

Reviews on

GLASS

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ICOM Glass

Lectures: ICOM Glass Annual Meeting
in St. Petersburg (Russia), 2018





Jug. Venice, the middle of the XVI century. Photograph © The State Hermitage Museum.
Photo by Alexander Koksharov.

Edit

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Beaker with the portrait of Empress Elizabeth Petrova, 1741-1761. Russian Empire. St. Petersburg Glass Factory, © the State Hermitage Museum. Photo by Aleksey Pakhomov

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George Ferdinand Wekler. Italian view circa 1830s. Photograph © The State Hermitage Museum. Photo by Andrey Terebinin, Aleksey Pakhomov, Konstantin Sinyabsky

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Glass collection Bacchos, Franci Černelč, 1995. Photograph©Documentation Celje Regional Museum, Slovenia.

FOREWORD

Dear Glass Members and Friends,

As the new Chairperson, I am very proud to present the eighth issue of *Reviews on Glass* - the official publication of the ICOM Glass International Committee. This issue contains a selection of the papers presented at the 2018 ICOM Glass Annual Meeting, hosted by the State Hermitage Museum in St. Petersburg, Russia, and organized by Curator Elena Anisimova. Our meeting's theme was 'Glass museums and collections in Russia'. Thanks to the work of our colleagues, the articles appearing in this journal will give the reader an overview on several aspects of Russian glass and glass preserved in Russian collections, including contemporary Russian glass art. Papers devoted to updates on glass from other regions of the world provide an opportunity of stay informed about the most recent improvements in our field.

Additionally, I am pleased to report on some recent activities of our Committee. In September 2019, ICOM Glass met as part of the ICOM 25th General Conference in Kyoto, Japan. Our rich and exciting activities at the Kyoto Conference were organized by Glass member Ruriko Tsushida, former Chief Curator of the Suntory Museum of Glass, Tokyo and currently the Deputy Director of the Glass Museum in Toyama. A Glass-only session of presentations on the themes "Glass Museums as Cultural Hubs" and "Updates on Glass" hosted twelve papers on diverse topics, ranging from the forming of glass collections in museums to the representation of glass objects in painted images. The joint session with ICDAD and ICFA included seventeen papers, four by Glass members, and explored the complex and multifaceted relationship and cross-cultural influences between the arts from the East and West. We also visited the MIHO Museum and had an inspiring two-day excursion to Toyama, known as the "Glass Art City," and Kanazawa. The outstanding programme and the opportunity to interact with our Japanese and Asian colleagues made the conference extremely successful. Forty participants attended the meeting and we were particularly pleased to see an increased number of members from Japan. During our General Assembly we elected the new board 2019-2021: Chair Teresa Medici, Secretary María Luisa Martínez, Treasurer Eva-Maria Günther, and Members Anne-Laure Carré, Milan Hlaves, Amy McHugh, and Ruriko Tsuchida.

ICOM Glass is committed to keeping close relationships with other institutions and associations interested in glass. Particularly relevant in 2019 was the active involvement in the promotion of the United Nation's International Year of Glass 2022. Also notable is the participation of several ICOM Glass members with the group planning the strategies to achieve the inclusion of Manual Glass Production into UNESCO's list of intangible cultural heritage. All these activities are increasing the profile and reputation of ICOM Glass and the awareness of our network of many international museums.

In 2020, we had to face the terrible situation of the COVID-19 pandemic. The restrictive measures implemented worldwide forced us to postpone our Annual Meeting in Southern Germany to 2021. Instead, we managed to organize the first Online Glass General Assembly on 21 July 2020. Held in the GoToMeeting platform made available courtesy of ICOM Italy, this gathering gave us a chance to meet and to exchange ideas about future activities.

My special thanks go to Paloma Pastor and Amy McHugh for editing and putting together this issue, and to María Luisa Martínez for taking care of the membership list.

Teresa Medici, *Chair. ICOM Glass*



Decanter with stopper 1870 Russian Empire, St. Petersburg, Imperial Glass Factory. Photograph ©The State Hermitage Museum. Photo by Aleksey Pakhomov.

LECTURES

The ICOM Glass Annual Meeting 2018 was hosted by the State Hermitage Museum in St. Petersburg, Russia, and organized by Elena Anisimova, the curator of European Glass at the Museum. The main theme of the meeting was “Glass Museums and Collections in Russia”. Other interesting topics were: “Updating of glass, glass museums and exhibitions”. The conferences took place at the marvelous Hermitage Theatre, in the Winter Palace.

GLASS MUSEUMS AND COLLECTIONS IN RUSSIA

The development of glassmaking in Russia exemplified by the works from the State Hermitage Museum collection

Tatiana Pankova. The State Hermitage Museum, St. Petersburg

The collecting of art glass in Russia dates back to the time of the reign of Emperor Peter I, who ordered the best works of domestic and European production to be collected and preserved for posterity. Subsequent rulers continued this tradition. In the second half of the 18th century at the Court of Empress Catherine II there was a

custom to present Her Majesty the best works of domestic manufacture for the feast of Christmas and Holy Easter. These presents, which included glassware, were kept in the palace storerooms, and favorites were used for interior decorations.

In the 1860s the Emperor's collection was established as a

public museum. Permanent exhibitions appeared within the Imperial Hermitage Museum. The Russian glass-wares were included in the exhibition, ‘The Gallery of Peter the Great’ and ‘The Treasure Gallery’.

After the October Revolution of 1917, the collections of Imperial palaces were nationalized and all

objects were registered. At the same time, nationalized private collections were accessioned into the newly established public museum. In 1918 the Department of History and Living Environment was organized within the State Russian Museum. Cultural monuments from palaces and mansions were transferred to the museum as well. The collection of Russian glass-wares from The Hermitage also ended up as a part of this Department.

In 1934 the Department of History and Living Environment was closed. Over the next several years the fate of the collection of Russian cultural monuments was uncertain. Thanks to the efforts of the Hermitage director Joseph Orbeli in April 1941, the Russian collection was transferred to a department in the Hermitage that was specially established for this collection called the History of Russian Culture Department. However, The Great Patriotic War (22/06/1941-09/05/1945) interfered into the plans for transporting, placing and calendaring of exhibits and work was resumed after it ended. Permanent and temporary exhibitions were organized in the halls of the State Hermitage Museum. Also, there emerged the necessity to expand the collection and through acquisitions from individuals the collection of Russian glassware gradually expanded to include 4000 objects.

The earliest Russian art glass in the Hermitage's collection, are samples of tableware dated to the times of Peter the Great. By the time Peter I acceded to the throne there were several glass manufacturers in Moscow Region; the biggest ones were in Dukhanino village of Dmitrovsky district and in Izmailovo village. These factories made products mostly for the royal Court. The assortment of the wares was very extensive. The factories produced tableware of white flint glass and stained glass decorated with gilt or enamel painting, engraving and carving. Among some of their products were inkwells, fly traps and various tares. Factory registers also describe decorative pieces in novel forms and sizes, which would have excited and delighted the Tsar and his entourage. Most workers of these factories were foreign masters, who shared their knowledge with the local apprentices.

In 1703 Peter I founded Saint Petersburg and in 1712 moved the capital there. There now was a need for glass production near the new capital. Over the period from 1705 to 1712 two adjacent glass factories opened in the city of Yamburg and in Zhabino village on the territories of Ingria. These two factories merged during the The Great Northern War (1700-1721). They were privately owned by Alexander Menshikov, one of the adherents of Peter I. The enterprises mostly

produced artistic glass for the Court and partially for sale. The most complex works were executed by the European masters, resulting in products that resembled thick-walled, carved Bohemian glass or exquisite goblets and bottles with hot-blown decoration 'à la façon de Venise'. The assortment of production was variegated. The manufactory produced tableware with engraved or painted ornaments and fancy shaped bottles. Pane glass and mirrors were also produced for the Court's palaces. Occasionally, when ordered by the Highest Court, the factory made



Beaker with the emblem of the Russian Empire. XVIIIth century (first quarter), Russian Empire, St. Petersburg Region, Yamburg Glass Factory; colorless glass, blown, engraved, hand-cut, № ЭРС-239; Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.

outstanding exclusive items. When there was no demand for glassware, the glass manufacturers of Izmailovo and Dukhanino suspended their work.

Once Peter I passed away, Alexander Menshikov fell into disgrace and his property was confiscated, including his glass factories. They were sold to William Elmsel, an English merchant, who transferred the production to the Lava River in Nazia village of the Shlisselburg District. The engraving workshop was located in Saint Petersburg.



Cup with a portrait of Empress Anna Ioannovna 1730s-beginning 1740s Russian Empire, St. Petersburg Region, Yamburg Glass Factory; colorless glass, blown, engraved, hand-cut, N° ЭPC-29. Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.



Beaker with the portrait of Empress Elizabeth Petrovna, double-headed eagle & EP monogram 1741-1761; Russian Empire, St. Petrburg Region; St. Petersburg Glass Factory; colorless glass, blown, engraved, hand-cut, N° ЭPC-2972 ; Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.

At this time the enterprise acquired the name of St. Petersburg Glass Factory.

In the second quarter of the 18th century, this factory was the main supplier of glass-wares for the Court. Like previously, most of the employees were foreign masters. The production did not have a variegated range and the masters used European products as examples. For instance, Saxonian goblets were used as a sample for similar items with

portraits of Empress of Anna Ioannovna of Russia and Emperor Ivan VI Antonovich of Russia.

In 1738 W. Elmsel died and the glass factory acquired public status. At this time Russian masters from the nearby saw mill joined the glass factory. These workers became the first of many generations of glassmakers, establishing dynasties. From this time forward, the produced wares began to have Russian design characteristics. Engraved

and painted embellishment on the table-wares, were noted for its calmer rhythm and larger-scale patterns.

In the second half of the 18th century, colored glass wares gained more widespread popularity. Michael Lomonosov (1711-1765) is considered to be the founder of this direction of production. In 1753, upon his petition, a glass factory was founded in the village of Ust-Rudits (Russia, St. Petersburg region). The factory produced stained glass, smalt, beads, glass beads and variegated haberdashery goods made using technological advances invented by Lomonosov. As a result of numerous experiments, he invented formulas for more than 1000 shades of colored glass. M. Lomonosov was not only pursuing science, he with his apprentices were also creating mosaics and glass beads panels.

In 1752, Peter Druzhinin was sent for apprenticeship from the Petersburg Glass Factory in Nazia to Lomonosov's laboratory. A year later he returned to the manufactory and commenced the production of colored glass. In 1765 M. Lomonosov died and his glass factory was closed. After the death of Elizabeth Petrovna, the Empress of Russia in 1761 there was a stagnation period for the Petersburg's factory.

In 1777 Empress Catherine II issued an order to revive the

enterprise and transferred it into the private ownership of her favorite prince Grigory Potemkin (1739-1791). The new owner relocated it to Ozerki - situated on the territory leased from the Saint Alexander Nevsky Lavra 5 km from the borders of St. Petersburg. The glass manufactory immediately reached a new level of production.

This period marks the beginning of the Neoclassical period. As a response to the spirit of the time, the prince's glass factory produced colorless thin-walled tableware with engraved ornaments and expanded the color range of colored-glass

wares with gold painting. As before, the factory's major customers were the Royal family members, supplemented by other private orders.

The Hermitage has preserved pieces of art commemorating remarkable life events associated with the monarchs and Russian history. One example is in 1774 the Potemkin factory produced a fragrance vial with the memorable inscription: 'Peace with the Turks July 10, 1774'. In 1784 a monumental purple vase, measuring one meter in height, was also produced here. At different times this vase was



Basket-shaped vase with Easter Eggs 1786 Russian Empire, St. Petersburg; Potemkin Glass Factory; color glass, blown, engraved, hand-cut, painted, № ЭРС-1890\1-2; ЭРС-2701-2706; Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.

a decoration of private rooms of the imperial couple in Winter Palace. Upon the request of Empress Catherine II the glass factory produced a vase with seven Easter eggs decorated with the monograms of the Empress' son and his family - the future Emperor Paul I. The vase was presented to the family of Paul Petrovich on the Holy Easter in 1786.

Potemkin's success did not last long. On October 5, 1791, Grigory Potemkin died suddenly and the factory was returned to state ownership and renamed to the Imperial Glass Factory.

The private ownership of glass factories by Alexander Menshikov, Michael Lomonosov and Grigory Potemkin indicate that Russia had the ability to develop a robust glassmaking industry. In the second half of the 18th century, bigger and smaller glass manufactures were established throughout the Russian Empire and they provided products to the general public. Only the best manufacturers were awarded the right to supply the Imperial Court, and this was conferred upon the factories owned by the Bakhmetev's and the Maltsov's families.

In 1764, the landowner Alexey Ivanovich Bakhmetev (1720-1779) established a glass factory on land owned by him in the villages of Nikolskoe and Pestrovka of the Penza Province.



Ovoid vase with bronze ornament 1784 Russian Empire, St. Petersburg; Potemkin Glass Factory; violet-blue glass, blown, bronze, cast, № ЭРС-1982; Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.

The masters of the Bakhmetev's factory satisfied any fancy whims requested by their customers and soon their work attained recognition. The factory wares competed in artistic qualities with the works of the Imperial Glass Factory and supplied its

products to the Court. For example, in the 1820s, the Imperial Court ordered from Bakhmetev a 'Bakhmetev's set' made of decolorized lead crystal for the Winter Palace. Any lost items of this set were replenished by the Imperial Glass Factory.

The Maltsov's factories were also strong competitors in the design of glassware. The famous family of glassmakers, who founded several glass manufactures in Vladimir, Orel and Ryazan Provinces in the second half of the 18th century, had twenty-four glassworks in the second half of the 19th century. The largest among them were the Gus-Khrustalny (Vladimir Province) and Dyatkovsky (Orel Province) glass factories.

In addition to family-run glass factories operated for generations, representatives of noble families

were also successful in this field. Among the most renowned were the glass manufactures of Prince Orlov in the Milyatin District, Kaluga Province, and Prince Nicholas Yusupov in the Moscow Region. During the manufacturing process, the princes devoted much attention to the scientific and experimental work in this area. Years later, the items they produced gained interest among collectors and were accepted into the State Hermitage Museum.

Starting with the second half of the 18th century, grand architectural complexes were built in Saint Petersburg and its

vicinity by prominent architects. The architects paid attention to the complexes' interior design, making sure vases, lighting fixtures, expensive fabrics and furniture harmoniously complemented each other and created solid, artistic compositions. Following their projects, the Imperial Glass Factory produced pieces of monumental and decoration art from glass and crystal: tripod vases, floor lamps, ovoid and krater vases, amphoras, pieces of furniture and table embellishments with glass sculpture details. Following the Imperial Glass Factory,



Decanter with stopper 1870 Russian Empire, St. Petersburg, Imperial Glass Factory, crystal, blown, painted, polished, № ЭРС-1392/1-2; Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.



Vase painted in Oriental style 1880 Russian Empire, St. Petersburg, Imperial Glass Factory, glass, blown, painted, polished, № ЭРС-3403, Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.

Bakhmetev's Gus-Khrustalny and Dyatkovsky factories added similar items to their assortments.

From the 1820 to the 1850s, the designers and manufacturers looked to historical designs, including folk art, for inspiration. This inspired a new style named 'historicism'. There were pieces to suit everyone's taste: carafes; traditional birch-bark boxes and jugs in the Russian style; vases and flower pots in the style of Arabian, Egyptian and Syrian glass and ceramics; pieces,

replicating elements of Persian art, antique reminiscences on glass, items that imitated semiprecious gems or urushi varnish; reduced copies of architectural structures and much more. Renowned artists and architects were invited to create the projects of these pieces of art. For example, unique in their artistic qualitative items were created according to the projects by Alexander Brullov, Vivant Beaucé, Ippolit Monighetti, Victor Hartmann and Elizabeth Bem (Boehm).

In 1890 the Imperial Glass Factory was merged with the Imperial Porcelain Factory of Saint Petersburg. All equipment was transferred to the Imperial Porcelain Factory. The items produced during this period were close to the production of leading European companies.

In 1889, the works of the French artist E. Gallé caused a sensation at Paris' Exposition Universelle and caught the attention of the monarchs. Following the Court's orders to create similar pieces of



Vase Tulip 1898 Russian Empire, St. Petersburg, Imperial Porcelain & Glass Factory, multi-layered glass, blown, carved, engraved, polished, № ЭРС-2430, Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.



Vase Azalea 1901, Russian Empire, St. Petersburg, Imperial Porcelain & Glass Factory, multi-layered glass, blown, carved, engraved, polished, № ЭРС-2427, Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.



Vase with landscape 1914-1917 Russian Empire, Vladimir Province, Gus- Khrustalny, Y. Nechaev-Maltsov's Factory; multi-layered glass, blown, carved, engraved, polished, № ЭРС-3292, Photograph © The State Hermitage Museum. Photo by Aleksey Pakhomov.

art, masters at the Imperial Glass Factory imitated the works of Gallé. Though, unlike Gallé, who used hydrofluoric acid in his method, Russian masters were carving and engraving the layered colored glass to attain similar artistic effects. However, after 1910 hydrofluoric acid was employed to create the Russian wares as well. Apart from the Imperial Glass Factory, the Gus-Khrustalny Glass Manufacture also created items in the style of

Gallé. Usually, their forms were cylinder and cone-shaped vases or bowls decorated with images of mountain or forest landscapes.

Some of the pieces created during this time ended up in the Imperial Hermitage Museum and the most beloved monarchs became the decoration of the private apartments of imperial palaces and residences. For example, the Hermitage collection retains companion vases with tulips and calla lilies (1898). These vases decorated the Silver Drawing Room of the private apartments of Nicholas II and Alexandra Feodorovna in Winter Palace and were documented in the photographs taken right before the revolution. In the photographs of Empress Alexandra Feodorovna's study in the Winter Palace, the 'A branch of the laurel' vase (1896) is visible and the companion vase 'Iris' (1900) is displayed in the Boudoir.

With the beginning of the First World War, art glass manufacturers gradually reduced their production. Many artists and masters were called for military service and the factories were directed to produce laboratory and optical glass. Some of the glass works had to shut down, including the Imperial Glass Factory which stopped production in 1918. Despite the varieties of fortune of the 20th century, the Hermitage collection of Russian glass was preserved and enlarged

over the years. Individual items or whole sets, which decorated interiors, embellished tables or private apartments and brought aesthetic pleasure to their owners, now delight many visitors of the State Hermitage Museum.

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ARTISTS WHO WORKED AT RUSSIAN GLASS FACTORIES

Micromosaics by George Ferdinand Wekler from the collection of the State Hermitage Museum

Daria Lazarevskaya

The State Hermitage Museum, St. Petersburg

The Department of the History of Russian Culture of the State Hermitage Museum holds one of the largest museum collections of micromosaics by Russian artist George Ferdinand Wekler (1800-1861). It was acquired in

1973 from Nikita Frolov, who belonged to the famous Russian mosaicists dynasty¹. In total, the Department of History of Russian Culture has received 33 mosaics, 21 of them are attributed by Frolov's family as

works of George Ferdinand Wekler. This collection was published in 1986 by Evelina Tarasova.² Her study provides the most complete information about the mosaicist to the date, but only six black and white

1 First mosaicist in the family Aleksandr Nikitievich Frolov (1830-1909) worked at the Mosaic Department of the Imperial Academy of Art since 1856. His elder son Alexander Alexandrovich Frolov (1861-1897) founded in 1890 his own *Frolov Mosaic Workshop* after his trip to Italy, where he'd got acquainted with Salviaty mosaics method. Frolov's Workshop received a lot of orders in the late the 19th and early the 20th century. One of their most acclaimed works is mosaics for the Church of the Savior on Blood in Saint Petersburg. Youngest son of Aleksandr Nikitievich – Vladimir (1874-1942) took charge after his brother early death. He led the Workshop till 1918, when it was closed after the Revoluton. In Soviet Russia he continued to work as mosaicist. His last order was mosaics for Moscow Underground, which he finished in Leningrad in 1941, when the city was already under the Siedge. He dreamed about mosaics museum and started to assemble a collection for it. Most of it was lost during the difficult soviet years, only micromosaics where preserved and sold by Vladimir's son Nikita to the Hermitage Museum in 1973.

2 Тарасова Э.А. Мозаики Е.Я. Веклера в собрании Государственного Эрмитажа / Декоративно-прикладное искусство России и Западной Европы конца XVII-XIX веков. Л., 1986. С.58-65. Р.58-65."

images were included in her publication. Individual mosaics were exhibited at number of temporary exhibitions in Russia and abroad through the years, but no additional publications about the collection were executed.³ This paper presents fourteen mosaics undoubtedly attributed to Wekler, although only seven plaques are signed in *tesserae*. This is the first time some of the mosaics have been published.

George Ferdinand Wekler is the only widely-known Russian micromosaic artist, although he was not a sole master in the field. He revived the art of mosaic in Russia, which was almost forgotten after the closure of Mikhail Vasilievich Lomonosov's (1711-1765) factory in Ust'-Ruditsa in 1769. Wekler used imported Roman *smalti* in his works and executed mostly small-sized projects. Wekler's works are now part of many museums and private collections around the world⁴.

George Ferdinand Wekler was born on March 15, 1800 in Riga into a family of teachers. His parents died when he was young and he was sent to St. Petersburg



George Ferdinand Wekler
Russian dance
Circa 1830s.
Photograph © The State Hermitage Museum. Photo by Andrey Terebenin,
Aleksey Pakhomov, Konstantin Sinyavsky.

by 1810 to live with relatives. From 1816 to 1819 Wekler took lessons from acclaimed Roman micromosaic artists Domenico Moglia (1780-1862) in St. Petersburg. In 1821, Wekler presented his first mosaic modeled after Salvatore Rosa's *The Prodigal Son* at the exhibition in the Academy of Art⁵.

His piece was received well and acquired by Empress Elizabeth Alekseevna (1779-1726), the wife of Emperor Alexander I (1777-1825). Russian art historian Peter Petrov discussed the Empress' relationship with Wekler believing Elizabeth Alekseevna "praised him [Wekler] to her august husband" and

3 St. Petersburg um 1800: Ein goldenes Zeitalter des russischen Zarenreichs: Meisterwerke und authentische Zeugnisse der Zeit aus der Staatlichen Ermitage, Leningrad.- Recklinghausen: Verlag Aurel Bongers Recklinghausen, 1990. Imperial Glass Factory. 1777-1917. 225th Foundation Day Anniversary. Catalog of exhibition. Saint Petersburg. 2004. 225pp. Glass made to be admired. Masterpieces from 16th-20th centuries from the Collection of the State Hermitage Museum. Exhibition Catalogue. Saint Petersburg. The State Hermitage Publishers. 2018. 228 pp.

4 For example: The State Hermitage Museum; The Gilbert Collection, Victoria and Albert Museum ; The State Museum Pavlovsk; Peterhof State Museum Reserve ; The Russian Museum and others

5 Петров П.Н. Краткое обозрение мозаичного дела. Обзор истории мозаики вообще и особенно в России. СПб., 1864. P. 46.



George Ferdinand Wekler after Nicholas Peters Berchem
Travelling Peasants 1822 г.
Photograph © The State Hermitage Museum.
Photo by Andrey Terebenin, Aleksey Pakhomov, Konstantin Sinyavsky.

Alexander I commissioned “views of palaces on the islands Elagin and Kamenny” (1822) and “views of suburban palaces” (1824)⁶. In 1822 Wekler was admitted to the Imperial Academy of Arts as a mosaic artist for executing a plaque with the view of Kamennooostrovsky Palace. From 1834 to 1837 he studied at the Vatican Workshops under the direction of Migelangelo Barberi. During this time he lived in Rome on an academy commission. In Italy, Wekler executed a mosaic copy of Raphael’s *Transfiguration*,

which was highly praised by the press and presented to the Pope, who awarded Wekler a silver medal for this work. Russia awarded him the Academician title in October 1835 for this work and acquired the mosaic for the Hermitage and placed it in the Gallery of Rare Things (its current location unknown). In 1838 after returning from Italy, Wekler was assigned to the Cabinet of His Imperial Majesty with the title of Mosaicist of His Imperial Majesty and was given a salary of 3,000 rubles per year.⁷ He worked on the orders from the

court and private commissions. Additionally, he helped establish the mosaic workshop at the Academy of Arts and was considered for the department head even though he did not receive the position⁸. He is known to have worked on some orders completed by the workshop. The Academy’s Mosaics Department was created in 1845 to complete the mosaics for St. Isaac’s Cathedral, similar to how the Vatican’s workshops operated in the seventeenth century, but the department also worked on court and private orders as well.

Although George Ferdinand Wekler worked for the Imperial Court and he was the only person ever to be named Court Mosaic Artist, historians still know little about his works. Apparently, many of them were sold or lost during the 20th century. The works in the Hermitage collection come from the private collection of the Frolov family and mainly consist of works that were available on the market from the late 19th to the first part of the 20th centuries. For this study the collection is divided into several groups based on the work’s subject and inspiration.

The first works include micromosaic plaques with

6 Ibid.

7 Russian State Historical Archives. Fond 789. Register 20. 1838. File 5. P.19.

8 Петров П.Н. Краткое обозрение мозаичного дела. Обзор истории мозаики вообще и особенно в России. СПб., 1864. P. 47.

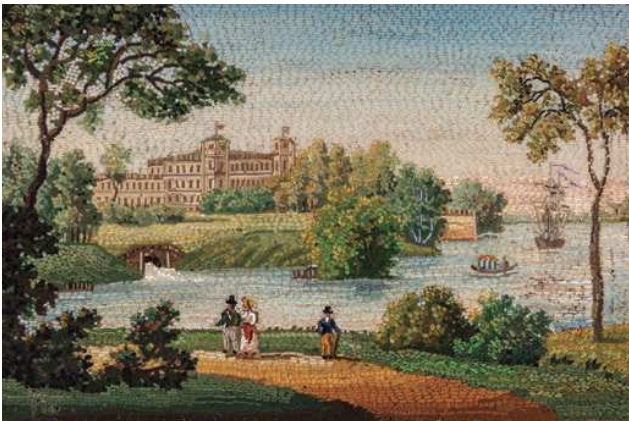
LECTURES



George Ferdinand Wekler
Landscape with Bathers 1827
Photograph © The State Hermitage Museum.
Photo by Andrey Terebenin, Aleksey Pakhomov,
Konstantin Sinyavsky.



George Ferdinand Wekler after print by K. Beggrov
View of the Elagin Palace 1840
Photograph © The State Hermitage Museum.
Photo by Andrey Terebenin, Aleksey Pakhomov,
Konstantin Sinyavsky.



George Ferdinand Wekler
View of the Gatchina Palace
Circa 1820s.



George Ferdinand Wekler after print by K. Beggrov
View of the Elagin Palace 1822 (?). Photograph © The
State Hermitage Museum. Photo by Andrey Terebenin,
Aleksey Pakhomov, Konstantin Sinyavsky.



George Ferdinand Wekler

Bulldog Circa 1840s

Photograph © The State Hermitage Museum. Photo by Andrey Terebenin, Aleksey Pakhomov, Konstantin Sinyavsky.

*vedute. View of the Elagin Palace*⁹ was made after a lithograph by Karl Beggrow of a drawing by Adolf Franciszek Shuh. Its dimensions are 20.1 x 13.5 x 0.7 cm. This piece was probably part of the first series of works

commissioned by Emperor Alexander I that were discussed earlier and dates to 1822. Elagin Palace was one of the favorite summer residences of the Emperor's family. The plaque's composition was simplified; there are fewer

figures than in the original print. Nevertheless, the mosaic is executed with excruciating detail - one can see how the wind moves the leaves on the trees around the Palace. There is one more plaque with the same image in the collection, which is

⁹ Inventory number ERKm-1048



George Ferdinand Wekler
Poodle on bank of the Gulf of Finland 1847 г.
Photograph © The State Hermitage Museum. Photo by
Andrey Terebenin, Aleksey Pakhomov, Konstantin
Sinyavsky.



George Ferdinand Wekler after Paulus Potter
Dog on a chain (Wolfhound) 1825-1850
Photograph © The State Hermitage Museum.
Photo by Andrey Terebenin, Aleksey Pakhomov,
Konstantin Sinyavsky.

believed to be executed later, around 1840¹⁰. It is smaller, measuring 3.7 x 5.1 cm. This mosaic is not as elaborate, the image was greatly simplified. *View of the Gatchina Palace*¹¹, c.1820s, and *Views of the St. Isaac Cathedral and St Isaac's Bridge*¹², c. 1830, belong to this group as well. Both plaques are made after prints. The *View of the St Isaac Cathedral* is based on a print from the album *Views of St. Petersburg*, published in 1826 by Alexander Pluchart. St. Isaac's Cathedral was not finished

until 1858 so the author used design drawings to depict the completed cathedral.

Like other artists visiting Rome, Wekler embraced the views of the eternal city and Italy's great landscapes. Two plaques in the collection were made during his visit to Italy. The first one, *View of the St. Peter Cathedral in Rome*¹³ (1837), depicts the dome of St. Peter Cathedral illuminated by the setting sun. An artist is pictured in the foreground, sitting behind an easel drawing the magnificent

view. It is most likely Wekler portrayed himself. The second plaque was made after the painting *Villa in Italy* by Michael Lebedev (now in Tretyakov's gallery in Moscow).¹⁴ This mosaic is signed *WEKLER* in tesserae. As Wekler often did when executing smaller works, he simplified details of the original painting.

The second group of micro mosaics is inspired by paintings. *Travelling Peasants*¹⁵ is based on a work by Nicolaes Pieterszoon Berchemc. It is signed "*Wekler*

10 Inventory number ERKm-1046

11 Inventory number ERKm-1047, dimensions: 7.9 x 5.3 cm

12 Inventory number ERKm-1055, dimensions: 10.8 x 7 cm

13 Inventory number ERKm-1056, dimensions: 15.3 x 11.8 cm

14 Inventory number ERKm-1059, dimensions: 7.1 x 5 cm. Hermitage has another, bigger (21x24 cm) and more elaborate mosaic of the same painting made by Wekler in 1839 that came from the different collection. (Epr-5726)

15 Inventory number ERKm-1044, dimensions: 14.4 x 9,6 cm



George Ferdinand Wekler
View of the St. Peter Cathedral in Rome
1837. Photograph © The State Hermitage
Museum. Photo by Andrey Terebenin,
Aleksy Pakhomov, Konstantin Sinyavsky.



George Ferdinand Wekler
Views of the St Isaac Cathedral and Isaac's bridge circa
1830s. Photograph © The State Hermitage Museum.
Photo by Andrey Terebenin, Aleksy Pakhomov, Konstantin Sinyavsky.

1822” in *tesserae* at the bottom left. This is one of the earliest known plaques by Wekler. A second work, *Wolfhound (Dog on a chain)*, is based on a painting by Paulus Potter now in the Hermitage collection and was completed between 1825 and 1850.¹⁶ Recently a similar plaque from a private collection was

published by Jeanette Haisee Gabriel.¹⁷ Apparently, the plaque from Frolov’s collection is a smaller version of one commissioned by Nicholas I, that was sold after the Revolution of 1917. There are two more plaques in the Hermitage collection after unidentified originals: *Landscape with Bathers*,¹⁸ signed “Wekler.

1827” at the bottom, and *Landscape with cows*¹⁹, (c.1820s), signed “W” in *tesserae*. A paperweight with a similar plaque signed “G. Wekler” was sold at Sotheby’s in 2004²⁰.

The third group includes two micro mosaics based on images from the album *Les peuples de la*

16 Inventory number ERKm-1051, dimensions: 8.2 x 5.7 cm

17 Gabriel, Jeanette Haisee. *Micromosaics* Private Collection. Movement Publishing. 2016. P.53. This plaque is bigger size 18 x 25 cm, signed in *tesserae* in the bottom: “G:Wekler” and came with a case with a label of Imperial Hermitage which indicates that it originated from Imperial collection in St. Petersburg.

18 Inventory number ERKm-1045, dimensions: 9.8 x 7.2 cm

19 Inventory number ERKm-1057, dimensions: 10,4 x 6,5 cm

20 <https://www.sothebys.com/en/auctions/ecatalogue/2019/style-european-silver-ceramics-objects-vertu-l19301/lot.483.html>



George Ferdinand Wekler. Landscape. Circa 1820-1830 s.
 Photograph © The State Hermitage Museum. Photo by Andrey Terebenin,
 Aleksey Pakhomov, Konstantin Sinyavsky.

*Russie*²¹ printed in Paris in 1812. Drawings for it were made by Emelyan Korneev. The two plaques *Russian dance*²² and *Game of jumping on a board*²³ are dated c. 1830s. For both pieces the mosaicist simplified the complex, multi-figure composition of the original drawings, removing spectators and leaving the main folk characters. Also, by transferring the scene from the print's dusty village street

to a calm green meadow, Wekler brightened the composition by including vivid, clear colors and adding bright accents to the girls' *sarafans*. The plaque *Game of jumping on a board* is the only oval-shaped piece in the Hermitage collection. *Russian Dance* is set into a black marble paperweight.

The last group of Wekler's work is composed of plaques with images

of dogs. Wekler used an original drawing of the animal for the two examples in the Hermitage collection.²⁴ *Poodle on bank of the Gulf of Finland*, the title recorded in the Hermitage inventory books, is signed "G: WEKLER 1847" at bottom left in tesserae.²⁵ A dog is placed in a landscape with St. Isaac's Cathedral clearly visible in the background. Another mosaic after a similar drawing is mounted in a malachite paperweight exhibited in the Treasury Room of the Petergof Palace. It is believed that Petergof's mosaic is a portrait of Emperor Nicholas I's poodle Hussar²⁶. The second mosaic *Bulldog*²⁷ (circa 1840-1855) is signed at bottom left "G. WEKLER." These mosaics amaze the viewer with the careful elaboration in picturing the animals. This gives us a reason to believe that Wekler completed several works featuring dogs that most likely belong to the Emperor's family.

George Ferdinand Wekler specialized in producing

21 Les Peuples de la Russie, ou Description des moeurs, usages et costumes des diverses nations de l'empire de Russie, accompagnée de figures coloriées. Paris. 1812-1813.

22 Inventory number ERKm-1043, dimensions: 4.5 x 7 cm, paperweight 1.8 x 13.3 x 9.1 cm. Only one is not acquired from Frolov's collection

23 Inventory number ERKm-1063, dimensions: 8.3 x 5.4 cm

24 There are at least 6 different mosaics by Wekler depicting dogs in various collection (The State Hermitage has two more plaque, probably by Wekler), one is in Gilbert collection, one in Petergof

25 Inventory number ERKm-1050, dimensions: 20.1x16.4 cm

26 Пашкова Т.Л. Император Николай I и его семья в Зимнем дворце. Часть 2. 1838-1855. СПб, Издательство Государственного Эрмитажа. 2014. P.303.

27 Inventory number ERKm-1049, dimensions: 13.2 x 9.5 cm



George Ferdinand Wekler
 Italian view circa 1830s
 Photograph © The State Hermitage Museum. Photo by Andrey Terebenin,
 Aleksey Pakhomov, Konstantin Sinyavsky.



George Ferdinand Wekler
 Game of jumping on a board
 Circa 1830s
 Photograph © The State Hermitage Museum. Photo by Andrey Terebenin,
 Aleksey Pakhomov, Konstantin Sinyavsky.

micromosaics. His mosaics were exclusive because he worked his entire life for the Imperial Court and the highest nobility. Wekler's work became a link between the mosaic workshop of Mikhail Vasilyevich Lomonosov and the mosaic institution opened at the Imperial Academy of Arts in 1845, created specifically to execute the mosaic paintings for the decoration of St. Isaac's Cathedral. Being the mosaicist for His Imperial Majesty and working along with the famous Roman masters such as Michelangelo Barberi, Wekler propelled the quality and level of Russian mosaicists to the highest level of mosaics art. One of the last mosaics completed by the Russian master, *Venus, looking in the mirror*, decorates the fireplace in the large double light hall of the Old Hermitage. It was executed as a part of a larger order of 10 mosaics to decorate the fireplaces of the grand hall of the Old Hermitage. The work entered the Mosaic Department in 1859 and was completed in 1861, the year the master died.

13 of the 14 mosaics presented in this article came from the collection of mosaicist Vladimir Frolov (1874-1942), who was the last mosaicist of the Frolov dynasty. His collection is the largest mosaic collection assembled in Russian before the Second World War that stayed in Russia. It was sold to the Hermitage Museum by his son Nikita Frolov.

COLLECTORS AND COLLECTIONS IN RUSSIA

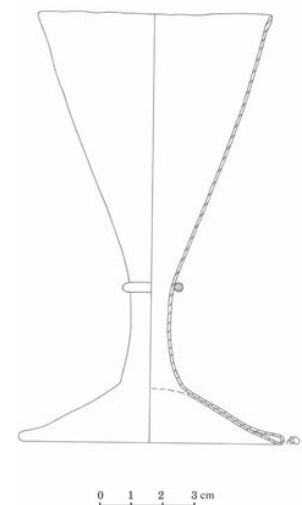
16th century glass vessels collection

from the burials of the Ascension Cathedral in the Moscow Kremlin

Ekaterina Stolyarova. Institute of Archaeology, Russian Academy of Science, Moscow

In 1929, in preparation for the impending demolition of the Kremlin Ascension Convent, the Moscow Kremlin Museums opened the tombs from the cemetery of the Russian grand duchesses and tsaritsas located in the main temple of the Convent. The workers recovered five glass vessels from the 16th century sarcophagi.

This small collection is highly unique and valuable to Russian, as well as European, decorative art historians. Knowledge regarding the type of glassware used around this time in Russia is extremely scarce. There were some glass vessels found in excavations of the 16th century layers. In general, they are fragments which are so featureless that their vessel type is impossible to define unless



Vessel from the burial of the Tsarevna Eudoxia (†1558) (after: Stolyarova, Ekaterina K., 'Issledovanie sosuda [Predpolagaemoe zakhoronenie tsarevny Evdokii Ivanovny. 1558 god]', Panova, Tatyana D.(ed.), Nekropol' russkikh velikikh knyagin' i tsarits v Voznesenskom monastyre Moskovskogo Kremlya, t. 3, Pogrebeniya 16 - nachala 17 veka, ch. 1, Moscow, 2018, p. 223, fig. 108, 109). H: 13.7 cm. © The Moscow Kremlin Museums. Photo by Sergey Nikitin. Drawing by Anna Dementieva.

they are very specific parts or have some recognizable décor (e.g. paintings or applied

decoration). Museums in Russia lack examples of 16th century glass vessels.

The Convent's collection is unique because the vessels can be precisely dated because they were found in dated burials. In most other cases, the dating of vessels in most European museum collection or archaeological sites is only an approximate value based on art reviews or archeological data.

The earliest vessels discovered at the Convent date to the late 1550s. They were found in the sarcophagus of the Tsarevna Eudoxia (†1558) and her mother, Tsaritsa Anastasia Romanovna Zakhar'ina (†1560), the first wife of Ivan the Terrible. Another vessel dated to 1571 and was found in the burial of Tsaritsa Martha Sobakina, the third wife of Ivan the Terrible. The most recent vessels date to the late 16th and early 17th century were found in the burials of the Tsarevna Feodosia (†1594) and her mother, Tsaritsa Irina Godunova (†1603), the wife of Tsar Feodor Ivanovich.

The goblet from the burial of the Tsarevna Eudoxia is among the simplest and most ordinary types



Vessel from the burial of the Tsaritsa Anastasia Romanovna Zakhar'ina (†1560) (after: Stolyarova, Ekaterina K., 'Issledovanie sosuda [Zakhoronenie tsaritsy Anastasii Romanovny. 1560 god]', Panova, Tatyana D. (ed.), *Nekropol' russkikh velikikh knyagin' i tsarits v Voznesenskom monastyre Moskovskogo Kremlya*, t. 3, *Pogrebeniya 16 - nachala 17 veka*, ch. 1, Moscow, 2018, p. 269, fig. 131, 132). H: 23 cm. © The Moscow Kremlin Museums. Photo by Sergey Nikitin. Drawing by Anna Dementieva.

of dinnerware common in Europe from the 16 and 17th centuries. The form's popularity is illustrated by numerous European finds, such as the ones from Switzerland (Biel), Czechia (Prague and Brno), Slovakia (Bratislava and elsewhere), and Slovenia (Ljubljana).¹

The beaker from the burial of Anastasia Romanovna is a club beaker (*Keulenglas*). It is decorated with four applied threads with wheel-pressed decoration. Thusly were adorned, among other things, *Passglas*, manufactured in Germany and the Netherlands in the 16-17th centuries.² According to historian

1 Glatz, Regula, *Hohlglasfunde der Region Biel. Zur Glasproduktion im Jura*, Bern, 1991, kat. 182; Kos, Mateja and Žvanut, Maja, *Glass Factories in Ljubljana in the 16th century and their Products*, Ljubljana, 1994, t. 3: 23, sl. 4; Sedláčková, Hedvika, *Renaissance Glass and other Archaeological Finds from Nymburk. With contributions by Helena Brožková and Dagmar Stará*, Libice nad Cidlinou, [1997], pp. 17, 24, Nos. 37–39, 42; Sedláčková, Hedvika, 'From the Gothic period to the Renaissance. Glass in Moravia 1450 – circa 1560', *Studies in Post-Medieval Archaeology*, 2007, 2, p. 209, fig. 31: D12–010; Drenko, Zoltán, 'Glass from Deserted Church Fort in Svodin', *Študijné Zvesti Archeologického ústavu SAV*, 2009, 46, p. 36, obr. 1: 6; Lesák, Branislav, 'Collection of Renaissance Glass from 3 Ventúrska Street in Bratislava', *Študijné Zvesti Archeologického ústavu SAV*, 2009, 46, p. 26, obr. 2: 17, 18, 20, 21; Veselá-Žegklitzová, Jana, 'Renaissance Style Glass from Archaeological Finds at the Prague Castle', *Študijné Zvesti Archeologického ústavu SAV*, 2009, 46, p. 61, obr. 2: 5, 7.

2 Sedláčková, [1997], p. 26; Ratković-Bukovčan, Lada, *Some Forms of Early German Glass from the Mimara Museum*, Studije Muzeja Mimara, 12, Zagreb, 1999, pp. 8–9, Nos. 3, 4.



Vessel from the burial of Tsaritsa Martha Sobakina (†1571) (after: Stolyarova, Ekaterina K., 'Issledovanie sosuda [Zakhoronenie tsaritsy Marfy Vasil'evny Sobakinoi. 1571 god], Panova, Tatyana D. (ed.), *Nekropol' russkikh velikikh knyagin' i tsarits v Voznesenskom monastyre Moskovskogo Kremlya*, t. 3, *Pogrebeniya 16 - nachala 17 veka*, ch. 2, Moscow, 2018, p. 172, fig. 92, 93). H: 30 cm. © The Moscow Kremlin Museums. Photo by Sergey Nikitin. Drawing by Anna Dementieva.

H. Sedláčková, club beakers were manufactured in Northern Germany during the late 15th into the 16th century.³ A large number of these vessels have been recovered in other European countries, particularly in the

Czechia (Brno, Olomouc, Opava),⁴ and these findings are indicative of their great popularity.

The goblet from the burial of Martha Sobakina has a thistle-shaped bowl and a glass bulb

inside decorated with an enameled depiction of three birds lurking in a grass thicket. From the middle of the 16th and throughout the 17th century goblets with thistle-shaped bowls were common in Venice and in the *a la façon de Venise* workshops. In the middle and the second half of the 16th century these vessels were classified as reliquaries.⁵ At the end of the 16th and the first quarter of the 17th century, such vessels were commonly used for drinking wine.⁶ Apart from the Kremlin's vessel, only three other 16th century goblets with similar decoration are known. They can be found in the British Museum, in the Museum of the History of Art in Vienna as part of the collection of Rudolf von Strasser, and in the Ambras Castle Museum (Innsbruck, Austria) as part of the collection of the Archduke Ferdinand II.⁷

Besides glass vessels, we know of another similarly shaped goblet – a vessel made of rock crystal

3 Sedlachkova, Hedvika, 'Glass Vessels from the Moscow Residence of Ivan the Terrible and Goblet from the Tomb of the Tsaritsa Anastasia Romanova', *Archaeology of the Romanov court: background and history of the Moscow center in 12th-19th centuries*, Data of salvage archaeological excavations, 12, Moscow, 2009, p. 143, (in Russian).

4 Sedláčková, 2007, pp. 192–194, fig. 10.

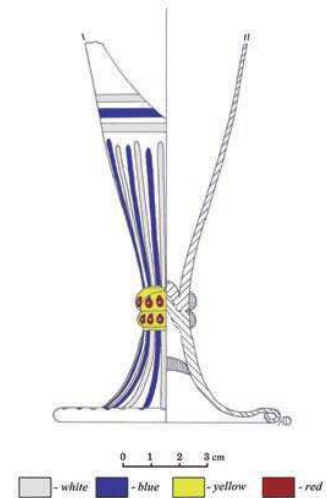
5 Balboni Brizza, Maria Teresa (ed.), *Verti. Le guide del Museo Poldi Pezzoli*, Milano, 1991, No. 13; Dorigato, Attilia, *The Glass Museum*, Venice, 2006, il. 19.

6 Theuerkauff-Liederwald, Anna-Elisabeth, *Venezianisches Glas der Kunstsammlungen der Veste Coburg. Die Sammlung Herzog Alfreds von Sachsen-Coburg und Gotha (1844–1900)*, Lingen, 1994, fig. 38, 41; Page, Jutta-Annette, *Beyond Venice. Glass in Venetian Style, 1500–1750*, Corning, 2004, p. 47; Barovier Mentasti, Rosa (ed.), *Trasparenze e riflessi. Il vetro italiano nella pittura*, Verona, 2006, p. 175, il. 5.

7 Egg, Erich, *Die Glashütten zu Hall und Innsbruck im 16. Jahrhundert*, Innsbruck, 1962, pl. XIV, ill. 29; Tait, Hugh, *The Golden Age of Venetian Glass*, London, 1979, cat. 34; Auer, Alfred et al., *Ambras Castle*, Milan, 2000, pp. 50, 52; Strasser von, Rudolf and Baumgärtner, Sabine, *Licht und Farbe. Dekoriertes Glas – Renaissance, Barock, Biedermeier. Die Sammlung Rudolf von Strasser*, Schriften des Kunsthistorischen Museums, 7, Wien, 2002, kat. 39.

mounted with a gold-plated silver.⁸ Apart from the shape, the similarity between the glass and crystal vessels is further emphasized by a gold medal located inside. The vessel bears the stamp of Albrecht Jamnitzer from Nuremberg (1550-1555), who worked in the workshop of his brother, the renowned Wenzel Jamnitzer.⁹ The date suggests that the Nuremberg crystal goblet with a gold medal inside could have been used as a model which glassmaker followed to reproduce in their own way, creating a work of art with the bulb inside.

The goblet found in the burial of Tsarevna Feodosia is covered with enamel paintings imitating filigree. The upper part of the vessel is now lost, however, a photograph of the vessel taken in 1929 immediately after it was recovered shows that the upper part was adorned with a gold band flanked on both sides by enamel dots. Vessels with imitation filigree were known in Europe at the turn of the 16th and 17th century.¹⁰ One such vessel, found in Olomouc, dates



Vessel from the burial of the Tsarevna Feodosia (†1594) (after: Stolyarova, Ekaterina K., 'Issledovanie sosuda [Zakhoronenie tsarevny Feodosii Fedorovny. 1594 god]', Panova, Tatyana D. (ed.), *Nekropol' russkikh velikikh knyagin' i tsarits v Voznesenskom monastyre Moskovskogo Kremlya*, t. 3, *Pogrebeniya 16 - nachala 17 veka*, ch. 2, Moscow, 2018, pp. 250, 251, fig. 131, 134). © The Moscow Kremlin Museums. Photo by Sergey Nikitin. Drawing by Anna Dementieva.

to the late 16th or early 17th century and is believed to be locally manufactured.¹¹ The upper part of the vessel is decorated with a gold band with enamel dot accents, similar to the design found on the vessel from the burial of the Tsarevna Feodosia.

The beaker from the burial of Irina Godunova is stackable.¹² Similar shaped vessels were found during excavations of the Prague Castle (Czechia).¹³ They have also been found in Olomouc (Czechia) in the 17th century layers and are considered local products.¹⁴ However, Czech

8 Goncharenko, V.S. and Narozhnaya, V.I., *The State Historical and Cultural Museum-Reserve "The Moscow Kremlin". Armory. A Guide*, 6th edition, Moscow, 2012, p. 181, (in Russian).

9 Markova, Galina A., *German Artistic Silver from 16–17 centuries in the State Armory*, Moscow, 1975, No. 5, (in Russian).

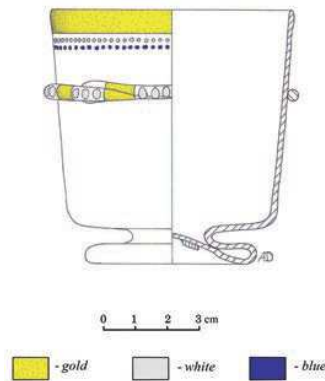
10 Tait, Hugh (ed.), *Five Thousand Years of Glass*, Revised edition, Philadelphia, 2004, p. 176, ill. 226.

11 Sedláčková, Hedvika (ed.), *Renaissance Olomouc in Archaeological Finds. Glass, Festive Ceramics and Tiles. Archaeological Research of the Institute of Landmark Conservation in Olomouc 1973–1996*, Olomouc, 1998, pp. 13, 86, Nos. 16. 1–4.

12 Vavra, Jaroslav, *Das Glas und die Jahrtausende*, Prag, 1954, S. 56–60, Abb. 141, 143, 145–150; *Czechoslovakian Glass 1350–1980. A Special Exhibition*, New York, 1981, pp. 51–52, Nos. 4–7; Dragotova, Olga, 'New views on the tradition of Czech glass evolution', *Glass review*, 1984, 12, pp. 6–7, fig. 1, 4, 8, (in Russian); Charleston, Robert, *Masterpieces of Glass. A World History from the Corning Museum of Glass*, New York, 1990, pp. 106, 109, 110, 117.

13 Vesela-Žegklitzova, 2009, p. 60, obr. 1: 6.

14 Sedláčková, 1998, p. 49, Nos. 05.1–1, 72, 13.2–11, 12.



Vessel from the burial of the Tsaritsa Irina Godunova (†1603) (after: Stolyarova, Ekaterina K., 'Issledovanie sosuda [Zakhoronenie tsaritsy Iriny Fedorovny Godunovoi. 1603 god]', Panova, Tatyana D. (ed.), *Nekropol' russkikh velikikh knyagin' i tsarits v Voznesenskom monastyre Moskovskogo Kremlya*, t. 3, *Pogrebeniya 16 . nachala 17 veka*, ch. 2, Moscow, 2018, p. 327, fig. 170, 171). H: 8 cm. © The Moscow Kremlin Museums. Photo by Sergey Nikitin. Drawing by Anna Dementieva.

vessels are made of opaque red-brown and blue glass. Vessels made of transparent glass during the 16th and the first half of the 17th century, according to the researchers, come from the Southern Netherlands or northern France.¹⁵ D. Caluwé believes that these vessels appeared during the earlier period and were initially used for wine tasting by professionals. The cup's shallow form assisted the drinker in experiencing wine's bouquet, the color, and the taste. Later on, such shapes developed into luxurious drinking glasses used at the table.¹⁶

The glass vessels recovered from the burials of the Ascension Convent fulfilled a ritualistic function. They were connected with the ritual of extreme unction whereby the sick would obtain God's grace through priests' prayer. It is worth noting that glass vessels were not used as lachrymatories until the mid-16th century. Prior to this time, from the 14th to the first half of the 16th century, glazed ceramic bowls were used. They were found exclusively in burials and never in the cultural deposit. As opposed to them, vessels akin to those recovered from the burials

of the Ascension Convent were excavated in Moscow layers of the second half of 16th and early 17th century.¹⁷

The first glass lachrymatories were found in the cemetery of the Ascension Convent in female burials pertaining to the family of Ivan the Terrible. Under Ivan, relations were established with European countries. As a result, glassware, hitherto unknown in Russia and therefore valuable, was brought to Muscovy as diplomatic gifts. We know nothing about its daily use. Perhaps it was used as in Europe, where goblets and beakers, similar to vessels from the burials of Tsaritsas Anastasia Romanovna, Martha Sobakina and Irina Godunova, Tsarevnas Eudoxia and Feodosia, were intended for drinking wine, beer, and other beverages. And vessels similar to the goblet from the burial of the Tsaritsa Martha Sobakina were used as reliquaries. We can't ignore the representative function of the Kremlin vessels, especially the goblet from the burial of Martha Sobakina. It is evident, however, that they were highly rated. Probably it accounts for their being used in the rite of extreme unction and then placed in burials.

15 Henkes, Harold E., *Glaz zonder glans*, Rotterdam Papers, 9, 1994, p. 106, Nos. 24.16, 24.18.

16 Caluwé, Danielle, 'The Use of Drinking Vessels in the Context of Dining and Communal Meals. Some Preliminary Thoughts Drawn on Archaeological Evidence from Medieval and Post-medieval Periods in Flanders and the Duchy of Brabant (Belgium)', pp. 12–13, [online] available at: https://www.academia.edu/4533804/FH7_full_text (10th March 2014).

17 Panova, Tatyana D. and Koval', Vladimir Yu., *Report on salvage archaeological excavations in the Tainitskii garden of the Moscow Kremlin in 2007*, vol. 1, Moscow, 2008, Archive of the Institute of Archaeology, Russian Academy of Sciences, F-1, R-1, No. 29009, p. 57, (in Russian); Sedlachkova, 2009, p. 143.

COLLECTORS AND COLLECTIONS IN RUSSIA

Attribution of a jug from the collection of A. Bazilevsky

To the history of collecting in the 19th century

Elena Anisimova and Sergei Khavrin

The State Hermitage Museum, St. Petersburg

One of the masterpieces of the Hermitage's collection of European glass was traditionally considered a jug, attributed to a workshop in Venice produced mid-16th century.¹ It entered the Imperial Hermitage in 1885 as part of the collection of Alexander Bazilevsky (1829-1899). This collection was acquired for the museum in its entirety by personal order of the Russian Emperor Alexander III.

Russian diplomat Alexander Bazilevsky permanently resided in Paris. He collected Oriental and European applied art from the Middle Ages and the Renaissance. The Bazilevsky-owned collection was well known to connoisseurs and art lovers of its time. It was deservedly considered one of the best in France, and its owner even won the honorary title of "King of Collectors".²

Unfortunately, the Hermitage does not know how and when Bazilevsky purchased the jug. It can be speculated that it was bought as part of another big collection or purchased independently from an European antique dealer. In the Bazilevsky's collection records, there is no information on the jug's origin.

Historians know that the jug was not presented at the Paris

1 Jug. Venice. Glass: the middle of the XVI century, painting - the third quarter of the 19th century. Colorless and white glass; free blowing, vetro a retortoli, gold painting. Height with handle 28.0 cm.; diameter 12.5 cm. Inv. No. F-480.

2 Simpmetta Castronovo e Cristina Maritano. Alexander Basilevsky, « Le Roi des collectionneurs »// Il collezionista di Meraviglie. L'Ermitage di Basilevsky. Catalogue de l'exposition. Torino, 2013, p.21-22.

exhibition of 1865, the first fair where Bazilevsky exhibited some works from his collection in the Museum's retrospective section. It also was not among the objects exhibited by private collectors at Paris' Exposition Universelle in 1867.

The pitcher probably had not entered Bazilevsky's collection by 1870. This year, he moved to a mansion on Blanche Street in Paris, house 49. In a separate hall of his new house, a collection belonging to the owner was presented. There are two watercolors of 1870 representing the Bazilevsky collection, but this jug is missing from the images.

Thus, we can confidently speculate the jug entered the collection no earlier than the end of 1870 and no later than 1874, when the first catalog of Alexander Bazilevsky was published³. The catalog was prepared by the owner himself, together with his friend Alfred Darcel (1818-1893), one of the greatest experts on medieval art of his time.

Among the 54 glass objects presented in the catalog, only two items were reproduced in photographs that accompanied the publication. The photographs reinforce their volubility to Bazilevsky; the jug was included in the album.

The jug's current state is consistent with its 1874 photograph. The vessel's decoration in the "*vetro a retortoli*" technique on its body and foot is visible, as well as the painting on the vessel's neck of garlands and other patterns.

However, the description given in the catalog varies from what is depicted in the image. The catalog card states: "Panse ovoïde, allongée vers le fond inséré par un anneau sur un pied bas en scotie, terminé par un ourlet; aplatie dans le haut chargé de deux filets au-dessous du col qui s'élargit en bec trilobé. Anse en S, terminée inférieurement par un mascarón.

Sur la panse et sur le pied sont appliqué des baguettes filigranées de blanc, en spirale, faisant une légère saillie. Leur intervalle est décoré de fleurons d'or qui dessinent des guirlandes sous l'ouverture, et des torsades sur les filets et sur l'ourlet."⁴

The description does not mention the gold painting in the form of three garlands on the outside and inside of the throat and clearly visible in the image in the album.

The absent reference to this decoration is not an oversight of the authors. This can be explained - the garland



Jug. Venice. Glass: the middle of the XVI century., painting - the third quarter of the 19th century. Colorless and white glass; free blowing, *vetro a retortoli*, gold painting. Height with handle 28.0 cm.; diameter 12.5 cm. Inv.No. F-480. Photograph © The State Hermitage Museum. Photo by Alexander Koksharov.

decoration was applied on top of a restoration gluing to hide the seam. The gold trim on the sides of the high handle was applied at the same time to create a unified look.

Bazilevsky probably ordered this alteration. It should be emphasized that such additions did not reduce the object's value, otherwise the authors would not have included the object in the album attached to the catalog.

3 Darcel A., Basilevsky A. Collection Basilevsky. Catalogue raisonne. Paris, 1874, N° 497, Pl.L

4 Darcel A., Basilevsky A. Collection Basilevsky. Catalogue raisonne. Paris, 1874, N° 497, Pl.L

The absent references to later decorative additions suggests that at the time of the acquisition by Bazilevsky the jug's appearance was consistent with the catalog's description and its attribution to the Venetian production of the 16th century was not questionable. Until recently, attribution was not questioned by the followers of Alexander Bazilevsky and Alfred Darcel.

After entering the Hermitage collection, the jug was repeatedly published.⁵ In the 1923 book, *Venetian Glass*, by the Hermitage's curator Alfred Kube (1886-1942), the jug is presented as one of the best examples of old Venetian production in Hermitage collection⁶. The author provides a detailed description of the subject. Unlike Alfred Darcel, Kube describes in detail the painting on the throat of the jug, "on the upper and lower surfaces ..." of which "... are written in thick gold paint with garlands of flowers connected in six places by edges ... ribbons in the form of narrow stripes." He does not mention that the two-sided painting masks a crack.

This can be explained because of it's high quality restoration.

This explanation seems the most likely, as Kube paid special attention to the condition of the object, noting "... the glass of the vessel's body and neck was significantly clouded."

The crack on the jug's throat was not noticed by Kube and is not listed in future descriptions⁷. Perhaps that is why the dating of the jug by the 16th century has never raised doubts, and gold painting seemed to be a distinguishing feature that gives the subject special artistic value.

For a long time, the jug was on permanent display at the Hermitage. In connection with the preparation of the exhibition in Japan in 2011, the jug was removed from display and examined. It was during this time that conservators determined the painting on the throat was made on top of the crack existing on the handle side.

It was also noted that the pattern is duplicated on the bottom surface - a technology not typical for the 16th century. For the first time it was suggested that the throat's painting is evidence of a 19th century restoration.

Studies have convincingly show that all gold-painted ornaments date from the 19th century, but they were not executed simultaneously

In 2017, Dr. Dora Thornton, during her visit to the Hermitage, verbally suggested that the jug was of late origin and considers it to be a fake and produced during the second half of the 19th century.

The object was transferred for research to the Department of Scientific and Technical Expertise of the State Hermitage Museum to determine the time of the creation of the jug and its decor⁸. The results of a study seemed extremely interesting.

Studies have convincingly shown that all gold-painted ornaments date from the 19th century, but they were not executed simultaneously.

5 Kondakov N. The Imperial Hermitage. Index of the Department of Middle Ages and Renaissance. St. Petersburg, 1891, p. 173, No. 105 (in Russian language)

6 A. Kube. Venetian glass. St. Petersburg, 1923, tab. VI, p. 86-87 (in Russian language)

7 B. Shelkovnikov. Glass. Leningrad, 1962, p. 38, Fig. 23 (in Russian language)

8 The study was conducted on January 2019 by Sergey Khavrin in the Department of Scientific and Technical Expertise of the State Hermitage museum

The mirrored garland painting on the throat is made of thin gold. The paint was not laid evenly, which is perfectly visible in macro photography.

The painting was done without subsequent fixing firing and

required a substrate to keep the paints adhered to the surface. Barium white was used; this was commonly used since the late 1830s.

The decor on the body and leg, which A. Darcel and A. Bazilevsky

considered authentic, was also executed in the 19th century, but several years earlier. After analysis, it was concluded that gold was laid on a brown substrate of white lead, calcium carbonate, ocher, kaolin and chromium-containing paint. This mixture was used in the late 1810s and 1830s. Since the painting was not fixed by fire, the paint was unstable. As a result, a restoration was conducted and traces of its residue are clearly visible in macro photography.

The presence of traces of the subsequent restoration is consistent with the results of modern research, which proved that a similar painting technology using a substrate, but without the use of high temperatures, gives a weak adhesion of the paint to the surface of the vessel⁹.

In 1923, Alfred Kube noted the gilding was probably applied to



Jug throat fragment with mirrored painting. Photograph © The State Hermitage Museum. Photo by Alexander Koksharov.



Fragment of painting from the body of the jug. Photograph © The State Hermitage Museum. Photo by Alexander Koksharov.

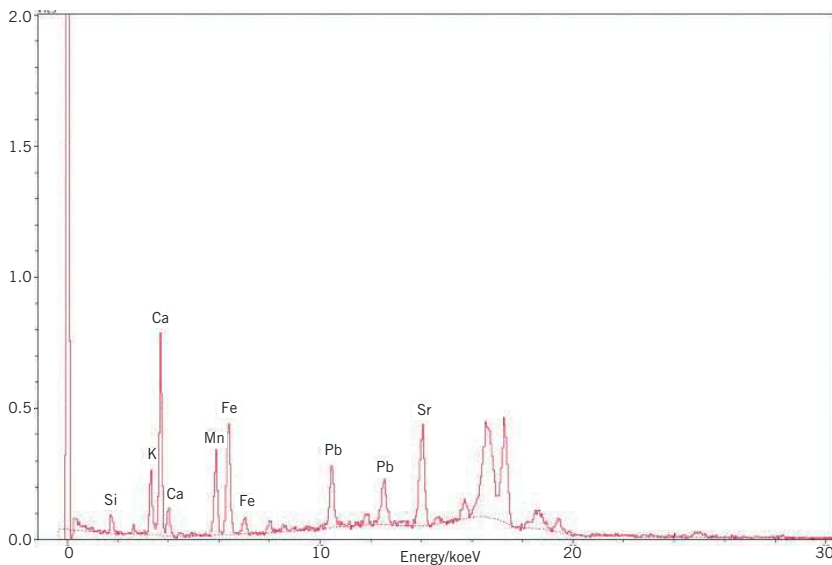


Macro photography of the jug's throat featuring a fragment of the painted garland. Photograph © The State Hermitage Museum. Photo by Alexander Koksharov.



Traces of the painting restoration completed on the body of the jug. Photograph © The State Hermitage Museum. Photo by Alexander Koksharov.

⁹ Inês Coutinho, Teresa Medici, Rui J.C. Silva Bernard Gratuze, Helena Catarino, Augusta Lima. Gilding on glass: New evidence from a 17th century flask found in Portugal/ Journal of Archaeological Science: Reports 6 (2016), p.294



SEM-EDX - light particle spectrum on the jug's transparent glass surface.

the body of the jug to mask the clouding of "... the glass of the body and neck ..." This adjustment is noticeable in the photograph in the 1874 album¹⁰.

The clouding of the glass is the result of a surface interaction with an aggressive environment: most likely, the jug was actively used for some time to store and serve drinks. The need to "improve" the surface with gold painting indicates that the item itself

was created long before this decoration.

The jug's form - an egg-shaped body, a narrow neck, a three-bladed throat, and a high handle - is typical of Venetian glass or *Façon de Venise* produced in the second half of the 16th and early 17th centuries. Its decor, the use of external canes known as a *retortoli*, also confirm the proposed attribution. Similar decoration can be found on other glass products dating to this period.¹¹

In view of the foregoing, a jug from the Hermitage collection can be attributed to the production of Venice or *Façon de Venise* and it can be dated to the second half of the 16th and early 17th centuries. Its dating is also confirmed by data collected by a X-ray fluorescence study ArtTAX spectrometer and a Scanning Electron Microscopy coupled with Energy Dispersive X-ray (SEM / EDX) showed that the main components of the jug's glass are calcium and silicon oxides.¹²

This study made it possible to assert that this jug was created by masters in the Renaissance, with decoration added in the 19th century. A passion for collecting in the first half of this century prompted an unknown antique dealer to give the product with the help of gold painting a more luxurious and, accordingly, expensive look. The jug's new owner, Alexander Bazilevsky, also ordered improvements to the jug. The being of this jug is a vivid episode in the history of collecting 19th century.

¹⁰ A.Kube. Venetian glass. St. Petersburg, 1923, tab. VI, p. 87; Darcel A., Basilevsky A. Collection Basilevsky. Catalogue raisonne. Paris, 1874, Vol. 2, Pl.L

¹¹ Cup from the collection of the Rijksmuseum, Amsterdam (Pieter C. Ritsema van Eck, Henrica M. Zijlstra-Zweens. Glass in the Rijksmuseum. Amsterdam, V.I., Zwolle, 1993, No. 74, p. 59); a tazza and a vessel in the form of a boot from the collection of the Metropolitan Museum of Art, New York (Dwight P. Lanmon, David B. Whithouse. The Robert Lehman Collection. Glass. The Metropolitan Museum of Art. B. XI, New York, 1993, No. 52, 54, p. 143,147-149)

¹² The study was conducted on 10.01.2018 by Sergei Khavrin in the Department of Scientific and Technical Expertise of the State Hermitage museum

GLASS SCIENCE ON RUSSIAN COLLECTIONS

Products of the Leningrad Artistic Glassworks

and research of their chemical composition by means of x-ray fluorescence spectral analysis

Olga Startseva, Sergey Sirro. The State Russian Museum, St.Petersburg

In this article we will explore the possibilities for employing the x-ray fluorescence spectral analysis to research the chemical composition of the objects manufactured at the Leningrad Artistic Glassworks (hereinafter referred to as LZHS) within the period from the late 1940s to the 1980s. The review of the archival material and integration of the analysis' results allowed us to establish the scale of the chemical composition of the glasswork's glass. The findings obtained from this study can be used in attributing and clarifying dates assigned to artistic glass made at LZHS.

To begin with, it seems reasonable to characterize the materials that laid the basis of

the study. Then we will proceed to the description of the study's results and, finally, draw some conclusions relating to the importance of the findings for the museum work.

Leningrad Artistic Glassworks traces its lineage to the small experimental workshop at the Deminskaya Mirror Factory (later the Leningrad Mirror Factory) located on Deminskaya Street, now Professora Kachalova Street, 9. The founders of the establishment were sculptor V.I. Mukhina and chemical engineer N.N.Kachalov. They were tasked with creating industrial designs for Soviet glassware, establishing modern techniques for glass melting and decoration, and restoring the

forgotten technologies. The first artworks were made here in 1940-1941. The work was then suspended during the Great Patriotic War and resumed in 1948. In 1948, the Leningrad Mirror Factory was reorganized into artistic glassworks, which became an all-Union experimental base for the production of unique, stock, and mass-produced crystal and glassware. In 1996, the Leningrad Artistic Glassworks ceased production, due to bankruptcy.

As it is known, Leningrad Artistic Glassworks developed a formula for glass and crystal, which was used to manufacture artistic ware and mass-produced designs. Special requirements were

imposed on the crystal at the factory, since the company started producing crystal-ware in 1950, and since the mid-1960s switched entirely to the stock- and mass-production. The main requirements for crystal glass were the following: I do not understand minimum amount of defects of stone, striae¹ and air bubbles; whiteness and transparency of the glass, high refractive index.

In 1950, engineer V.A. Dauvalter developed one of the main compositions of the lead crystal glass that contained the following components and indicators: SiO₂ – 58,0%, PbO – 25,0%, K₂O – 14,0%, Na₂O – 3,0%, As₂O₃ – 1,0. Refractive index: 1,55 Expansion factor: up to 400°: 113,3.10⁻⁷ and up to 450: 129,9. 10⁻⁷. It was characterized by maximum transparency, whiteness, “sonority”, as well as a high index of refraction and dispersion.

With regard to the stained glass, the factory was also looking for new compositions and ways to obtain them. For example, in 1952, engineers Ivanova and Kiryenen first invented a new type of glass - zinc sulfide. It was characterized by its easy color ability and, most importantly, its opacity in a wide range of degrees colors. The production of zinc sulfide glassware was mastered during

the second half of the 1950s. Artists such as B.A. Smirnov, E.V. Yanovskaya, L.O. Jurgen, and H.M. Pyld worked with sulfide glass. For example, B.A. Smirnov and H.M. Pyld created a series of sulfide vases and sets with different color shades and decor, imitating the “Venetian thread”. Due to the narrower specialization of LZHS and the increase in the production of stained and unstained crystalware, the melting of zinc sulfide glass was stopped in the mid-1960s.

The palette of stained glass at the factory was diverse and rich and overtime, was improved upon and production costs decreased. The colors of blue, red, purple, yellow, green, and white were the most popular to produce. All of them were melted multiple times and kept at the factory for a long time, until the 1990s. The glass was characterized by purity of color, intensity, saturation, and variety of shades from warm to cold.

Less popular colors to produce were lilac, pink, smoky, yellow-green, and brown. The reason for this was that the composition of these glasses included either expensive components, or components containing substances harmful to production. For example, the composition of yellow-green glass included uranium oxide, it

was used only for solid (not flashed) products, and in the late 1950s this type of glass was discontinued. Pink, also known as “golden ruby”, contained the small gold particles. Lilac-colored glasses, painted with the rare, earth element neodymium oxide, were rarely used at the factory; produced, only in the early 1960s. The main reasons were “insufficiently studied as a raw material for glassmaking” and “the high cost of neodymium trioxide, due to the difficulties of obtaining and cleaning it”.

Stained glass was used to produce original designs and in stock- and mass-production from the 1940s to the 1990s: in 1940-1941 and in the early 1960s - in its pure form, in the late 1940s-1950s it was used as a flashed glass, in the 1970s-1980s it was used as a decorative bright spot or inclusion, only occasionally in a solid form. The color used was

The color used was associated with the form's shape, decor, purpose and method of use

1 Stria is a glassy inclusion that differs in its composition and properties from the “main” glass.

associated with the form's shape, decor, purpose and method of use, and also influenced by the global fashions of the applied and decorative arts.

This kind of data, of course, can be used for attribution of glass and crystal-ware, but it cannot be the only source because, first, LZHS's glass formula was used by other USSR glass factories, and secondly, the artists of other glass factories also focused on the changes and innovations that took place in the glass industry and culture in general.

In light of these challenges, there is a need for a comprehensive and complex analysis of glass and crystal-ware. These finds will provide a base of information and to take this data, about the chemical composition of glasses. This will allow scientists and art historians to detect differences in the crystal and glass formulas used by USSR factories, as well as to identify specific features within each individual period, which can serve as a basis for specifying the time of manufacture of the object under study.

To collect information about glass compositions, the x-ray fluorescence spectral analysis (XRF) method is of particular importance. It relates to physical, non-destructive methods of

elemental analysis of the composition of the objects containing elements from Al (aluminum) to U (uranium). Its main feature is the possibility of simultaneous analysis of the qualitative composition and quantitative content of elements in complex multicomponent mixtures with an error of 0.01% for sufficiently small subsamples.

The XRF method was used to study 105 items from the collection of the State Russian Museum of the 18th, 19th and 20th centuries. This report will focus only on a certain period of time of one factory - LZHS.

In addition to LZHS's products of the 1940s-1980s, the works made in the second half of the 19th century to the early part of the 20th century are used for comparison in the report. The study of the chemical

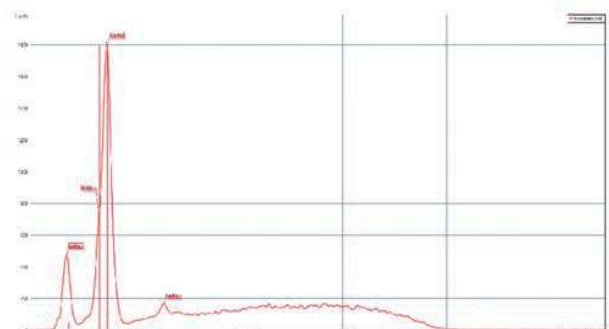
composition of the glass was carried out on the X-Art-M spectrometer,² located in the Department of Technological Research of the State Russian Museum. The head of the department, Sergey Sirro, conducted the research.

The results of x-ray fluorescence analysis were derived in the form of spectra, one of which is presented in Table 1.

The analysis data showed that the main composition of products of the second half of the 19th century and products made at the LZHS in the late 1940s and 1950s included the following components: Si (silicon), K (potassium), CA (calcium). In the early 1960s, the composition changed: it included Si (silicon) and K (potassium), but the third main component instead of Ca



V.I. Mikhlin Glass, 1940-1941.
Glass, hot glass (furnace)
(handblown)
ST-2666
The State Russian Museum



No arsenic and lead compounds. Most likely, slaked lime (calcium carbonate) and potash (potassium carbonate) were added. A little iron oxide.

The study of the composition of the glass was carried out on the X-Art-M spectrometer.

² X-Art-M spectrometer is a versatile x-ray fluorescence energy dispersive analyzer designed for rapid analysis of the chemical composition of various objects.

(calcium) is Zn (zinc). The introduction of Zn in the composition helped to increase the light refraction of glass.

In pre-revolutionary items, and especially in LZHS items of the 1940s and 1950s, iron (Fe) oxide is observed in small amounts in the composition of the glass. There is an explanation for this. The iron got into the glass from the refractory. This fact is confirmed by archival documents and scientific and technical sources. Later, there was no iron in the glass.

All glass samples, except those made in 1940-1941, contain lead (Pb) oxide. The lowest concentration of lead is found mainly in items from the late 1940s to the 1950s, and this figure increased significantly post 1960. The evidence of this fact is archival information, which documents record “on the termination of the production of high-quality glassware in 1965, and on the vacated production capacity, the factory began to increase the production of crystal-ware”.

In objects produced during the late 1940s and into the 1950s and in items from the second half of the 19th and early 20th centuries there was a presence of arsenic in the glass composition. The data obtained

shows that arsenic was introduced into the composition of pre-revolutionary glass in greater quantities than in LZHS products, and there is an explanation. “Arsenic on LZHS was introduced as a chemical decolorizing agent for glass. The introduction of a high percentage of arsenic in calcium and potash-lime glass contributed to the formation of abundant small air bubbles. To eliminate this defect originating from the manufacturing process, A.N. Dauvalter suggested using arsenic in a quantity of 0.05%”.³ Thus, the presence of this element is a good dating mark that indicates a certain manufacturing time period.

Some of the glass samples that are part of this study contain dyes such as Co (cobalt), Mn (manganese), Cu (copper), Cr (chromium), and U (uranium). During the analysis, it was found that compounds of two oxides were used to give the glass a more saturated color. For example, compounds of Co (cobalt) and Mn (manganese) oxides were used to give the product a dark blue color (almost black). This indicates an economical use of raw materials in the production of mass products at LZHS.

There was also a presence of Sr (strontium) in some glass composition. Strontium is seen in

products with stained flashed glass. It is known that in glassmaking strontium was used to produce special optical glass, as well as to increase the chemical and thermal stability of the glass and the refractive index.

The work carried out allows to draw conclusions:

1. The study of the chemical composition of glass and crystal by the non-destructive XRF method allowed scientist to not only to see the main components that make up the glass of pre-revolutionary items and LZHS products, but also to make a comparative analysis, which revealed a number of significant markers indicating the time of manufacture of the item.
2. The study of archival materials and their inclusion in the work made it possible to corroborate, complete and expand the information and clarify a number of questions raised during the study of the chemical composition of glass and crystal.
3. The obtained data can be used for attribution of glass and crystal-ware, as well as give an impetus to new research and discoveries in the study of glass and crystal-ware.

³ Dauvalter A.N. Crystal, stained and opal glass. Gosudarstvennoye nauchno-tehnicheskoye izdatelstvo [State Publishing House for Science and Technology], 1957, p. 110. (in Russian)

GLASS SCIENCE ON RUSSIAN COLLECTIONS

A Study of the Lidded Glass Bowl in the State Hermitage Museum as an example of ‘Glass:

Gold leaf/Colour combination Type’ and its Cut Gold Leaf Technique ‘Kirikane’

Hidetoshi Namiki & Yasuko Fujii. Tokyo University of the Arts, Tokyo

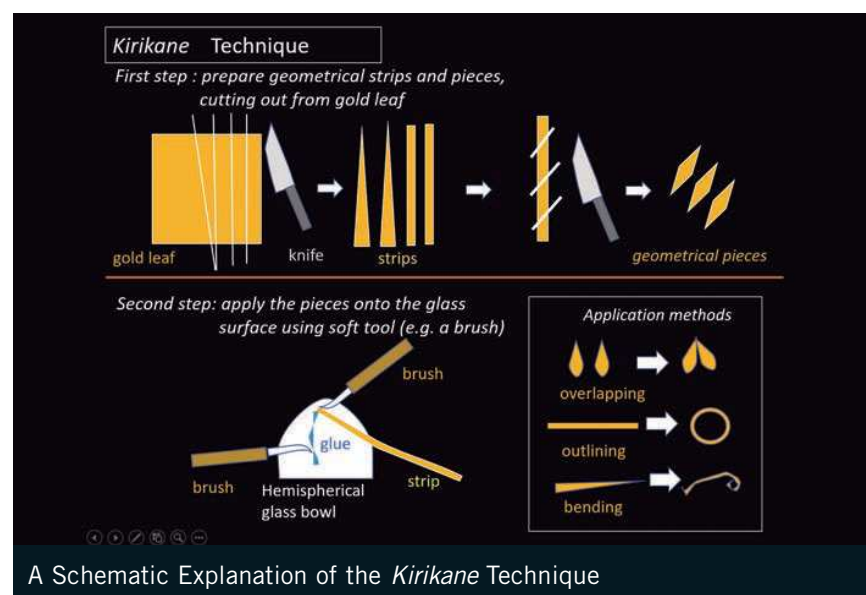
Introduction

The aim of our collaboration is to provide further evidence to identify the possible place of manufacture and date, through studying cut gold leaf decoration techniques on the ancient glass. In previous studies we confirmed that the cut gold leaf decoration on nineteen out of twenty-two pieces of Hellenistic gold sandwiched glass was made using the *Kirikane* technique.

We decided to employ this particular term, describing the Japanese traditional cut gold leaf technique dating from the 6th century AD, because, although this procedure disappeared from

the western world after the late Roman period, it must have had a ‘western’ origin.

In our lecture we focused on the two Hellenistic gilded glass objects in the Hermitage State





Bowl: part of the Olbia vessel. Left: from above, Right: profile. Photo by H. Namiki © State Hermitage Museum

Museum, which we had the opportunity to study in 2014, and explained the characteristic features of *Kirikane* on the gold sandwich glass bowl from Mozdok (inv. no. K₃ 5323) and the lidded glass bowl with gilded and painted decoration from Olbia (inv. no. E 805). In this paper, we will concentrate on the latter piece, one of the rare objects whose fragile cut gold leaf decoration was protected on both sides in a similar manner to gold sandwich glass, but in this case, one side was covered by the layer of red and blue colour. We will call this variation 'Glass: Gold leaf/Colour combination Type', and as E. Marianne Stern has indicated, we would like to examine this type as a prototype of the gold sandwich glass.

The Lidded Bowl from Olbia (inv. no. E805)

The lidded bowl was donated to the State Hermitage Museum from G. Kallo collection in 1900, and is said to be from Olbia, Ukraine, one of the Greek colonies on the northern Black Sea coast.

It is composed of a shallow bowl and a lid which resembles another shallow bowl. The former has an outspread horizontal rim about 1cm wide and a slightly convex base. Its diameter is 13.3cm, the height is 3.1cm, and its thickness is between 2 and 2.5mm at the rim. The lid has a curved but angular rim about 2.5cm wide, whose horizontal part is about 1.5cm wide so that it fits the horizontal rim of the bowl. Its base is flat rather than convex. Its diameter is 14.4cm, its height is 1cm, and its uneven thickness ranges

from 1 to 4mm at the rim. Both parts are colourless with a greenish tinge, and both inner and outer surfaces of the glass show thin and concentric wheel-abraded marks.

The traces of the decoration are composed of cut gold leaf, with red and blue colours. In her 1997 catalogue Nina Kunina mentions that the decoration remains on the inner surfaces of both the bowl and lid. Although the appearance of the lid section is now more worn than it appeared in the catalogue's photograph, the



Lid: part of the Olbia vessel. Left: front side, right: underside. Photo by H. Namiki © The State Hermitage Museum

decoration is still visible. Stern and Despina Ignatiadou have described this technique as 'reverse painted decoration', since it was intended to be viewed from above or the front through the transparent glass.

The decoration is composed of three bands, each band corresponding to the three faces of the curved but angular rim. The bands are divided by a long, thin strip of gold leaf. The central band is applied on the approximately 1.5 cm wide horizontal section, and features a wreath (of myrtle, olive or laurel), tied with a red ribbon, on a blue background. On the outer band of the edge section runs a row of small lozenges in gold leaf on a red background. The inner band on the inner edge section features a row of small

rectangular pieces whose shorter sides are attached to a border strip forming a type of crenelated pattern on a red background.

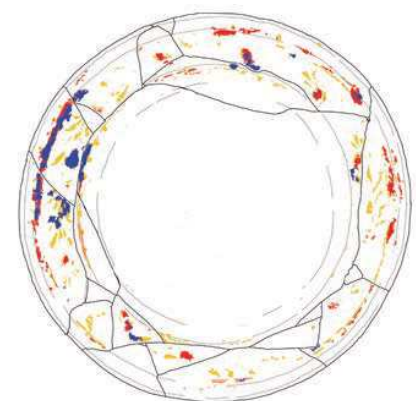
Where Kunina described 'pale trace of golden flower visible on bottom', only tiny specks of gold leaf with several whitish attachments are now visible, mainly on the lower left part of the inner surface.

Concerning the red and blue colour, we cannot clearly define what the materials are, but its grainy surface leads us to believe they are pigments.

This type of lidded bowl is very rare, and Stern noted just 11 other examples in the appendix of her article. Apart from fragmented or dispersed pieces, only two other intact examples

are known. One example is in the Thessaloniki Archaeological Museum from Pydna, northern Greece, nowadays Makrygialos (inv.no. Py 6435, Py 6436; lid D. 18cm, bowl D. 15.4cm), found in an excavated Macedonian tomb of the early 3rd century B.C.(the bowl is probably older and is dated to the 4th century B.C.). The other example is in the Louvre Museum and has unknown provenance. It dates to the 3rd or 2nd century B.C. (inv. no. S 2584-2585; lid D. 12 cm, bowl D. 11.2 cm).

Both bowls feature reverse painted decoration on the inner surface of the incurved rim. The Louvre piece shows a close similarity with the Olbia piece in the combination of gold leaf and colour (red, blue and black); three-band decoration



Left: detail of decoration. Photo by H. Namiki © The State Hermitage Museum. Right: actual state of remaining decoration, drawn by H. Namiki

with similar patterns on the lid; traces of the decoration on the inner surface of the bowl; the uneven shape of the rim; and size. However, there are also differences when we consider the more angular contours of the lid, and lack of black colour on the Olbia piece. According to Despina Ignatiadou, who first reported the Pydna vessel, the Olbia and Louvre examples were made by slumping. The bowl part may possibly be explained by this technique, but it is more difficult to explain exactly how the curved, wide and angular rim of the lid part of the Olbia piece was formed. Mark Taylor and David Hill have suggested that the lid was probably made by slumping over a form which included the shape of the rim as a channel, and the slumped glass was coaxed into this channel around the main body of the form.

Kunina dated the Olbia vessel to the 1st century B.C., but, more recently, Ignatiadou dated it to the 3rd century B.C., whereas Stern has dated it from the late 4th to the early 3rd century B.C. As Kunina's dating was made before the discovery of the Pydna example, we will follow the earliest dating, around the 3rd century B.C.

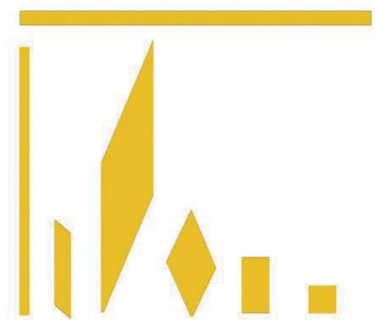
Cut Gold Leaf Decoration of the Lid: *Kirikane* with Minimal application method

I will describe the cut gold leaf decoration: shows a

hypothetical reconstruction by Hidetoshi (in yellow), superimposed onto the remains of the original pattern (in black). It is possible that the wreath running along the central band may have had additional elements, such as a knot or tops to the wreaths. However, Hidetoshi tentatively interpreted the design as a continuous and repeated pattern. With the help of Hidetoshi's reconstruction, we can see that each wreath is composed of a ribbon, five leaves, two berries and three more leaves. This unit, without the latter three leaves, is similar to the laurel wreath pattern on the rim of the Mozdok bowl.

Unlike Hellenistic gold sandwich glass, it is not easy to show the evidence of *Kirikane* on the 'Glass: Gold leaf/Colour combination Type' because of its

poor condition: most of the gold leaf decoration has flaked off, the smaller remaining part is covered by the coloured layer, the whitish weathering of the glass layer makes it difficult to observe the leaf, nor can the coloured layer be checked for overlapping or bending gold leaf parts by applying light from below. Nevertheless, close examination enabled us to discover evidence for the use of the *Kirikane* technique on the lidded bowl from Olbia: we noted that two long strips which bordered the bands are not smooth but wavy and jagged. If the decoration had been made by the 'scratching' technique, these strips would more likely be straight. Furthermore, one of the small rectangles attached to the strip shows a different 'fabric' grain to the gold leaf, which indicates that it was not scratched, but made by applying different pre-cut pieces. Therefore, Hidetoshi,



Left: The surviving cut gold leaf decoration (in black) together with a hypothetical reconstruction by H. Namiki (in yellow). Right: possible geometric pieces and strips of cut gold leaf prepared to create the decoration.

as a *Kirikane* master, suggests that there were seven types of geometric or strip pieces required for the Olbia lid decoration: longer and thinner strips, diamonds, parallelograms and rectangles. All of the patterns on the three bands are made by applying the pre-cut gold leaf pieces minimally, without using any overlapping, bending or outlining techniques. The use of this 'minimal' method may also be seen on the laurel wreath pattern of the Mozdok bowl: the application method will always depend upon the nature of the decoration pattern.

'Glass: Gold leaf/Colour combination Type'

The tiny, thin-cut gold leaf decorations are very delicate and fragile, requiring some manner of protection from abrasion. In this case, after the cut gold leaf decoration was applied onto the inner surface of the glass lid, the outer surface was covered by a layer of pigment. Therefore, unlike the gold sandwich glass, which usually employs transparent glass layers, enabling its decoration to be seen from both sides, this variety can only be viewed properly from its front. Using this technique, cut gold leaf decoration becomes a more sophisticated decoration, with its contrasting blue or red background which acts as a protective layer. Unfortunately, the passage of time has shown that the coloured layer proved

less durable than the glass itself. In fact, whilst most of the original cut gold leaf decoration on the Mozdok bowl remains, that of the Olbia lid has almost disappeared. This leads us to assume that another lidded bowl without decoration might once have been decorated in a similar way: to the existing list of 'Glass: Gold leaf/Colour combination', we would like to add the fragmentary, colourless, flat fragment (3.71cm x 3.2cm, 0.2cm thick) from Tanis (house 25), Egypt, excavated by W. M. F. Petrie in 1884, and now in the British Museum (BM EA 22462). Its reverse painted decoration is composed of a wave pattern and parallel lines in gold leaf, red and blue colours. It was originally dated as Ptolemaic by Petrie, and as Roman (2nd A.D.) by J. D. Cooney.

Conclusion

In this paper we confirmed the use of the *Kirikane* technique

on the Olbia vessel. Although it will be necessary to examine the other known lidded bowls, we may now state that *Kirikane* was used on both 'Glass: Gold leaf/Colour combination' type, and the gold sandwich glass. This suggests that the traces of wave patterns on the Pydna piece, which Ignatiadou proposed was possibly made using a thick gold foil decoration, might also have been the product of a thinner cut gold leaf decoration style. As we have already presented in our previous studies, the wave patterns on Hellenistic gold sandwich glass were common, and were made using *Kirikane* (the bending and filling method), and where this was not used, might have been coloured in blue, like the wave patterns on the Tanis piece. According to Hidetoshi, the manufacture of gold leaf requires a higher level of craftsmanship than gold sheet.





Hypothetical 3D reconstruction by H. Namiki of the Olbia lidded bowl.

Gold sheet requires only 'striking and stretching', but in order to create the much thinner gold leaf, such as may be torn easily by finger pressure, the medium sandwiched between the gold sheets needed to have been of the highest quality.

There is another reason why we became interested in the Olbia bowl: it is related to the Tresilico-Valepodio bowl, which we studied intensively in 2010. This shallow bowl, now in the Reggio Calabria National Archaeological Museum, is an unusual example: a shallow bowl shape with a pictorial scene, similar to the Pushkin Museum of Fine Art's fragmentary piece. The shape of the bowl, with its rim opening outward, further increased speculation that the lid of the bowl may have

continued and featured gold sandwich glass, suggesting that the lidded bowl might have been its prototype. Here also, the common features of cut gold leaf decoration by *Kirikane* are confirmed.

Furthermore, according to Stern, the findspots of the lidded bowl suggest that the type may have originated in Macedonia, northern Greece, and the other sites mentioned are known to have been in contact with Greece. This leads us to consider the likelihood that the origins of the *Kirikane* technique may have been around the same location.

Acknowledgement

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We would like to thank the State Hermitage Museum for their kind collaboration.

We would also like to thank Mark Taylor and David Hill for their comments and suggestions.

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Museum of Glass and Jewellery in Jablonec nad Nisou

Petr Čížek

The Museum of Glass and Jewellery
in Jablonec nad Nisou



Photo ©Museum of Glass and Jewellery.

The Czech lands have been known as an area of glassmaking for many centuries. This is especially true about North Bohemia, where several production hubs emerged and achieved global importance. It is only natural, then, that it is here the Museum of Glass and Jewellery, in Jablonec nad Nisou, is located. This is the only national specialised museum in the Czech Republic devoted to glass and costume jewellery. The museum now operates under the auspices of the Ministry of Culture of the Czech Republic, but its history stretches back to 1904, when it was established by local industrialists. It was provided with a nationwide remit in the disciplines of costume jewellery and glass in 1961 and

1974 respectively. Since then the museum has transformed itself into a modern and dynamic institution with extensive collections of global significance, citing more than 15 million objects. The institution's goal is not only to preserve history, but also, and mainly, to effectively present this to modern-day visitors and researchers.

The two permanent exhibitions at the museum offer visitors a unique insight into the spectrum of glassmaking and costume-jewellery-making techniques. The glass exhibition focuses on the material's utility, as well as aspects of artistic and studio glass. It is regularly updated with innovations in the field.

There is also an exhibition dedicated to mining and medal-making in Jablonec and examples of fasteners and buttons from a unique collection gathered a hundred years ago by Prague industrialist Jindřich Waldes. The permanent exhibitions are both highly professional and can be easily interpreted by the general public. Additionally, printed and audio guides, available in several languages, complement the exhibition program.

The Museum of Glass and Jewellery also hosts a summer exhibition program in Kristiánov, a former glassmaking settlement that dates back the 18th century. This is where the successful and

famous Riedel glassmaking dynasty was located. The last remaining factory building known as "Liščí bouda" (Fox Cabin) is home to a new exhibition on the firm's history.

Currently, the museum is rethinking the space by expanding the exhibition space with a modern annexe. It will be shaped in the rather unconventional shape of a cut costume-jewellery stone. With an opening date of 2020, visitors will be able to admire a selection of Christmas ornaments from the museum's collection, which is among the largest in the world.

The activities of the Museum of Glass and Jewellery are far-reaching indeed. A programme of short-term exhibitions, workshops, talks and other cultural events is prepared every year, often in cooperation with significant glass artists and companies, such as Moser, Preciosa, Lasvit and many others. Support from the Ministry of Foreign Affairs, Czech Centres and other Czech and foreign institutions has helped a number of exhibition projects to be staged in 17 countries of the world, including France, Spain, Greece, Japan, Azerbaijan and Russia: No Limits, Hot & Cold and Brilliant by Design, or the very latest - Handmade Dreams – to name but a few.

The climax of the museum's exhibition activities is the



Photo ©Museum of Glass and Jewellery.

International Triennial of Glass and Jewellery. This event was inspired by the celebrated international costume jewellery fairs that were held in Jablonec nad Nisou in the second half of the 20th century. Catalogues are published for all exhibitions and are available from the museum's e-shop. A total of ninety-eight brands from twelve countries attended in 2017. The next event will be held in 2020.

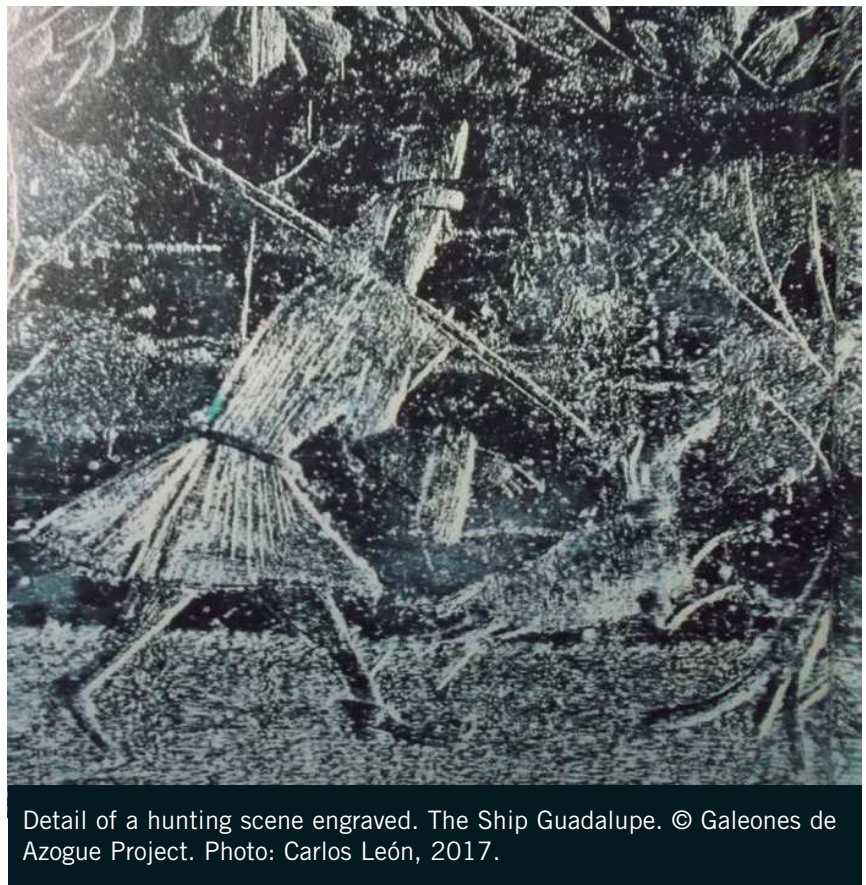
The Museum of Glass and Jewellery is also registered as a science institution. The museum's research activities rely upon the cooperation of other museums and draws upon its own library, which contains around 20,000 bound volumes and an extensive archive. The Museum of Glass and Jewellery in Jablonec nad Nisou is always open to collaboration. Entering into cooperation with ICOM Glass is seen as an exceptionally important step in this regard.

Glass collection of the Fleet of Azogues of 1724 sunk at Samaná Bay

Carlos León, underwater archaeologist, **Teresa Palomar**, Instituto de Cerámica y Vidrio, CSIC, **Paloma Pastor Rey de Viñas**, Museo Tecnológico del Vidrio

The ship *Nuestra Señora de Guadalupe y San Antonio*, commanded by Gabriel de Mendinueta, set sail from Cádiz as leader of the *Azogues* fleet, the 13th of July of 1724. The ship *San José*, also known as “Conde de Tolosa” accompanied the fleet commanded by Captain Sebastián Villaseñor. The load was 370 tons of mercury for Nueva España with a huge amount of iron nails, exemptions, state official paperwork, and private load of the andalusians harvesters, mainly olive oil, wine and spirits. The destination was the Veracruz harbor. The commander of the entire fleet was the General Lieutenant Baltasar de Guevara y Vinuesa, on board the *Guadalupe*.

After a stopover at the port of Aguada in Puerto Rico the night



Detail of a hunting scene engraved. The Ship Guadalupe. © Galeones de Azogue Project. Photo: Carlos León, 2017.



Glasses found on the Guadalupe Ship exhibited in the Museum Atarazanas Reales, in Santo Domingo, República Dominicana. © Galeones de Azogue Project. Photo: Carlos León, 2017.

of the 24th of August, a tropical storm with a strong north wind surprised them when they attempted to sail across the northeast of the Dominican coast. Both ships crashed against the reefs in the area. The *Guadalupe* was stranded close to the coast but the *Tolosa* dramatically sank in the middle of the bay.

In 1976 the *Guadalupe* was found by fishermen of the close location of Miches. They recovered some items and they sold them until the Dominican government signed a contract with the treasure hunter Tracy Bowden who organized a recovery operation that took a year almost. The company recovered almost 20.000 pieces in excellent states of preservation. Among the

remains of the ship Bowden found was a group of 364 glasses. They were hidden in a very recondite area of the ship at the stern of the boat and they ranged in different truncated cone shaped sizes and with a variation of decoration. They were packed with grass with the smallest ones inside the bigger ones, not into cages. Five of the magnificent glass jars were also decorated. One year later Bowden found the remains of the *Tolosa* with another important load of more than 250 glasses found at the *Guadalupe*.

In 1994, a Spanish and Dominican team managed by Pedro J. Borrell, Cruz Apestegui, Manu Izaguirre, and Carlos León started up the Galeones de Azogue



Location of the glasses found in the stern of the ship Guadalupe, by Tracy Bowden in 1976. © Dirección Nacional de Patrimonio Cultural Subacuático Archive. Photo: Jonathan Blair, 1976.

Project, documenting the remains of *The Guadalupe* that still remained at sea. They studied the items recovered by Bowden and found many documents about the double shipwreck at the Archivo General de Indias in Sevilla.

Unlike the rest of the goods that appear on the registries of both ships, there were no official records regarding the glasses. This lack of documentation and the location where they were found, hidden in the ship, suggests the idea that the glasses were being smuggled.

Chemical analysis of some of the glasses certified that the pieces

Table 1. Chemical analyses of different fragments founded on the shipwreck

	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	SO ₃	K ₂ O	CaO	Fe ₂ O ₃	As ₂ O ₃
M1	0.5	0.88	0.3	75.1	0.06	0.19	14.5	7.6	0.14	0.67
M2	0.33	<0.10	0.36	69.5	0.07	0.33	17.8	10.4	<0.10	1.15
M2A	0.66	<0.10	0.1	73.6	<0.04	0.3	14.8	9.11	<0.10	1.32
M3	0.3	0.55	0.32	71.1	0.05	0.26	16.8	8.9	<0.10	1.68

were potash-lime silicate glasses with a content of SiO₂ around the 70 wt. % (Table 1). This composition is typical of Bohemian glasses. The high content of CaO and SiO₂ in the glasses increased their chemical stability. For this reason, the glasses present a good state of conservation after being two centuries on the seabed.

It is important to note that customs and Spanish harbors at the first half of the 18th century recorded the competitive prices

and final destination of the imported glasses manufactured in Bohemia and central Europe. Only in Spain do we know that were commercial desks of Bohemia in the main harbors or Cádiz, Sevilla, La Coruña, Alicante, San Sebastián or Bilbao.

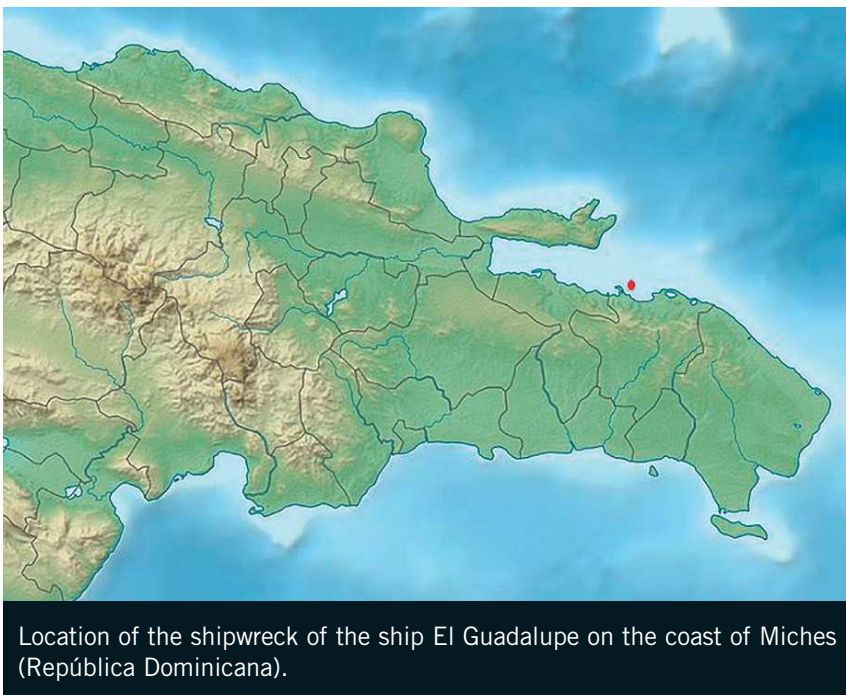
The exported glass from central Europe was made by potash-lime, with thick sides, simple shapes and small sizes in general, therefore easy to transport. The most common were the truncated

cone shaped drinking glasses in different sizes and rectangular jars. Sometimes they featured wheel engraved or glazed decoration with popular figures that were easy and fast to create with ornaments specific to the end consumer's culture.

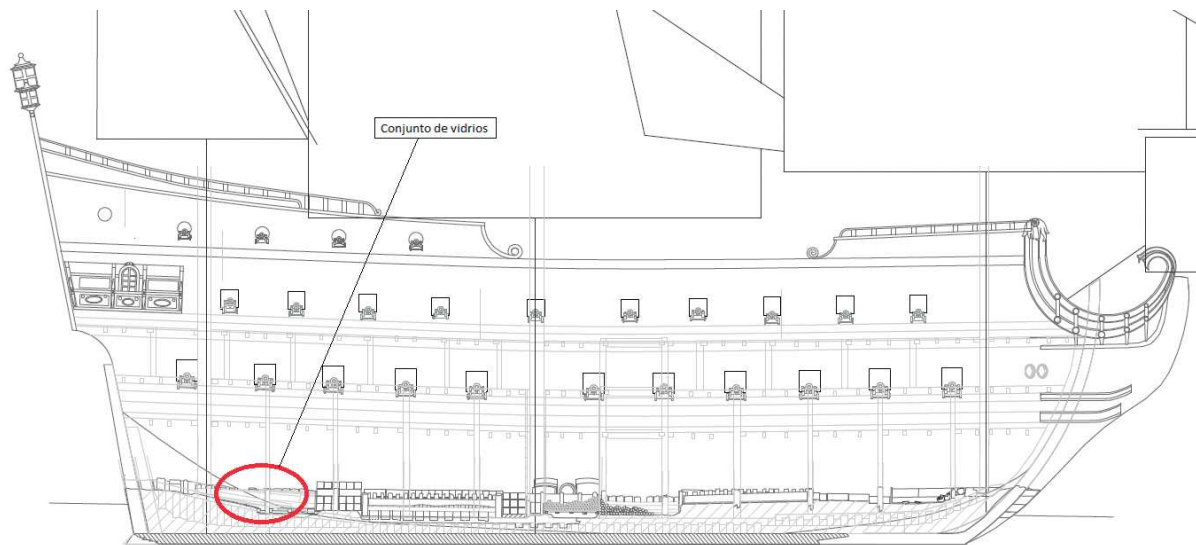
The glasses found at *Guadalupe* and *Tolosa* remind us that glasses made for export from central Europe, sometimes featured wheel engraved decorations of flowers or bouquets, rendered very simply with a Chinese style. Only one of the glasses, found on the *Guadalupe*, show a wheel engraved hunting scene.

According to the bibliography, the origins of these glasses is not clear. Some authors confirm that they came from the Real Fábrica de Cristales de La Granja as they found some similar aspects of this glass pieces with the ones created there, but this type of creations are much newer than the date of the shipwreck.

Some other authors, confirm the glasses came from Catalonia, what we cannot be agree with due to the difference with the models. The last possible theory



Location of the shipwreck of the ship El Guadalupe on the coast of Miches (República Dominicana).



Ideal reconstruction of the longitudinal section of the ship El Guadalupe, according to the location of the glass found in the stern of the ship. © Galeones de Azogue project. Dibujo: Cruz Apestegui, 1995.

is that they came from the glass factory of Nuevo Baztán, close to Madrid, owned by Juan de Goyeneche. This is based on information from documents regarding this factory, which shows that some glassmakers from Germany and Bohemia worked there and their products were exported to Nueva España. Unfortunately, there is no proof that can confirm that the glasses came from this factory.

And also, in a sporadic form, several bottles were found on both ships. Are typical British glass bottles, olive green, with plain bottom and truncated cone shape.

Conclusions

The purpose of this presentation is to share examples of some of the

glasses found on *Guadalupe* and *Tolosa* in order to do a more in depth study of this material in near future.

The first impression is that it is a collection of glasses came from central Europe made for export to America, and in this case, they were probably smuggled as it was not registered in any way.

It is important to note the glasses excellent state of preservation when compared to other glasses found in excavations. Due to this good shape and to be founded on a perfectly documented fleet, as we know the exact date of the sunk, the commodities on board, the itinerary and the rest of the relevant information, this give to this pieces and extraordinary value.

It is a collection of glasses came from Central Europe made for export to America, and they were probably smuggled

Until now, it was not possible to date with accuracy this type of glasses from central Europe (Bohemian glasses), many times found at land excavations in Europe. Therefore this is material with an extraordinary historical value and deserves to be studied in depth.

The Rogaška Glassworks and its designers

Jože Rataj

Celje Regional Museum, Slovenia

The glassworks that we know today as Steklarna Rogaška was built on a marshy site in Tržišče near Rogaška Slatina. The reason this location is not entirely clear, but it is known that production began in the former brickworks building next to the coal mine, in which removed up to 2,900 tons of coal each year.

The Abel Company acquired the brickworks in 1923, while Wilhelm Abel's Sjedinjene tvornicestakla n.d. [United Glassworks] had already purchased the Sveti Križ coal mine from the Alpine Montangesellschaft a year earlier. The glassworks was connected to the mine by a cableway that transported coal to the furnaces. It became the direct successor of the glassworks in Zagorje ob Savi, which had operated, with



Glass collection Bacchos, Franci Černelč, 1995. Photograph©Documentation Celje Regional Museum, Slovenia.



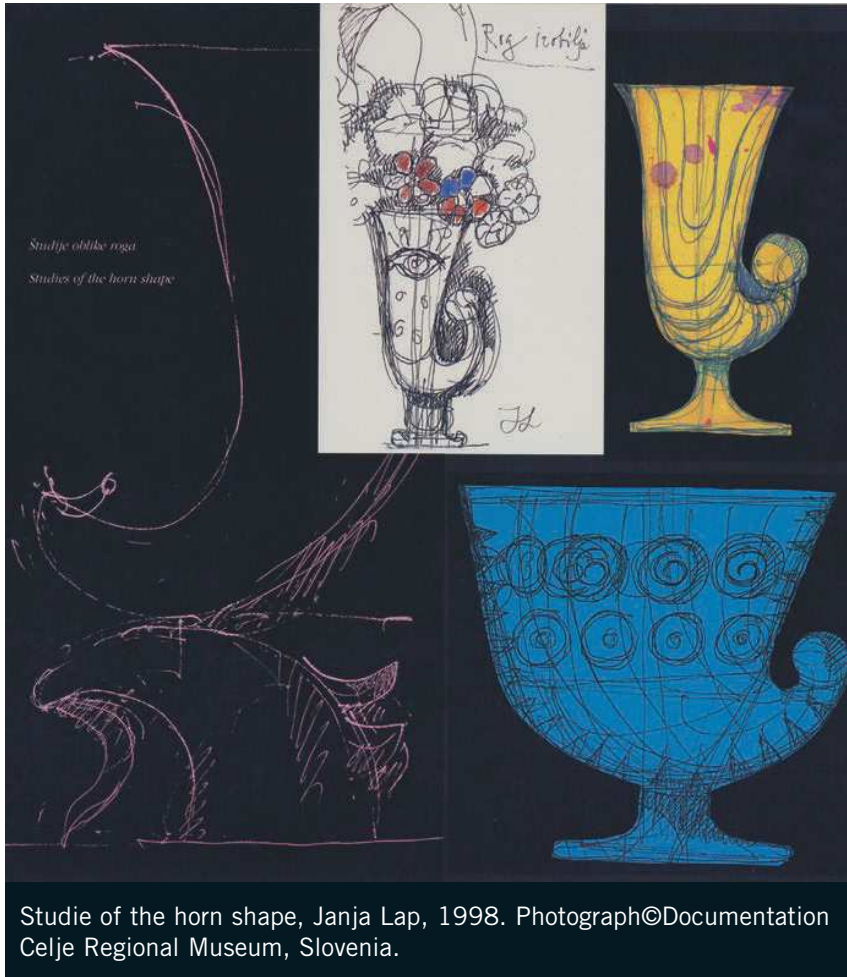
Rogaška Glass factory, 2017. Photograph©Documentation Celje Regional Museum, Slovenia.

interruptions, since 1809. The owner of the Zagorje glassworks as it then existed was the Trbovlje Coal Mining Company, which in 1912 had leased the glassworks to Wilhem Abel's Erben [Heirs of Wilhelm Abel], a company based in Hrastnik, which a year later established the company "Glasfabrik Sagor Wilhelm Abels Erben in Sagor".

In 1924 the Abel family began preparations to build a glassworks in Tržišče, prompted by the fact that glassmaking represented a profitable economic sector. Rogaška Slatina was also well known as a prominent spa and health resort, visited by the wealthy for many centuries. The

owners of the glassworks envisaged that these visitors could become important customers for their glass products. Similar combinations had proved successful elsewhere, for example the Moser factory in the spa town of Karlovy Vary in western Bohemia. There were also coal deposits in the area around Rogaška, which were used in Tržišče to fire the brick kilns. The mine continued to operate until 1943, after which it was abandoned. At that time it was still providing around 15 tons of coal a day, which was just about enough for glass production. Sufficient workforce was also available, so the company began building a factory complex consisting of seven buildings on

the brickworks site. Having readied the first production premises, the owners lit the first melting furnace on January 10, 1927. The honor fell to the brothers Wilhelm and Richard Abel and their brother-in-law, the engineer Adolf Körbitz. Seventeen days later full-time production began. The first workers to start work at the Sveti Križ glassworks came from Zagorje ob Savi. They were the master glassmakers Jakob Ernejc, Franc Jugovar, Anton Pok, Franc Pok, Avgust Siter, Benedikt Weber, Vinko Weber, and Engelbert Weinberger. The following assistant glassmakers also came from Zagorje: Jože Ašman, Karl Ilk, Norbert Ilk, Beno Jugovar, Ivan Laneger, Franc Lipovšek, Ivan



Studie of the horn shape, Janja Lap, 1998. Photograph©Documentation Celje Regional Museum, Slovenia.

Matko, and Jože Siter. Master glassmaker Vencelj Šaly came from Hrastnik, while Karl Denk, Iztolc, and Linke came from abroad. The first glass cutters were the Drimel brothers, Jakob, Vinko and Jože Karat, Ignac Otmar, and Franc Slatinšek. The first mould makers were Franc Lipovšek and Franc Peršič from Zagorje ob Savi, while the first glass founder was one Brajer from Hrastnik. Engelbert Mecilovšek became the first manager of the glassworks. He also acted as the manager of the Zagorje ob Savi glassworks in

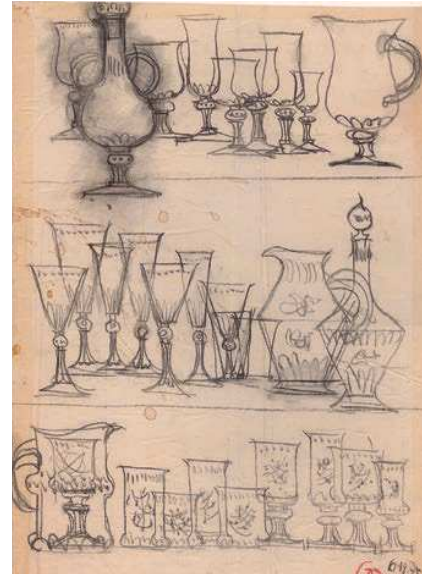
the last months of its operation. He was represented in Rogaška Slatina by his son Vojko as the first plant manager.

The glassworks occupied an area of approximately 700 m² and consisted of six interconnected buildings. The main building was the melting shop, in the center of which stood the main melting furnace, with ten melting pots. The furnace ran on gas produced by a gas generator. Next to the main furnace were ten annealing furnaces for cooling finished glass

items. These had a capacity of 3 m³. There was also a furnace for pre-heating the melting pots and five drum heaters for making bottles and jugs. The furnace had a melting capacity of 2,500 kg per day. The remaining equipment corresponded to this capacity and consisted of two machines for cutting and splitting glass products with two diamond cutting tools, twelve grinding machines (two vertical and ten horizontal) in the rough grindery, fourteen grinding spindles for fine grinding, seven spindles for brush polishing, two pantographs for painting on glass and other equipment. A separate building housed a carpentry workshop and wood turning shop where packing crates and wooden moulds for blown glass were made. In the initial period the new glassworks employed around 225 workers. Besides the glassmakers from Zagorje ob Savi there were many locals among the workforce, for whom work in the factory was a way to earn a living in their own environment. At this point this category still included between 30 and 40 workers in the mine. From the very beginning, the glassworks focused production on more technically demanding hand-blown glassware. By the mid-1930s the sales catalogue included around 5,000 different products, notable among which were bottles, jugs, vases, and glasses in smooth, cut or painted glass. In this period most products were sold on the domestic market. Exports to foreign markets began to increase after 1936. At the outbreak of the



Rogaška Glassworks, around 1930. Photograph©Documentation Celje Regional Museum, Slovenia.



Sketches for glass collection, Raoul Goldoni, 6. 6. 1975. Photograph©Documentation Celje Regional Museum, Slovenia.



Glass cutter at work, around 1950. Photograph©Documentation Celje Regional Museum, Slovenia.

Second World War the glassworks employed 280 workers and 40 miners and had an annual production of around 200 tons of luxury products, more than 50% of which were sold to foreign markets, particularly Italy,

Switzerland, France, England, Austria, Greece, Turkey, Syria, Morocco, and America. Potassium glass and lead crystal were the predominant types of glass. The global economic crisis that shook the world also affected production

at the Rogaška glassworks. In the early 1930s the factory only operated for six months a year. During the Second World War work at the glassworks continued in irregular fashion. Some workers joined the partisans, while others were interned or deported to Serbia, all of which represented a major blow for the factory. Production during this period mainly focused on supplying the needs of the occupying forces, so the partisans attacked the glassworks to show their dismay. The attack came on the night of September 16th and 17th in 1944, when the fighters of the Šerčer Brigade broke through the main entrance and set fire to the factory buildings. The fire did not destroy the melting furnace but it was nevertheless extinguished, and this

meant the end of glass melting. For some time only the glass cutters remained in the factory. The coal mine had already been closed – in 1943 – and coal was being imported from Klenovac in Croatia. Quartz sand was likewise imported, soda was purchased in Lukovac, lime was supplied by lime burners from Boč, and potash was purchased from a merchant called Teslić in Sisak. In 1935 the glassworks used 10 tons of potash, 100 tons of soda and 3.6 tons of Glauber's salt. The moulds were made from pear wood purchased from local farmers. After the end of the war around 180 workers gathered in Rogaška Slatina and formed a “shock work” brigade in order to rebuild the glassworks. They were assisted by the glassworks in Hrastnik and Straža pri Rogatcu, which sent them the material they needed for the rebuilding work. A further problem was the lack of coal, given that the factory's own mine was no longer operating. The Ministry of Industry approved the supply of the necessary quantities of coal, and this enabled the glassworks to start operating again on September 9, 1945. Following the liberation it merged with the Hrastnik glassworks as an autonomous operation. It became independent on July 1, 1947, when it was given the name “Slovenska tovarna stekla v Rogaški Slatini” [Slovene Glass Factory in Rogaška Slatina]. It was renamed again in 1953 following the death of [liberation front leader and politician] Boris Kidrič. It would henceforth be

known as the “Steklarna Borisa Kidriča Rogaška Slatina” [Boris Kidrič Glassworks, Rogaška Slatina].

At that time the Yugoslav glassmaking industry was unable to supply sufficient quantities of hollow glass, so the socialist authorities decided to increase production in existing glassworks and build new ones. Construction of a new melting furnace began in 1948, at which time the furnace hall containing the first melting furnace was enlarged. The production hall was completed in 1950, together with a new furnace with 12 melting pots. The glassworks now had a total of 20 melting pots, which meant a 120% increase in production. In addition to the new furnace hall, the rough and fine grinding departments and other areas were also renovated. The number of grinding spindles increased to thirty-five. The number of employees increased from 250 in 1947 to more than 600. A third furnace was constructed in 1959, followed five years later by a fourth. The 1970s saw the construction of a new grinding shop for 70 workers with an acid polishing plant, silos for the storage of raw materials, and an automatic batch plant. In 1974 the Boris Kidrič Glassworks opened the Dekor plant in Kozje. This glass grindery, which had fifty grinding stations, later switched its focus to glass engraving. The product range began to be increasingly dominated by modern



Glassblowers at work, around 1960. Photograph ©Documentation Celje Regional Museum, Slovenia.

cut crystal ware in the unique designs of the new Design Studio GRY. By the end of the 1970s, the glassworks was operating seven melting furnaces and 46 melting pots. The previous fuel – generator gas – was replaced by fuel oil. The number of employees continued to increase –from 1,178 in 1977 to 2,093 in 1986. The glassworks mainly produced colorless crystal glass, which had been a top seller since the interwar period.

The volume of production increased in the 1980s and new tank furnaces and automation were introduced. In 1985 a 15-ton tank furnace with two automated lines for crystal glass was installed. A new automatic acid polishing plant and new lines with automatic



Rogaška Glassworks employees, 1932. Photograph © Documentation Celje Regional Museum, Slovenia.

grinding and polishing machines were installed at the same time. Natural gas was introduced as process fuel and electricity took the place of heating oil. In the period leading up to Slovenia's independence all the traditional furnaces were replaced with tank furnaces, with the exception of one, which continued to be used for melting colored glass. Business ventures with the glass cutting and grinding works Tehnokristal Kardeljevo and Dalmacijakristal Vrgorac proved to be a poor decision and the attempt to enlarge the Kozje grindery also ended in failure. The period following independence, characterized by numerous poor management decisions and difficult conditions in global markets, was the most critical period for the glassworks. Efforts were made to modernize

the product range and bring it into line with the demands of modern markets while taking advantage of the possibilities offered by new technologies. The management wanted the Irish company Waterford as a strategic partner and sold them a 30% share of production. This was followed by a series of poor decisions and ill-considered investments in the bankrupt Mestinje timber processing plant, the Samobor glassworks and the hotel industry. These decisions proved to be the downfall of the glassworks, best reflected in the declining number of employees, of whom fewer than 900 remained after 2002. In 2012 the glassworks was taken over by Metropolitana and KPS Capital Partners and, after 2015, the Finnish company Fiskars.

Among the designers who helped give the Boris Kidrič Glassworks a recognizable identity was Raoul Goldoni (1919–1983). Goldoni began working with the glassworks in 1956, originally with the intention of making one-off pieces and decorating them using cutting and engraving techniques. He later focused on mass production, which opened up the area of industrial design. Goldoni, who had previously worked with the world-famous glassmaking workshops on the Venetian island of Murano, brought his knowledge and experience to Rogaška Slatina. Beginning in 1967 he became a full-time collaborator with the Boris Kidrič Glassworks and even took over as head of the design department. He trained a number of designers over the years, although none of particular note.

Two other designers with a decades-long connection with the glassworks are Igor Polik and Tihomir Tomič. The Rogaška glassworks was open to collaborations with designers and architects who wished to try and realize their ideas in glass, as evidenced by the numerous presentations and design awards at the Biennial of Industrial Design in Ljubljana, the Zagreb Fair, and exhibitions at the Design Centre in Belgrade. Worth mentioning among the many external collaborators of the glassworks are designers Ljubica Ratkajec Kočica, Janja Lap and Peter Arlič.

Contemporary Art in a Religious Museum

Teresa Almeida, Graciela Machado

Research unit Vicarte “Glass and Ceramic for the arts”, FCT/UNL
Unidade de Investigação i2ads, Instituto de Investigação em Arte, Design
e Sociedade. Faculdade de Belas Artes Universidade do Porto.

Introduction

Specularis, looking through was an exhibition held in Alberto Sampaio Museum, Guimarães, Portugal in Summer 2018. This exhibition is the outcome of an interdisciplinary set of projects conducted between glass and printmaking studios. It included research studies applied in practice-based artworks produced between printmaking and glass, thus demonstrating existing collaborations between different people and their areas of technological interest, at the Faculty of Fine Arts, University of Porto.

Throughout the years, and based on the two workshops, efforts were gathered to overcome the resistance to innovative academic approaches. And the search for what is still unknown and undone was based on setting up old and new technological challenges.

Seeing and speculating, in several materials, posing problems, understanding their nature according to the most basic forms of inscription and invention, lead to the emergence of techniques and the circulation of ideas between the two workshops. Along this

presentation, we propose, such practices are located outside a specific studio practice, and confirm experimental and innovative artistic exploration of image transfer and printed image, as a basis for broadening creative thinking.

Intertwining: glass and Print

Stefan Sonvilla-Weiss says “we have to know what we want to know before we can start looking for it” (Sonvilla-Weiss, 2008, 103).

The cooperation between different areas and



The main entrance of The Alberto Sampaio Museum.
© Teresa Almeida.



Entrance of the museum after 6.00 pm. Piece of Daniela Pinheiro. Cruzamentos Cromáticos: uma opacidade que reflete, glass painting, 6 x (10,8 x 19,2 cm), 2018. © Teresa Almeida.

technologies, such as glass and printmaking, was initiated by the Faculty of Fine Arts, University of Porto (FBAUP) with a collaboration between workshops, in the context of Pure Print - International printmaking meeting (pureprint.fba.up.pt). Artists and academics working and conducting research in various universities were invited to participate and in 2013 we organized four workshops in the area of printmaking glass and ceramics (Almeida, Machado 2016).

Two multidisciplinary research projects by the University of Porto had already initiated research on alternative surfaces and substrates for the application of the printed image. The first project, finished in 2014, was dedicated precisely to the relationship between glass and the printed image IJUP 2011, no. 262 “Vidro e Impressão: criação de matrizes e substratos de impressão alternativos” and the last one “Vidro e Impressão: monoceduras sobresuperfícies vítreas”. The projects had the

institutional support of the i2ads - Research Institute of Art, Design and Society of Faculty of Fine Arts, University of Porto and they were also awarded a research scholarship resulting from the collaboration with Vicarte–Glass and ceramics for the arts, based at the Campus of Faculty of Science New University of Lisbon (Almeida, Machado 2019).

The Museum and exhibition

The Alberto Sampaio Museum was founded in 1928 to house

the collections of local religious institutions that had previously closed, such as the former Collegiate of Our Lady of Oliveira, and other convents and churches in the Guimarães region. It is situated in the city center because in the tenth century Countess Mumadona founded a monastery around which the village of Guimarães was born. The cloister is from the 13th century, the building had several renovations over the centuries, and in 1910 it was classified as a national monument (Santos, 2010), and the city became a world heritage center in 2001. The museum has a well-preserved sacred art booty. The Director, Isabel Maria Fernandes, established various activities and besides the permanent exhibition she organizes several temporary exhibitions. In the summer (middle July- beginning of September) the museum holds an event titled “Night Museum”. During this period the museum is open until 11:00 pm allowing visitors to experience the museum at night.

The exhibition *Specularis, looking through* was on display from July 13th to September 16th 2018 and was part of the “Night Museum” programming.

23 participants include students from BA, Master and PhD, alumni, and researchers joined the exhibition by purposely conceiving site specific works.



Daniela Ribeiro, void (urban structure), kilncasting piece with engraving, 160x50x40 cm 2018. © Teresa Almeida.



Nathalie João, Regarde à travers. Tout est opaque et puis, soudain, le transparent, casting cement and decals, 70x18x15 cm, 2018. © Teresa Almeida.



Marta Rebelo, untile, drawing on glass – vídeo, 2018. © Teresa Almeida



Front: Daniela Lino, Imagem sobressaltada (Startledimag), kilncasting, 27x53x4 cm, 2018. Back: Inês Vedes, La Boite, painting on glass, 20x20x20 cm, 2018; Cristina Ferro, Procariontes, blowing and copper wire, 2014. © Teresa Almeida.

It is becoming more common to see “artists making use of certain aspects of curatorial and organizational work in their practice by assuming the role of curator” (Vidokle, 225). This statement can also be applied to professors and academics that sometimes have a curatorial role, organizing exhibitions of students’ works and their process is common at universities.

The exhibition occupied the building’s cloister, garden, and a smaller room used for temporary exhibitions. In order to organize, several trips were made with the students to the museum so they could choose the place where their work would be displayed.

Also, to get acquainted to mounting restrictions applied to the monument.

The spatiotemporal structure of the exhibition was utterly thoughtful as some students choose a specific place to present their work, such as a suspended pixel glass on the chapel from Mariana Moranduzzo, the garden had a kilncasting piece of Daniela Ribeiro, Nathalie João displayed her piece in the cloister and a video in the corridor from Marta Rebelo. Daniela Ribeiro combined the research from her Master, working with sand and high temperatures where the silica and plaster molds were the matrix to produce glass

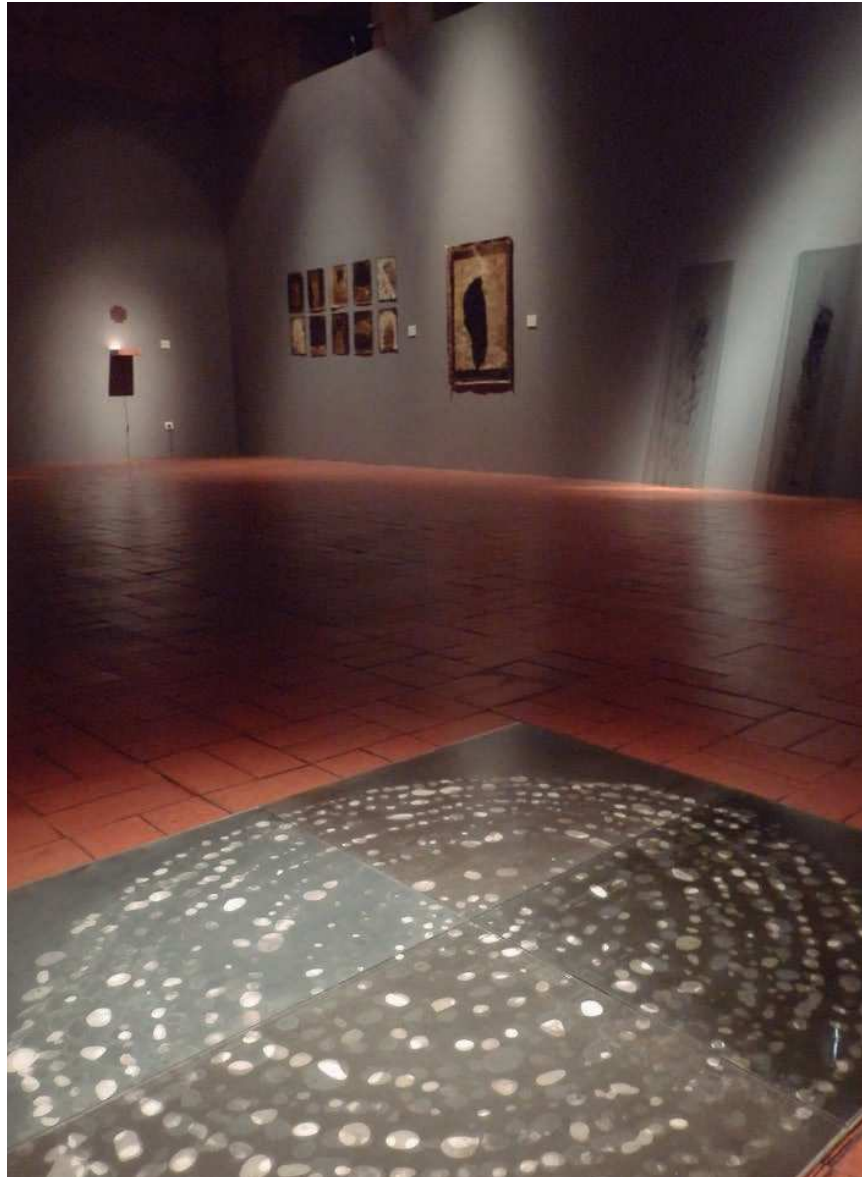
works and the ruins the subject of study. The matrix was used constantly to produce multiple pieces until it became a ruin itself. She presented *void (urban structure)* a kilncasted piece with engraving. Nathalie applied the results obtained in the research project “Vidro e Impressão: monocozeduras sobresuperfícies vítreas” to create decals that were placed inside the casting pieces. The light filtering into the building was studied, so it passed through the glass piece at specific times during the day, projecting a show of shadow in the interior space.

Marta Rebelo work, based on the use of grained glass as a drawing

surface, allowed an animation film of a single frame couple laid down in grass to project on a solid granite wall of the cloister, making stone and nature merge.

For the interior of the cloister the museum provided plinths.

In the temporary exhibitions room, light can be controlled. Marta Belkot placed on the floor a piece with an enameled printed image. From the beach, she collected glass bits created by the sea, which she later used as drawings devices into a negative ground coated into glass, applying the first results of reconstructing historical photo enamel techniques on glass dated from nineteenth century. By referring to the past of sand, bids, and personal references, she plays with interior and exterior, light and darkness, as metaphor for spirituality versus materiality. However, another room has available were the works from specific investigation were displayed – light. The room had three pieces, two with luminescent proprieties, Ana Margarida and Teresa Almeida, and Graciela Machado, referred to light projected into two rooms: a laboratory and a bedroom. Luminescent glasses were used in *Pequenos recipientes* work from Teresa Almeida, and this material is colorless in natural light, but in the presence of ultraviolet light, they gain the luminescence of the oxide



View of the interior room. Works from: (floor) Marta Belkot, Rezar(Pray), image on glass, and video, 124x100cm, 2018; right to left David Lopes, Frist Light, installation, 2018; João Gomes Gago, untitled, 2018; Lúcia Ramos, Momento #4 Momento #5 (Moment #4, moment #5), engraving and painting, 2(150x40cm, 2017). © Teresa Almeida.

introduced in the glass, featuring different colors (Laia and Ruivo 2019). Ana Margarida piece used luminescent pigments that fired at low temperatures with an

appropriate texture for glass painting. Luminescent enamels are being developed under several projects being “Glasslumiart” one example.



Work of Ana Margarida Rocha, *Interstellar dust in the Milky Way*, luminescent enamel, 2018. © Teresa Almeida.

One of the research lines of Ana Margarida study is the application of luminescent enamels in printing techniques. In the work *Interstellar dust in the Milky Way*, composed with 234 glass slides screen-printing technique was used to preformed what she calls the cosmic dust present in the galaxy (Rocha in *Specularis-looking through*, 2018).

Conclusions

The exhibition *Specularis* with the subtitle *looking through*, aimed to convey a new perspective on the recent questioning between printmaking and glass.

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Panel "Mysterious Worlds". 3500 x 2000 mm. Glass, engraving. Photograph©Vladimir Makovetsky.



10
to

Questions Vladimir Makovetsky

by Karin Rühl M.A.
Glasmuseum Frauenau, Germany

1. Vladimir, tell me where you have grown up and how you got in contact with the material of glass

I was born in Leningrad (today the historical name of St. Petersburg has returned). Grew up in the center of a big city, next to the Botanical Garden. After walking, my mother checked the contents of my pockets so that I would not bring home a frog, lizard, or any other creature from the street. But I managed to drag the snails behind the cheek or in the fist.

At school I dreamed of becoming a forester or a hunter and always felt uncomfortable in a closed home space.

But due to my physical disabilities, my life path developed quite differently - I graduated from the institute and became a glass-making chemist, though not for long. My friends defined my path differently.

Hiking in nature - fishing in winter and summer fascinated me so much that I completely

left my work problems, working at the institute at the department of glass for a week I drew in my imagination the next and next trip, prepared inventory, sewed tents and made fishing tackle. Friends were a huge support for me, because I did not walk well, but with them I forgot about my shortcomings and dragged my backpacks along with them and walked far on the ice, in frost and bad weather.

My comrades brought me to the Leningrad Glass Factory (LZHS). Huge workshops, a great museum, a lot of people, lively discussions of factory problems.

I was very attracted by the work of engravers, especially the art team, because since childhood I was fond of drawing, woodcarving and was not afraid of independent artistic solutions. The hand was accustomed to delicate work.

I studied pretty quickly - it was at the art glass factory that the traditions of engraving and teachers who knew these traditions were preserved. I was so carried away, creating images on glass that had been living in my head for a long time that gradually the fascination with travel was more and more replaced by travels in my inner worlds and the desire to display these ghostly fantasies on glass.

2. When did you realize that engraving glass is your preferred technique by working with glass?

The glass swallowed me up. At the factory, I learned both blown glass and diamond cut and many other manufacturing and processing techniques. But engraving immediately captivated me - this is the highest level, where I could most accurately express or reflect my plan.

When the plant closed due to changes in the country, my friends and I organized an independent art workshop for engraving „McGrave“, and together we tried to survive and keep engraving at a high enough level to develop this direction and not let die in such difficult years of perestroika, when much lost its meaning. We trained

students, looked for cooperation, and tried to be in demand, to show our level. From the mid-90s to 2003, our creative workshop presented Russian engraved glass in Frankfurt at the Ambiente and Tendence exhibitions. And since 1999, they have repeatedly taken part in symposiums in Kamenetskiy Shenov (Czech Republic) and Frauenau (Germany).

3. Do you always have a certain vision before you start a new project?

Yes, always. But in the process of thinking, what was conceived is constantly changing. Then, in the process of sketching, it changes again. Working in the material also gives rise to new interpretations. So from idea to implementation is a thorny path.



Trips to Frauenau and Kamenetsky Shenov. Photograph©Vladimir Makovetsky.



Elena draws, sculpts the form. Photograph©Vladimir Makovetsky.



Elena draws, sculpts the form. Photograph©Vladimir Makovetsky.



Reinike Fox. 290 x 180 mm. 2000 Optical glass, engraving. Photograph©Vladimir Makovetsky.

4. Are you influenced by Russian art in general or do you consider international artistic tendencies?

In our work with Lena, there is no division into Russian and non-Russian. Of course, traditions live in us, but they are rather global. In each individual work, you can feel the echoes of one culture or another. „Reinicke Fox“ is a collective image of a book beloved in childhood, illustrated by the artist Wilhelm von Kaulbach - German art. “Kazan Mother of God” - traditions of Russian icon painting.

5. How is your wife Elena involved in the creation of your works?

Ideas come from both of us. We discuss them for a long time. Lena, a glass artist by training, makes sketches of the images that we want to create, changes them, varies them, looks for a shape, sculpts. And in glass I am embodying the final version, born in the process of joint discussions, disputes, which has passed many probes.

6. Your motifs are so various, traditional as well as in many ways modern and abstract.

What do you prefer?

Both. The main thing is that this work should capture and captivate - then there is

strength, perseverance, passion. If the work is not fun, it simply does not work, i.e. turns out to be unsuccessful work, which we do not like to show and do not show.

7. How do you approach private orders, where big dimensions are asked?

Can you also calculate good with time?

Today we are not afraid of orders for large glasses. The main thing is that the size allows you to bring it into the workshop and put it in the workplace - the rest is a matter of technology. We have many assistants - they turn,

rearrange the large glass as needed, no problem. Last year, they engraved on glass with a size of 2600 x 1400 x 12 mm, weighing 82 kg ("Dragons").

Of course, such self-confidence did not appear immediately. Since 2009, there has been a gradual creation and modernization of the workplace, which made it possible to boldly take on previously impossible tasks. At the same time, a fundamentally new set of tools was created. And since 2015 we have been working in a workshop in the suburbs of St. Petersburg, where we continue our search in glass engraving.

Almost all of our work is very busy, but in most cases, presenting a plan for future work, we correctly calculate the time needed for it. So the work on the window to the office, as planned, took 1 year. But sometimes - continuous trials, mistakes, new finds. It was planned to finish this large panel „Landscape“ in 5 months. But the original work plan was completely changed. It was assumed that according to the drawing previously made in the sandblasting technique, the refinement would follow in the engraving technique. However, already the first samples did not satisfy us at all. As a result, the entire panel was made by hand



Dragons. 2600 x 1400 mm. 2019 Optiwhite glass, engraved. Photograph©Vladimir Makovetsky.



Our workshop outside the city. Photograph©Vladimir Makovetsky.

with diamond wheels, abrasive rubbers, and punched out with scalpels. And of course we miscalculated the time - it took only 1.5 years. Thank God that the customer turned out to be a real connoisseur, fully supported us in all searches and patiently waited for the end of the work. These are rare!

8. How is your relation to lightening questions for your work?

Very seriously. Engraving without backlighting is difficult to read. We have been working with light for a long time as an important tool for creating an image.

“Awakening” - edge illumination of ice floes sharpens the sense of plans, creates the effect of space. In the foreground, ice chips-incisions, and in the second - Mermaid, far from the illumination it floats out of the depths - wakes up.

“Wanderings” - the illumination from below fades out, then

slowly flares up, the neodymium glass, which is used here, changes color. That blue-gray - sunset, night. That pink - dawn - the Fish-ship wanders the ocean from dusk to dawn.

The illumination in “Landscape” made it possible to enhance the feeling of evening illumination: the sun disk is engraved with a punch and the light pierces the trunk of a spruce, the bushes

illuminated by the sun - the punch - the end illumination lights them up, so at sunset the tops of the trees burn.

The “Mysterious Worlds” have acquired versatility and color saturation due to edge illumination. Glass with a high content of iron oxide gains color due to the rays of light hitting the glass end. The longer the way through the green glass, the brighter the color of the engraved glass.



Panel “Landscape”. 1600 x 1400 mm. 2018 Optiwhite glass, engraved. Photograph©Vladimir Makovetsky.

“Griffins” (fireplace screen) - engraving on colorless glass. The task was to achieve the “flaming” color of the image. Backlit RGB LEDs allowed to create the color of the fire.

9. What is your plan for the next years?

Our work began with reliefs on flat glass and on volumes (“Balena”), then the volumes began to acquire sculptural significance, become more complicated and engraving here is no longer just a relief on the volume, but becomes a part of it, sculpts the edge, passes from plane to plane. To read the work, go around it from all

sides. This is how sculptures appeared in glass - “The Thirsty Dragon”, “Scylla and Charybdis”, “Plea”, “Angel”. Developing this direction is a very exciting way!

I’d like to find a more significant effect of light on the reading of an object by playing a light beam on more complex shapes and on different textures of the glass surface.

In general, experiments with textures are of great interest to us - so after the sparkling textures from a rough diamond wheel with a diamond grain of 315 microns, a “punch” appeared with sharpened

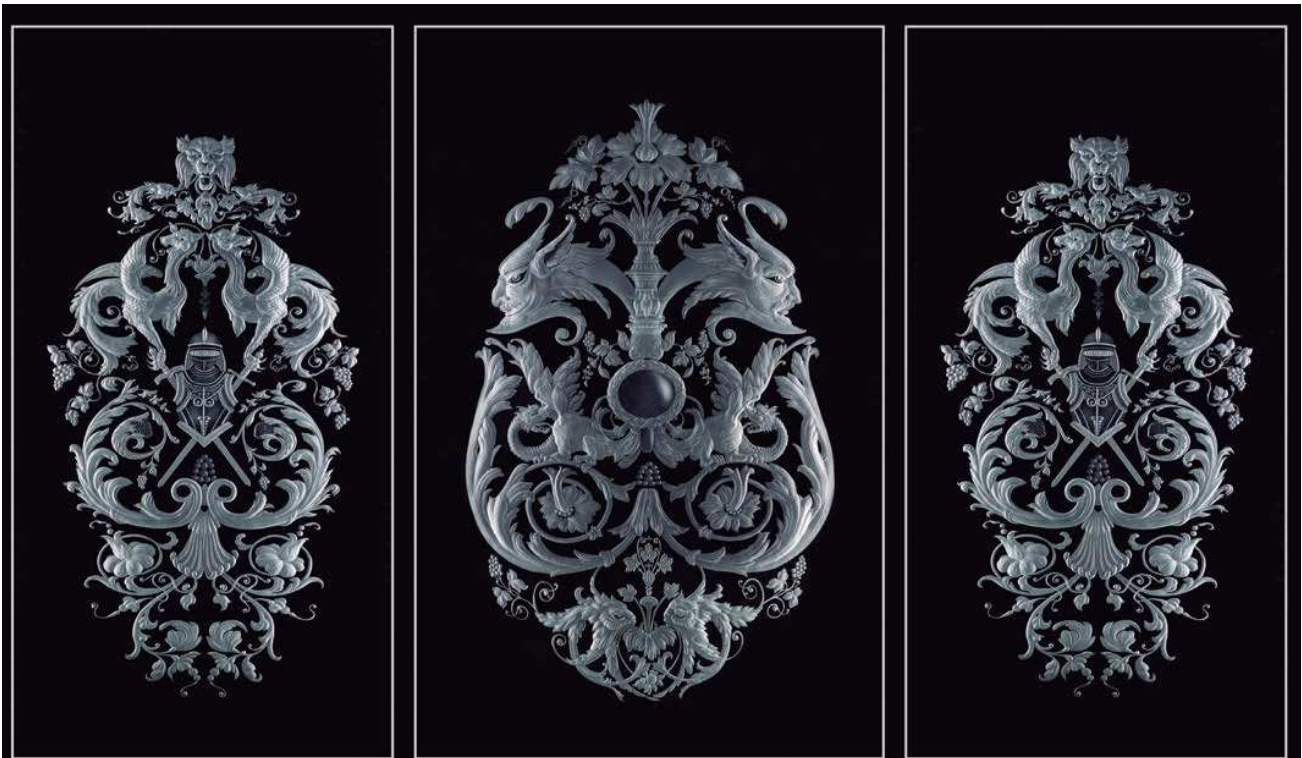
scalpels (chisels), as well as engraving with a diamond saw. (“White Silence”).

10. Did Corona (Covid 19) change a lot of things for you and Elena?

The coronavirus has not changed our lives in any way. Everything is the same, except that the masks and gloves have been added.

We are mostly “recluses”. The Internet and television still open a window to the world and we are in the know.

And there is no time to be bored, we work!



Window in the study. 2130 x 1600 mm. 2013 Optiwhite glass, engraving. Photograph©Vladimir Makovetsky.

Congresses & News

European Glass Context, 2021

Two large curated exhibitions at the Bornholm Art Museum and Grønbechs Gård will showcase the best of European glass. The exhibitions are curated with personal invitations, as well as an open call, where individual artists, artists associations, individual curators, artists, designers and crafts makers working with glass can apply for participation.

The new deadline for the Open Call is February 1st 2021. Applications will be accepted from January 1st - February 1st 2021.

<http://www.europeanglasscontext.com/EGC2021-Exhibition-Open-Call>

Yearly Meeting Light and Glass in Lisbon, 2021

Our special point of interest this year will be the importance of Lisbon/Portugal as a gateway for the export of glass and chandeliers to wide-reaching points in the world such as the Americas and the important role that the Portuguese offices (Kontors) played in this process. We will be visiting the Palacio Ajuda in the city of Lisbon, and also making a day-trip to the nearby Palaces of Sintra. We have therefore some

logistical planning to do – buses/transport, meals etc. 14-17 April 2021. Palácio Ajuda, Lisbon in April 2021
<https://www.lightandglass.eu/>

XXXIV ATIV Conference. Where Glass Science, Art and Technology meet together

The conference aims to bring together experts, academicians, scientists, industry executives and project leaders involved in Glass field to present, share and discuss the results of their research, new products and new technologies. It could be the right place to keep in contact with technicians coming from the most important World Glass and Machinery Companies.

The conference will feature a wide range of topics relevant to diverse perspectives including Glass Science, Sol-Gel, Art and History of Glass, Hollow Glass Technology, Environment, Regulations and Laws.

June is a perfect time to visit Parma, a lively and cultural city, located in Northern Italy, that is surrounded by parks, vineyards, lakes and medieval castles. Most importantly, Parma is a “food city”. It has been recognised as UNESCO Creative City of Gastronomy and hosts the European Food Safety Authority (EFSA)

headquarters. The congress year, 2021, will be a great time to visit Parma as it will be the Italian Capital of Culture and full of numerous special attractions.

From 12 to 14 May, 2021. Parma, Italy.

www.ativ2021.it

22 AIHV Join Meeting with ICOM Glass, Lisbon, Portugal, 2021

This congress will be organized by VICARTE Research Unit and Department of Conservation and Restoration from the Faculty of Sciences and Technology, NOVA University of Lisbon.

The scope of the AIHV 22nd Congress embraces all strands of glass knowledge and invites authors to submit their contributions to a wide range of fields of interest around glass. Submissions related to all aspects of glass history will be welcome but special attention will be given to consumption and diffusion of glass “on the two sides of the Atlantic” from antiquity to modern times.

The congress will be organized in order to combine an exciting program of lectures in parallel sessions and posters, museum visits and the opening of a special exhibition organized within the congress. A post-



conference tour will be organized.

From 13th – 17th September, 2021

<https://eventos.fct.unl.pt/22aihv/home>

AFAV International Conference, Romont and Nantes, 2021

L'AFAV : 34 ans d'activités pour l'étude du verre archéologique

L'AFAV, Association Française pour l'Archéologie du Verre, depuis sa création en 1985, a pour vocation la promotion et l'étude du verre ancien (de l'Antiquité à l'époque Moderne) et la diffusion de cette recherche. L'histoire du verre et de ses techniques, abordée à partir des sources archéologiques, historiques, iconographiques et archéométriques, et la conservation et la restauration des verres sont nos domaines de prédilection.

5-6 November 2021,

Vitromusée Romont

29 May-2 June 2021, Nantes

<https://www.afaverre.fr/>

Glass Annual Meeting in Southern Germany, 2021

The End of Glass Production – The Beginning of Museums?.

Deindustrialization and museums in glass production areas.

From 2-to 9 May, 2021.

Southern Germany: Coburg, Kleintettau, Lauscha, Waldsassen, Passau, Frauenau, Munich.

Provisional program:

<http://glass.mini.icom.museum/wp-content/uploads/sites/12/2020/01/Schedule-ICOM-Glass-Meeting-2021-Status-20200720.pdf>

Toward a United Nations Declaration: The International Year of Glass 2022

The International Commission on Glass (ICG), along with the

Community of Glass

Associations (CGA) and ICOM-Glass are promoting a United Nations International Year of Glass for 2022. It will

underline the technological, scientific and economic importance of glass — that transparent and enabling material underpinning so many of our technologies and which can facilitate the development of more just and sustainable societies to meet the challenges of globalization. It is also an important medium for art and its history is shared with that of humankind.

<http://www.iyog2022.org/>



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