



Article: The History and Preservation of the Josef Maria Eder Collection

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The History and Preservation of the Josef Maria Eder Collection

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The Eder Collection or more precisely the Photographic Collection of the Training and Research Institute for Photography and Reproduction Processes, which was founded by the renowned Austrian photo-chemist, Josef Maria Eder, has been inaccessible for decades.

Last summer a solution was finally found for this marvelous collection of photographs, photomechanical prints, cameras, as well as for the school's historic photographic library; the collection was moved to the *Graphic Art Collection Albertina* in Vienna where it forms the basis of the recently founded Photo Collection Albertina.

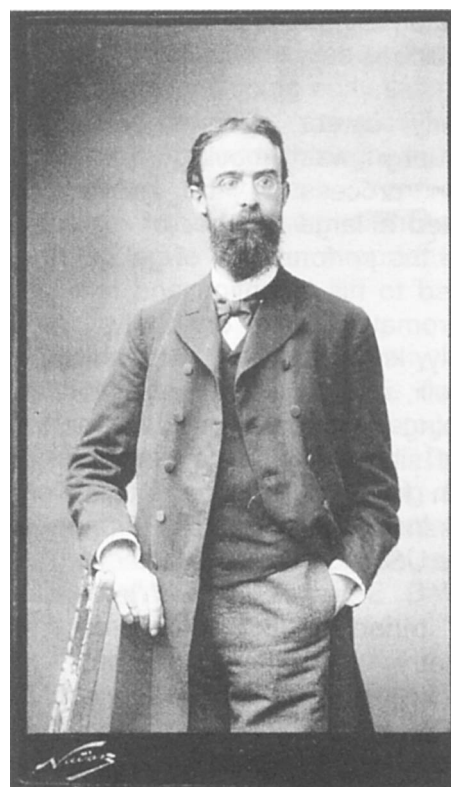
This article covers the biography of Josef Maria Eder, the history of his institute and its collections, the packing and transport of the collections to a new location in Vienna, as well as future plans and strategies for their storage, conservation and accession.

1. Josef Maria Eder (1855-1944)

When considering the life and work of Josef Maria Eder we are confronted with an almost insurmountable wealth of data on a man who was undoubtedly the most important Austrian photo-chemist and photo historian¹. Here are the most important stations in his life.

Josef Maria Eder was born in 1855 in the town of Krems on the Danube. His interest in natural science was recognized early at grammar school. In 1872 he enrolled for almost every non-biological science subject at the University of Vienna (chemistry, physics, mathematics, optics), and from 1875 onwards he attended additional relevant courses at the Technical University in Vienna. It was there that he

became acquainted with the early pioneers of photography in Austria. Their influence was to point him in the direction of his future research work. In 1877 he was awarded his doctorate while still only 22 and in 1879 he became assistant lecturer for photographic science at the Technical University. The Vienna Photographic Society supported him in this new position as new interest in photochemical research had rekindled among its members, something that had almost completely vanished at the time. He was president of this society from 1901- 1924 and professor for photochemistry at the Technical University from 1891 - 1923 (*illus. 1*).



(illus. 1) Josef Maria Eder. Photographed by Nadar, 1887.
© Fotosammlung Albertina/ Graphische Lehr- und Versuchsanstalt

However, the single most important event of his career in this regard was the role he played as co-founder of the *k.k. Lehr- und Versuchsanstalt für Photographie und Reproduktionsverfahren* (the Imperial and Royal Training and Research Institute of Photography and Reproduction Processes) in 1888, where he held the post of director until 1923.

During this entire period he proved himself to possess outstanding qualities both as a scientist and an organizer.

Although Eder carried out research in virtually every field of photography and the various processes of reproduction, the main body of his scientific work concentrated on the following areas:

He started out by formulating the underlying scientific explanation for photomechanical reproduction techniques through his work on dichromates. This remained the most important contribution on the chromate-colloids up until the 1920s².

His early career spanned a time when photography was moving from the wet-collodion process to the gelatin era. He conducted a large number of experiments to improve the performance of gelatin dry-plates, which led to his invention and terming of the orthochromatic gelatin dry-plates³. A fact not generally known is that he, along with G. Pizzighelli, invented the silver-chloride gelatin developing-out paper (gaslight paper) in 1881 and the silver-chloride gelatin developing-out paper in 1883⁴. This paper later swept world markets in the 1890s as VELOX paper, starting from the US.

Eder's other fields of interest included photometry, sensitometry⁵ and spectral analysis⁶.

Relatively little is known about the private person. Dr. Alfred Hay writes in the Photographic Correspondence for Eder's 75th birthday⁷: '(...) *Eder promoted and encouraged people and projects with great understanding wherever he could and (this is also significant)*

*managed to effect things through his endearing and winning ways, achieving what would not have been possible for another (...). Although it must also be admitted that Eder attacked some of his opponents with what some saw as his subjective temperamental manner, but he was never unfair when doing so.*⁸ This might be considered indicative of a somewhat difficult personality.

He was married to Anna Valenta, the sister of his close colleague Eduard Valenta. They had a daughter, Elsa, who later on assisted him with his publications and correspondence.

Although he retired in 1925, his capacity for work remained unbent. He re-edited his *Detailed Handbook of Photography* in 17 volumes. At the outbreak of WWII he moved to his country residence in Kitzbühel and spent his time growing plants, collecting insects and reading his photometric instruments. On October 18th, 1944 he died in Kitzbühel aged 89 and was buried there.

Publications

Robert Zahlbrecht compiled a bibliography in 1955 in which Eder's publications are listed according to year⁹. "The mere sight of the more than 650 titles alone", Zahlbrecht writes in his bibliography, "presents an imposing impression of the range and extent of Eder's work and the enormity of his achievement"¹⁰. Here are the most important publications and periodicals in which his research reports are to be found:

- Detailed Handbook of Photography¹¹
- Recipes, Charts and Instructions for Photography and Reproduction Techniques¹²
- Eder's Yearbook for Photography and Reproduction Processes¹³
- Photographic Correspondence¹⁴

2. The Training and Research Institute of Photography and Reproduction Processes

(Lehr- und Versuchsanstalt für Photographie und Reproduktionsverfahren)

This institute was established at the recommendation of the Vienna Photographic Society and was promoted and planned by

Eder. Prior to this, a photographer's training had taken place on a modest scale, for the most part as an apprentice to a master or as one scientist to another¹⁵. An increasing demand for well-trained photographers, however, necessitated the founding of a school. The new institute was opened on the 1st March, 1888, in the Westbahnstrasse in Vienna's 7th district, at a time of great prosperity in the Austro-Hungarian Empire. Eder was the first director, and he held this position for 35 years until 1923 (*illus. 2*).

Teaching was initially given through class-based courses on photography, as well as on photomechanical printing, photochemistry, and courses for non-professionals. The school expanded in the following years to incorporate other subjects such as drawing and commercial illustration, printing and bookmaking, as well as an increasing number of photo-reproduction techniques, which were enjoying a boom at the time¹⁶.

Naturally Eder would not have been Eder had he not ensured that large science laboratories were installed in the school for his own research purposes. Alongside the research work done there, tests were performed on photographic apparatus and lenses as well as on the newest photographic procedures and



(illus. 2) The Historic K.K. Lehr und Versuchsanstalt für Photographie und Reproduktionsverfahren.

© Fotosammlung Albertina/ Graphische Lehr- und Versuchsanstalt

papers. Under Eder's guidance the school achieved international renown and soon became an example for similar institutions.

Due to a lack of space the school moved in 1969 to a new building in the Leyserstraße in Vienna's 14th district. The original school building no longer exists as it was demolished soon after being vacated¹⁷.

3. The Collection

Alongside the various teaching departments and research laboratories, the collection was defined in the school's founding statutes as a department in its own right. This was a typical feature in many art-teaching institutions of the 19th century, resting on the belief that if specimens of the highest quality are provided for study, then students will deliver the best results. This is why a collection of photographic and graphic print samples was accumulated through donations and purchases from the very outset. Eder managed to acquire the holdings of the Vienna Photographic Society and the Technical University as a donation to the collection, both including early examples of photography. In addition, samples received from all over the world through publication activities related to Eder's Yearbook of Photography and the Photographic Correspondence are another important part of the collection.

The collection holds approximately 40,000 specimens and contains numerous examples of works by important Austrian photographers (including some by the Natterer Brothers, Andreas Groll, Anton Martin, Ludwig Angerer and Rudolph Koppitz - who incidentally also taught at the institute) and famous international photographers (W. H. F. Talbot, E. Balduz, E. Muybridge, H. P. Robinson, H. Kuehn).

The collection also boasts a fine selection of daguerreotypes with some 450 items (approximately 30 being erotic images, a disproportionately large number) and a rich collection of early color photographs (2,200 color screen plates, 30 Lippmann color plates, and other rare techniques).

In addition there is a large collection of pioneering scientific photography by Eder himself as well as by E. Valenta, Ernst Mach, G. Pizzighelli and others.

The collection of cameras, lenses and other equipment also grew to a considerable size (approx. 10,000) through further donations and purchases. The camera collection is more than impressive (approx. 3,000) and includes 2 Daguerre cameras (Giroux), 1 Voightländer metal camera, and a large collection of lenses.

An exceptional autograph collection of correspondence includes letters exchanged by Daguerre and Niepce, as well as some in the hand of Talbot.

The stock of over 25,000 books and periodicals makes the library the largest of its kind in Austria.

With the fall of the Austro-Hungarian Empire after WWI, Eder was forced to sell a small part of the collection for financial reasons. The Kodak Company purchased books and specimens, which are now at George Eastman House in Rochester.

As a study collection it still provides valuable and unique insight into the development of photography with clearly and precisely labeled examples, many of which are of rare and pioneering techniques. It has to be stressed that the particular quality and character of the collection derives very much from its consistent growth over many formative decades in the history of photography.

All of these factors combine to make the collection an extremely significant source of research. It is indeed more than rare to find a collection of original images such as this, preserved almost intact as a collection and still corresponding to an authoritative body of published text.

4. The Condition of the Collection

The collection suffered badly during its relocation to the new school building in the late 1960s. It was 'packed' into boxes and

containers, and parts of it remained in the same packaging until the summer of 2000. The collection had also not been completely inventoried since and was not accessible to the public.

The collection was stored in two rooms: an archive with the more important objects (mainly photographic prints) and a basement depot with the historic library, cameras, photographic equipment, lens collection and prints.

In 1995 the author carried out a survey on part of the collection in the basement and ordered the artifacts¹⁸. However, no funds were available to continue work until 2000. After months of discussion between several institutions, the collection was eventually handed over as a permanent loan to the Albertina.

5. The New Location of the Collection: Graphic Art Collection Albertina

The Albertina, whose name is derived from the collection's founder, Duke Albert Sachsen-Teschen, maintains one of the most valuable collections of prints and drawings in the world. The collection currently consists of approximately 40,000 drawings and nearly one million prints covering all of the major art-historical epochs from the late Gothic to the contemporary Modern¹⁹.

The change in directorship with *Dr. Klaus Albrecht Schröder* at the Albertina resulted among other things in the founding of the Photo Collection in October 1999, with the nomination of *Dr. Monika Faber* as chief photo-curator.

The Photo Collection Albertina fills a major gap in Austria. Now, for the very first time, an institution exists which is solely devoted to the collection, research and exhibition of historical and contemporary photography. An important foundation stone for the new collection was the assumption of responsibility for the Eder Collection²⁰.

The Albertina is situated in the historic center of Vienna on the Augustine bastion, one of the

last remaining stretches of fortification dating from 1529, the time of the Turkish siege.

The most extensive expansion work in the history of the Albertina started in the spring of 1999. A new four-storied structure is being erected and is to house climate controlled high-security storage facilities, a study building and a hall for temporary exhibitions. It is being built into the old city bastion not to interfere with the historic cityscape. The underground storage facilities will provide safe storage for the Albertina holdings with a computer-controlled elevated shelving system for automatic retrieval. The first phase of construction will be completed by the fall of 2002.

6. The Packing, Transport and Temporary Storage of the Collection

In the summer of 2000 the collection was moved to a new temporary storage area, a former exhibition building located a few hundred meters from the collection's final destination. The author was responsible for the supervision of the packing of the photographic prints - altogether a difficult task considering the large but unknown and inestimable number of objects. This was why colleagues from the Photo Collection Albertina, Mag. Astrid Lechner and Dr. Maren Groenig, compiled a digital inventory of the collection some 3 months before packing began. The inventory included size, photographer, technique, and location. Convolutés and portfolios were given *one number due to time pressure*.

This step is absolutely essential for any project involving transportation and removal when the number, materials or sizes of the objects are not known. This fundamental data alone can provide the basis required for a realistic and sound calculation in regard to packing materials and working hours.

However, during packing, new corners and even rooms filled with photographs were discovered almost every week. This of course meant that estimates for working time and packing materials had to be recalculated time and again. Added to this, materials were not delivered on time, which eventually created

serious difficulties with a real shortage of materials during the final weeks.

Packing materials

Since the transport containers were only intended for temporary use, regular brown corrugated cardboard boxes were ordered. The number of transport boxes necessary could be determined with relative precision using the digital inventory. As the sizes of the objects were also included in the inventory, it was possible to decide upon five standard sizes for the boxes. While some of the models could be ordered from catalogues, others had to be custom made as the dimensions of the majority of prefabricated boxes did not suit the purpose.

However, since it was not certain how long some of the items were to be kept in their containers, care was taken that the packing materials coming into direct contact with artifact surfaces met with photo-conservation standards²¹. PAT- tested PE - bags were used, since transparent packing materials are a distinct advantage when containers function as long-term 'temporary' storage in transit. Towards the end, however, photographic archival tissue paper was substituted to wrap the objects as materials were in short supply. Vulnerable surfaces were covered with photographic archival paper before being put into plastic bags and brittle items were given museum board supports.

Particular care was given to damaged photographs, broken glass-plates and disintegrating daguerreotype cases, all of which were given a security sandwich packing to hold the pieces in place and prevent further damage.

Each box contained a restricted number of objects dependent on size and materials in order to avoid excessive weight as this can be detrimental to photographs, causing ferrotyping among other things, and making handling difficult.

Every box was given its own number. This number was added to the respective entry for each of the items in the digitized inventory in that box. This ensures that any single object is

readily located in the boxes if required before the collection reaches final storage. The entire project took 4 people 6 weeks to pack.

7. Conservation

The immediate conservation of the photographs has been based on the following considerations. Since the photographs are covered with the dust and dirt of decades, the primary concern is to clean them before they can be further inventoried or researched and integrated into the existing collections of the museum. For this purpose a cleaning station has been established, equipped with a special dry-cleaning cupboard with a mold filter-system²² as well as a vacuum cleaner, which also filters mold²³. Confronted with so many items at this stage, all that can be done is to carry out basic dry cleaning with cleaning powder and vinyl erasers on the mounting boards and verso sides only, emulsion surfaces just being brushed. Tears are also being secured. All other conservation treatments have to wait until suitable facilities are available in the conservation studios in the new building when they are finished in the fall 2002.

After basic cleaning, the photographs are packed into customized photo-archival paper folders to be housed in archival corrugated cardboard boxes²⁴. Delicate and valuable photographs are mounted in passepartouts.

8. Future Accession and Digitization

The goals were clearly defined by the curators of the photo collection and these were that digital images of the items are required for cataloging, for research in the reading rooms as well as for the internet to publicize the collection.

A unique project funded by the Federal Ministry of Education and Cultural Affairs was launched in February 1999, where all drawings and watercolors are being recorded digitally within a data base. All the drawings will be ready for view on the internet in the near future at www.albertina.org.

The photo collection is being recorded in a very similar way. Low resolution images are being taken. Prints are being scanned or photographed with a digital camera. Items of A3 format (approx. 12x16"/30x43 cm) or smaller are scanned on a flatbed scanner if their condition permits their being placed face down²⁵. Larger photographs and sensitive materials (salted paper prints, early color, etc.) are reproduced with a 4x5" studio camera, equipped with a scanback²⁶.

In both cases the image size is between 9 and 10 MB. No image manipulation is done on the raw scans at this point, the data is stored on Photo CD. The images are transferred to the cataloging system on the computer and compressed to screen viewing size (JPEG, KB 400-700). The time for the whole procedure is approximately 7 minutes per image. The inventory of the collection is done with the software TMS (The Museum System), a program which was designed to manage large amounts of data. It is used by major collections and has been in use for the Albertina Art Department. For reasons of compatibility it is now also used for the photo collection²⁷.

Conclusion

In conclusion it must be emphasized that the task lying ahead is enormous. Many issues still remain unsolved but one thing is sure: the new Photo Collection at the Albertina will increase awareness and esteem for photographic materials as artistic and historical artifacts as opposed to considering them to be mere documentary evidence. This is an important and worthy development for Austria considering the significant and valuable contributions that were made to photography in this country in the past.

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Hans Frühwirth: Ihre Liebe galt Krems. 100 Kremser Persönlichkeiten von Gozzo bis Wilhelm. Krems, 1997. pp. 46-49.

² Also see: Josef Maria Eder: Über die Reaktionen der Chromsäure und Chromate auf Gelatine, Gummi, Zucker und andere Substanzen organischen Ursprunges in ihren Beziehungen zur Chromatographie"

in: Photographische Korrespondenz, vol. 15, Verlag Emil Hornig, Vienna, 1878, pp. 32-42, 48-67, 75-88, 98-113, 117-37, 144-57.

³ Orthochromatic erythrosin plates, first produced according to Eder's instructions at the dry plate factory of J. Löwy & J. Plener.

⁴ Also see: J. M. Eder u. G. Pizzighelli: Die Photographie mit Chlorsilber-Emulsion und chemischer Entwicklung. In: Photographische Korrespondenz, vol. 18, Verlag Emil Hornig, Vienna, 1881, pp. 79-85, 103-107, 122-123, 153-158, 215-218.

⁵ Construction of the Eder-Hecht grey scale densitometer, 1919.

Also see: J. M. Eder: Da's Graukeil-Photometer für Sensitometrie, photographische Kopierverfahren und wissenschaftliche Lichtmessungen. In: Photographische Korrespondenz, vol. 56, Photographische Gesellschaft Wien, 1919, pp. 244-271.

⁶ Also see: J. M. Eder and Eduard Valenta: Atlas typischer Spektren. Kaiserliche Akademie der Wissenschaften, Vienna 1911, Leipzig 1924, Vienna 1928.

⁷ cf. Dr. Alfred Hay: Hofrad Prof. Dr. J. M. Eder zum 75. Geburtstag. in: Photographische Korrespondenz, vol. 66, Verlag Julius Springer, Vienna, 1930, pp. 85.

⁸ quot. from Lüppo-Cramer (1), p. 1051

⁹ Robert Zahlbrecht: Josef Maria Eder Bibliographie. Photographische Gesellschaft Wien, Vienna, 1955.

¹⁰ quot. from Wilhelm Mutschlechner. Österreichs Anteil an der Entwicklung der fotografischen Fotochemie. In: Geschichte der Fotografie in Österreich. (publ: Otto Hochreiter und Timm Starl

im Auftrag des Vereins zur Erarbeitung der Geschichte der Fotografie in Österreich) vol. 2, Bad Ischl, 1983, p.37.

¹¹ *Ausführliches Handbuch der Photographie.*

3 editions 1884 - 1932, Wilhelm Knapp Halle/Saale. This appeared in 3 editions between 1884 - 1932, the last edition in 17 volumes, and represents Eder's life's work. Volumes I & II, The History of Photography, were translated by Epstein in 1945 into English. Some volumes appeared as reprints in 1992 at Lindemann's ; Stuttgart.

¹² *Rezepte, Tabellen und Arbeitsvorschriften für Photographie und Reproduktionstechnik.*

This was written as a textbook for his students. It was published in 25 editions between 1889 - 1949, Verlag Wilhelm Knapp Halle/Saale. It was also translated, but only in French, by G. Braun in 1900. Reprinted by Lindemann, Stuttgart.

¹³ *Eder's Jahrbuch für Photographie und Reproduktionstechnik*

Issued between 1887-1933, Verlag Wilhelm Knapp Halle/Saale. It provides a compilation of the developments in the photographic field year by year.

¹⁴ *Photographische Korrespondenz.*

This was one of the most important periodicals of its type and appeared between 1864 and 1972. It was the journal of the Vienna Photographic Society from 1864 and eventually also that of Eder's institute after its foundation and as such his very own mouthpiece.

¹⁵ cf. Wilhelm Mutschlechner: Österreich und die Photographie – eine Rückblende. In: Rückblende. 150 Jahre Photographie in Österreich. Ausstellungskatalog, Technisches Museum Wien, (publ: Photographische Gesellschaft Wien), Vienna 1989, pp. 98-99.

¹⁶ cf. Josef Maria Eder: Die Geschichte der Anstalt. In: k.k. Graphische Lehr- und Versuchsanstalt 1888-1913, Vienna, 1913, pp. 1 - 28.

¹⁷ In 1908 due to a shortage of space large glazed studios were constructed on top of the neighbouring building, Westbahnstraße 27-29. Interestingly enough these have survived to this day.

¹⁸ cf. Andreas Gruber: Wien: Bearbeitung eines Teiles der fotografischen Sammlung der Höheren Graphischen Bundes- Lehr- und Versuchsanstalt. In: Rundbrief Fotografie, N.F.6, (publ: Museumsverband Baden-Württemberg), Stuttgart, 1995, pp. 8 - 10.

¹⁹ for more information: <http://www.Albertina.org>

²⁰ Monika Faber: Fotosammlung Albertina, in: Rundbrief Fotografie, N.F.27, (publ: Museumsverband Baden-Württemberg), Stuttgart, 2000, pp. 28 - 29.

²¹ All materials used have passed the Photographic Activity Test (P.A.T), in accordance with ANSI/NAPM IT9.16-1993 (ISO 14523:1999)

²² Reinraumbank HERA Safe, Heraeus. Kendro Laboratory Products GmbH. Heraeusstr. 12-14, D-63450 Hanau, Germany.

²³ Wap SQ 240-1M, Staubklasse M (mould), source: Gabi Kleindorfer, Geräte, Material und Werkzeuge für Papierrestauratoren, Asterstr. 8, D-84 186 Vilsheim.

²⁴ Archival boxes (NOMI-Boxen) and archival photo paper (unbuffered), source: Klug Conservation, Postf. 1341, D-87503 Immenstadt.

²⁵ Linoscan F2400 LX, Heidelberg Company
Linoscan F2400 LX, Heidelberg Company

²⁶ SINAR studio camera and Scanback Power Phase, model: Phase One, trilinear CCD array

²⁷ The Museum System. Gallery Systems, 1995 Broadway, Suite 203, New York, NY 10023-5882.
<http://gallerysystems.com>