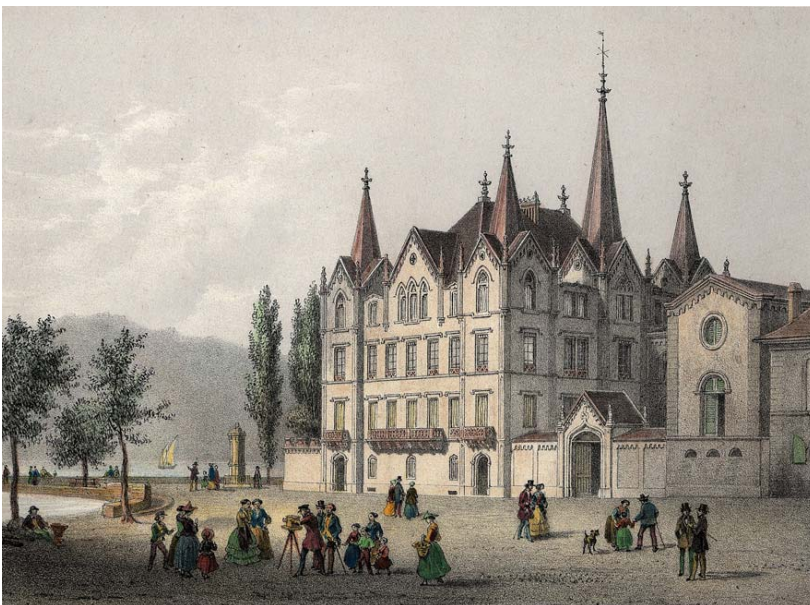


Swiss Camera Museum

THE BEGINNINGS OF PHOTOGRAPHY

This first phase of the new permanent exhibition, reminds visitors how exciting, how innovative early photography was. A selection of fascinating pictures enrich the display and its wealth of recent donations and purchases.

19 August 1839 : this is the date when the Académie des sciences in Paris proclaimed the invention of photography, the result of the joint groundbreaking research by Niépce and Daguerre... In 2009 photography is more than ever omnipresent, as it celebrates its 170th anniversary, an auspicious moment to evoke its birth and the people who created the photographic process.



1. Photographer at work in front of the Château de l'Aile in Vevey, lithograph by Friedrich von Martens printed in Paris around 1850. Collections Swiss Camera Museum

The illustrations are directly downloadable on the site
<http://www.ceramuseum.ch/en/N7634/exposition-permanente-de-en.html?M=7563>
Other illustrations are available on request.

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Tuesday to Sunday 11 am – 5.30 pm and public holidays falling on a Monday

The Beginnings of Photography – how it all came about

After discovering the interior of a camera **obscura** and trying out a device for drawing silhouettes, the visitor can learn how various instruments work and admire the optical lenses which preceded the invention of photographic technology as we know it today.

Then comes a portrayal of the work of Nicéphore Niépce, born in Chalon-sur-Saône, France, who from 1816 on, tried to find a way of obtaining an image by using photosensitive substances. The daguerreotype, the result of long research carried out by **Niépce and Daguerre**, was introduced in 1839, and rapidly gained worldwide popularity. The exhibition also features a fine collection of daguerreotypes with superb views of Paris, dating back to the very beginnings of photography.

This was also the era when the Englishman William Henry Fox Talbot was perfecting a process for paper prints, the « calotype » or « talbotype », the first use of negative and positive, thus allowing multiple prints.

In 1851, **Frederick Scott Archer** invented the wet collodion process for negatives on glass plates. This meant a great improvement in the quality and definition of the images. The Museum's exhibition puts particular emphasis on the tremendous variety of processes for producing photographic paper prints over the years, presented through video demonstrations.

In addition to the enthralling history of techniques, the exhibition comprises an interesting overview of the photographers of the time – scientists, erudite amateurs, travellers and artists. A further section portrays those who were the first to conceive and consolidate the notion of photography as a profession.



2. Daguerreotype by Jean-Gabriel Eynard, showing his children, around 1850. Collections Swiss Camera Museum

Further Information

The Camera Obscura

The formation of the picture of an exterior landscape through a small hole in a darkened room is a phenomenon, which was well-known before our time; Aristotle, the Greek philosopher of the IVth century BC, noticed it without being able to explain it.

It was in the XVth century that Leonardo da Vinci found a rational explanation for the phenomenon. During the XVIth and XVIIth centuries, the idea came about to replace the little hole with a lens to improve the image, and then to install a mirror to make it upright again, and use the camera obscura as a drawing instrument.

The camera obscura was a highly valued instrument in the XVIIIth century and at the beginning of the XIXth, some were permanently installed in houses built in parks, gardens and holiday locations to everybody's greatest pleasure.

From the XVIth century, the camera obscura was considered as the ideal instrument for rendering perspective and became from that time an artist's tool. In the XVIIIth century, travel was the fashion, and people brought home sketches and drawings made with the aid of a camera obscura. Various models, folding or compact, were available to informed enthusiasts. Manuals explaining how to use, and even make a camera obscura were published, while attempts to improve the optical system continued.



3. Travel camera obscura in the shape of a table (walnut), France, mid- XVIIIth century.

The cabinet folds up for transport and has a double bottom, leaving space for drawing material. It is equipped with an optical prism device of a later date.

From the collection belonging to the Swiss Camera Museum, inv. 4129

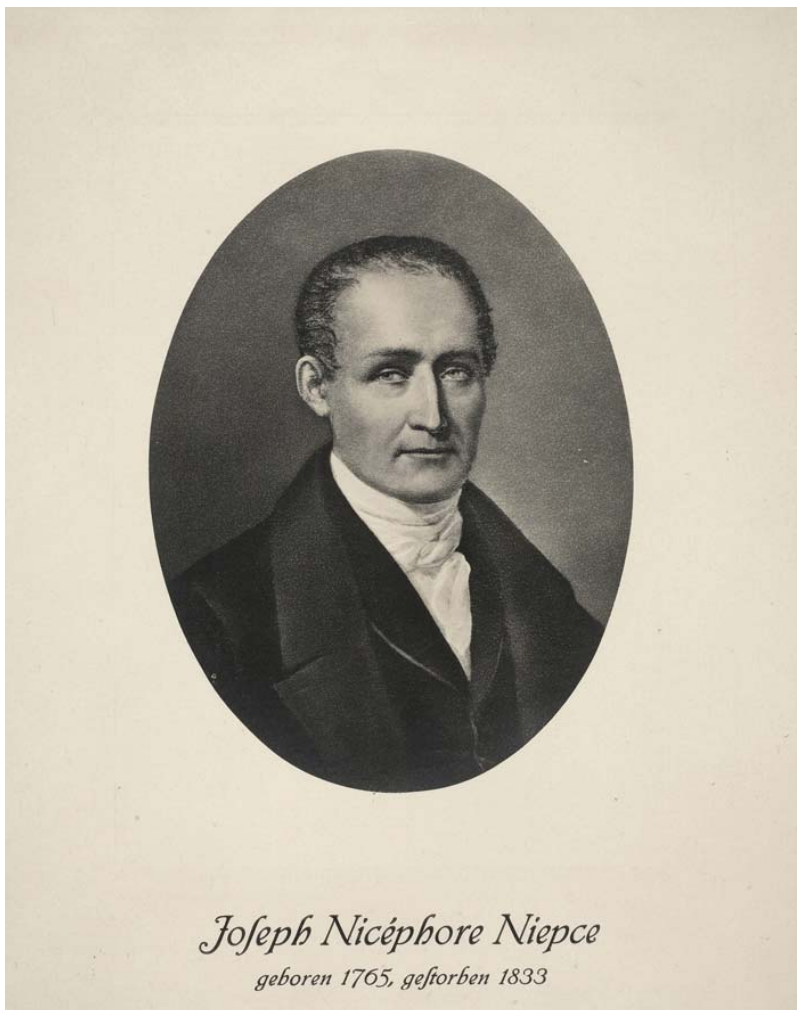
Joseph Nicéphore Niépce

Joseph Nicéphore Niépce, born at Chalon-sur-Saône in 1765, shared a passion for research with his brother Claude: they kept corresponding with each other about their experiences, and it's thanks to this exchange of letters that we know so much about the work of Niépce.

From 1816, Niépce became interested in lithography and conducted many trials. He discovered that Judean pitch has the property of hardening in the light; while exposing a translucent drawing on a plate coated in this substance, he succeeded in obtaining a picture. He christened this process heliography.

Niépce exposed these same plates in a darkened camera and thereby succeeded in obtaining the first photograph. The oldest photographs known to this day, reproduced here, took him a day to expose.

The video made by Jean-Louis Marignier, a French researcher, on show a little further along, will allow you to discover a reconstitution of this first process.



4. Portrait of Joseph Nicéphore Niépce, printed and published in Germany.
From the Collection of the Swiss Camera Museum, inv. 73073

1839: the invention of Daguerre unveiled to the world

Louis-Jacques-Mandé Daguerre, born in 1787 at Corneilles-en-Parisis, arrived in Paris in 1804 and trained as a theatre stage designer. In 1822, together with the artist Bouton, he set up the "Diorama", where large canvasses were painted on both sides with different subjects. Their appearance changed, depending on whether they were illuminated from the front or behind.

As Daguerre made frequent use of the camera obscura, he often went to the Opticians Chevalier. It was here that he heard about Niépce, with whom he started to work.

In parallel with their joint research, Daguerre discovered that silver iodide quickly changes in light. He placed a plate coated with silver in a box containing iodine crystals, whose vapours formed silver iodide on the surface of the plate. After exposure in the camera, the picture, still not yet visible on the plate, was revealed by the vapours given off by the mercury, heated to a certain temperature. On 19th August 1839, this process was presented by Arago to both Academies of Fine Arts and Sciences.



5. Copy of SIMON PLÖSSEL type daguerrean equipment, Vienna, (original dates back to 1840), EPFZ foundation. From the collections of the Swiss Camera Museum

1851: Archer invents wet collodion

The inconvenience of the negative on not very transparent paper, quickly gave rise to the search for a better basis: the use of glass was attractive, but how was one to make the sensitive emulsion stick to it?

In 1846, a French chemist, Louis M nard, dissolved some cotton powder or guncotton – discovered that same year by a chemist from Basel, Christian Friedrich Sch nbein – in a mixture of alcohol and ether: he obtained a viscous liquid, which hardened and became transparent as it dried, this was collodion, used for various purposes, including in the medical field.

In March 1851, the English sculptor and calotypist, Frederick Scott Archer, perfected the so-called wet collodion method: the plate had to be prepared just before being exposed, at the risk of losing its sensitivity, and then developed straight after taking the photograph. So the photographer had to be equipped with a portable laboratory whenever he went out! The very beautiful quality of the negatives obtained with this process assured the general introduction of this method from the 1860s at the expense of the "daguerreotype" and calotype systems.



6. 1864: The Dubroni Camera Laboratory

The idea of processing the exposed picture directly inside the camera came along very quickly: already in 1839, Talbot had conceived of such a piece of equipment. On 21st December 1864 in England, Jules Bourdin applied for a patent for a camera, which he christened the Dubroni Pocket Camera (an anagram of his name), which was produced in several different sizes and models. This was the era of wet collodion, making it necessary to sensitize the plate just before taking photographs and developing them immediately afterwards. The body of the camera contained a bottle, whose rear side was open; the ground glass was replaced by a glass plate. With the aid of a pipette, the composition for sensitising the plate was inserted into the hole situated on the outer frame and one shook the camera to ensure an even application. After an exposure of a few seconds – with the camera on its stand and corked up – one could proceed with the development. It was possible to check one's progress through a yellow glass on the rear panel, protected by a shutter.

This model, number 2, was part of a pack containing all the products needed to process the plates, in bottles bearing the trademark Dubroni, as well as various accessories, proof papers, and of course a user's manual!

From the Collections of the Swiss Camera Museum, inv. 4340