

**HIPPOLYTE
BAYARD**

and the
Invention of
Photography

Edited by Karen Hellman and Carolyn Peter





same date

Portrait de l'auteur

Bayard

COLLECTOR
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HIPPOLYTE BAYARD



and the Invention of Photography

Edited by Karen Hellman and Carolyn Peter

- vii Foreword
Timothy Potts
- i Introduction
Karen Hellman and Carolyn Peter
- 4 Chronology
Carolyn Peter
- 18 Hippolyte Bayard, Inventor
Karen Hellman
- 34 A Paper Bridge: Hippolyte Bayard's
Cross-Channel Exchanges
Carolyn Peter
- 46 Hippolyte Bayard and the Institution
of Photography: The Construction of
a Photographic Reputation
Paul-Louis Roubert
- 60 Hippolyte Bayard, an Eternal Rediscovery:
The Historical Fortunes
of an "Unknown" Photographer
in the Twentieth Century
Éléonore Challine
- 74 Paul Mpagi Sepuya and Hippolyte Bayard:
A Photo Essay and a Conversation
Paul Mpagi Sepuya with Karen Hellman and Carolyn Peter

Contents

85 Plates

86 Early Photographs

- 88 Comparing Hippolyte Bayard's First Photographic Processes at the Académie des sciences with Those at the J. Paul Getty Museum
Art Kaplan and Tania Passafiume in collaboration with Ronel Namde, Marie-Angélique Languille, and Céline Daher
- 96 *Le Noyé* [The Drowned Man]
Jillian Lerner

102 The Getty Album

106 Photograms

114 Early Art Reproduction

- 120 In Bayard's Studio
Anne de Mondenard

126 Gardens and Flowers

- 130 Bayard's Garden
Nancy B. Keeler

136 Portraits and Garden Scenes

- 138 The Self-Portrait and the Substitution Principle
Michel Frizot
- 148 Bayard's Portraits
James A. Ganz
- 154 Light Sensitivity Evaluation of Bayard's Salted-Paper Prints in the J. Paul Getty Museum Collection
Sarah Freeman and Ronel Namde

168 Paris Monuments, Construction, and Architecture

- 171 Under the Paris Sky: Bayard and Clouds
Luce Lebart
- 196 Photographing Hittorff's New Circus for the Champs-Élysées
Anne McCauley
- 202 Jean-Auguste Barre's Fountain of the Four Seasons and the West Wing of the Restaurant Guillemin
Anne McCauley

206 Bayard and the British

214 The Outskirts of Paris: Batignolles and Montmartre

- 219 Construction Worker, Paris
Jillian Lerner

240 Beyond Paris: The Provinces

251 After the Album

256 Later Art Reproductions and Publications

- 259 Bayard and Blanquart-Evrard
Anne Lacoste

264 Studio Portraits and Later Self-Portraits

- 274 Hippolyte Bayard's Recipes: Submissions to the Académie des sciences, 1839–51
- 280 Acknowledgments
- 282 Bibliography
- 289 Contributors
- 290 Index

47
2
107

arc de Triomphe de
Carrousel.



Among the rarest and most treasured holdings in the J. Paul Getty Museum's Department of Photographs is an album of prints by Hippolyte Bayard (1801–1887) titled *Dessins photographiques sur Papier: Recueil No. 2* [Photographic Drawings on Paper: Collection No. 2] dating to the first decade of the medium's invention. Bayard began his experiments with paper photography on January 20, 1839, and for the next four decades dedicated his life to the advancement of the new art form, integrating the science of chemicals and light with the aesthetic practices of drawing, painting, and printmaking, at the time a revolutionary achievement. Though often overlooked early in his career, Bayard was ultimately decorated as a Chevalier of the Legion of Honor and recognized for his essential role in the invention of photography.

The Getty Museum's 1984 acquisition of the album, which contains 145 prints by Bayard, along with 60 other works, made the Getty Museum's Bayard collection the second largest in the world. Highlights include several self-portraits taken by Bayard in his garden, a symbolic composition of objects arranged in his studio, exquisite portraits staged outside of his home, and a significant number of photographs featuring Parisian monuments such as Notre-Dame Cathedral as well as neighborhood streets, commercial buildings, and dilapidated structures on the outskirts of the city.

Because of the extreme light sensitivity of Bayard's experimental processes, access to the album has been restricted, and few of the

prints have been exhibited. However, recent microfade and X-ray fluorescence testing has allowed conservators to identify a selection of these important early photographs that are stable enough for limited display in the Getty Museum exhibition *Hippolyte Bayard: A Persistent Pioneer*, the first on Bayard in North America. This companion volume, the first book on Bayard in English, includes numerous previously unpublished images and offers a long-overdue study of Bayard's essential contributions to art and science. Twelve contemporary works created in response to Bayard's oeuvre by Los Angeles-based photographer Paul Mpagi Sepuya manifest the continuing impact of Bayard and nineteenth-century photography more generally on the ways we view and make pictures today.

At the Getty Museum, former associate curator Karen Hellman and assistant curator Carolyn Peter were responsible for the concept and the realization of the Bayard exhibition and this publication; associate conservators Sarah Freeman and Ronel Namde were responsible for the scientific testing that objects of this age and fragility require.

We thank all the art historians and conservators who contributed to this volume, including Paul-Louis Roubert and Éléonore Challine of the Société française de photographie (SFP) in Paris, which received the majority of Bayard's photographs and archives from his family after his death. We extend our gratitude also to the SFP, the Hammer Museum, and other institutions and private collectors who loaned works to the exhibition or allowed us to reproduce their own fragile Bayard images for this catalogue.

Foreword

Timothy Potts

Maria Hummer-Tuttle and Robert Tuttle Director, J. Paul Getty Museum

Promesse d'argent - Vignoble de Mexico



In a self-portrait from June 1845 taken in his garden in Batignolles on the outskirts of Paris, Hippolyte Bayard (1801–1887) evenly returns the viewer’s gaze (opposite; plate 14). He stands in full sun with one hand resting on a wooden gate, slightly ajar, while his other hand, propped at his hip, sweeps aside a long coat to reveal a buttoned vest. One foot steps forward, the upturned toe allowing a bit of shadow to appear underneath. In this way, Bayard, one of the inventors of photography, proudly presents himself within the art and magic of his own discovery.

By the time of this self-portrait, Bayard had been creating photographs for more than six years, making him one of the pioneers of a revolutionary technology and art form that changed people’s perceptions of the world. Bayard’s interest in art and the Parisian creative circles in which he traveled undoubtedly influenced his decision to enter this unexplored realm. Experimenting with light-sensitive materials, the sun, and different optical devices during the same heady period as a handful of other curious individuals, Bayard invented and improved upon several photographic processes, including, most notably, the direct positive on paper.¹

Yet, from the start his work was eclipsed by that of his countryman Louis-Jacques-Mandé Daguerre (1787–1851), best known for his invention of the eponymous daguerreotype, and the Englishman William Henry Fox Talbot (1800–1877), credited with the invention of the calotype. Although Bayard was the first to publicly present photographs at an art exhibi-

tion and had the longest career of the three, Daguerre and Talbot had superior connections, wealth, and governmental support. Nevertheless, Bayard persisted over four decades, despite having to squeeze his photographic work into his free time away from his bureaucratic position at the Ministry of Finance. He continuously experimented with photographic techniques; displayed his work at universal and industrial expositions; contributed photographs to publications; cofounded the Société héliographique and its successor, the Société française de photographie (SFP);² and opened a portrait studio. The impact of his innovations, artistry, and influence reverberated well into the future of the medium.

Bayard’s self-portrait at his garden gate opens an album of his work from 1839 to the late 1840s—among the earliest photograph albums ever assembled. Titled *Dessins photographiques sur Papier: Recueil No. 2* [Photographic Drawings on Paper: Collection No. 2], it includes his early experiments on paper with new chemical processes and printing techniques as well as innovative artistic compositions of various subjects—still lifes, portraits, street scenes, and architecture.³ Now held at the J. Paul Getty Museum, the album, with its green-and-black marbled covers, is similar in style to the other known album devoted to Bayard, owned by the SFP. Inscriptions found on the backs of photographs and on the pages of the Getty album support the theory that the artist himself, or someone with first-hand knowledge of the chemicals Bayard used, assembled the Getty volume.⁴ Thus, this

Introduction

Karen Hellman and Carolyn Peter

precious compilation offers intriguing insights into Bayard's practice, choice of subject matter, and presentation strategies.

Acquired in 1984, when the Getty was first forming its photography collection, this well-preserved volume has passed through multiple hands across its 180-plus-year life. Many unanswered questions remain, but through research and correspondence we have recently filled in some gaps in the album's provenance. Working backward in time, the Getty Museum purchased the album from the American collector Arnold Crane (1932–2014), who had purchased it in 1970 from Alain Brioux (1922–1985), a Parisian book dealer. By the early 1950s the album was in the possession of the commune of Breteuil-sur-Noye, Bayard's hometown, or of its mayor, François Monnet (1890–1970).⁵ Previously, a member of Bayard's extended family may have given or sold the album to Breteuil.⁶ Moving back into the nineteenth century, at the time of Bayard's death in 1887 his family likely chose to keep the album rather than donating it to the SFP. And prior to that, we believe Bayard held the album in his possession for more than forty years.

The Getty's Bayard album is the central focus of this book and the accompanying exhibition. It contains 145 photographs by or attributed to Bayard (along with twenty-two works by early British photographers). Forty-five other photographs round out the Getty's Bayard holdings. With a total of 190 Bayard photographs, the Getty's collection is the second largest in the world, after that of the SFP in Paris.

Bayard has long been positioned as an outsider in the early histories of photography—the one who lost out to the more prominent figures of Daguerre and Talbot. His outsider status has been fortified by twentieth-century historians characterizing him as “the most luckless pioneer,”⁷ “an accidental, unfortunate character,”⁸ and an “unfortunate inventor.”⁹ This perspective is not entirely warranted, however, as Bayard did receive recognition during his

lifetime, including the Chevalier of the Legion of Honor (plate 204) in 1863. Seeking to expand and sometimes correct earlier narratives, this book—the first dedicated to Bayard in English—presents the broad scope of his contributions to photography from the earliest years to the establishment of his commercial studio in the 1860s. Using close examinations of photographs in the Getty collection as points of departure, it explores Bayard's career trajectory, processes, subject matter and themes, strategies for self-presentation, and the ways in which he navigated the politics and rivalry that marked the early decades of the medium.

An illustrated chronology begins the book, followed by four essays that address various aspects of Bayard's contribution to photography. Karen Hellman provides an overview of Bayard's life and oeuvre. Using photographs in the Getty album, Carolyn Peter explores Bayard's connections to British photographers in the 1840s. Paul-Louis Roubert focuses on the construction of Bayard's reputation throughout the nineteenth century. Éléonore Challine addresses Bayard's shifting reception after his death and in the twentieth century. A conversation with Los Angeles-based artist Paul Mpagi Sepuya provides a contemporary perspective on the role of the photographer's studio space in his work and that of Bayard while also offering insights into Bayard's photographs and legacy.

The Plates section is supplemented with focused essays by experts on Bayard, nineteenth-century photography, and conservation. The topics range from an exploration of Bayard's most famous photograph, *Le Noyé* [The Drowned Man] (plates 8–11), to the microfade testing employed to determine the stability of Bayard's photographs for exhibition. Other essays tackle Bayard's love of gardening and how it informed his choice of subjects, his practice of substituting inanimate objects for himself in images, his idiosyncratic approaches to photographic portraiture, and his creative integration of clouds. Finally, translations

of the photographic recipes Bayard submitted to the Académie des sciences offer further evidence of his tenacity.

The Getty Museum's photographs by Hippolyte Bayard are among its most treasured photographic holdings from the first decade of the medium, and we seek to provide broad access to these significant but thus far unpublished photographs. In conjunction with this book and exhibition, the Getty produced a digital facsimile of the album to give readers a more immersive experience of this rare object. It can be accessed at <https://www.getty.edu/art/collection/object/1040J2>.

- 1 For discussion of the early days of photography, see Batchen 1999.
- 2 The Société héliographique, the world's first photographic society, was founded in Paris in 1851 by a group of artists, writers, and photographers. The society, of which Bayard was among the founding members, sought to promote photography through exhibitions and the sharing of ideas and methods, and from 1851 to 1860 published a weekly journal, *La Lumière*. The Société héliographique was dissolved in 1853 and succeeded by the Société française de photographie (SFP), of which Bayard was also a founding member.
- 3 The Getty's Bayard album was disbound in the 1980s after it came to the museum. For further information on the album, see Peter 2022.
- 4 Thanks to XRF testing we have been able to detect aspects of the chemistry in some of Bayard's photographs. A handful of the inscriptions are consistent with chemicals found in the photographs while others are not. XRF testing cannot, however, always detect all components of a photograph's original chemistry (see Kaplan and Passafiume in this volume).
- 5 In 1952 A. Falquet, a representative from Kodak-Pathé, visited Breteuil to view the album. In October 1959 Pierre-Georges Harmant and Marcel Abribat, SFP archivist and president, respectively, accompanied Marlis Steinert, the wife of curator Otto Steinert, who came to see the album in preparation for an exhibition at the Folkwang Museum in Essen, Germany. We are grateful to Jean-Charles Capronnier, president of the Breteuil Historical Society, for sharing this history with us.
- 6 Monsieur Nervet of La Neuville Roy (a village near Breteuil) may have been the Bayard family member. His biography of Bayard, inscribed August 30, 1953, and a letter to François Monnet, who was mayor from 1947 to 1965, were included with the album. The letter's salutation addresses Monnet as mayor, and the letter mentions the deaths of Frédéric and Madame Maître in 1951, so its date of August 8, 1943, is probably an error; the more likely year is 1953. The letter was reexamined by Karen Hellman and Carolyn Peter in October 2022. Interestingly, Monnet and his descendants owned the Bayard family home from the 1940s until 2019.
- 7 Newhall 1938, 54.
- 8 Lo Duca 1979, 15.
- 9 Gernsheim and Gernsheim 1969, 86.

1801

JANUARY 20 Hippolyte Bayard is born to Emmanuel Bayard and Marie-Elizabeth-Adélaïde Vaconsin Bayard in Breteuil-sur-Noye, France. Hippolyte has an older brother, Louis-Emmanuel, and an older sister, Elizabeth-Mélanie.

1802

JUNE The earliest recorded attempts to capture images using the effects of light on chemicals, by Thomas Wedgwood (1771–1805) and Humphry Davy (1778–1829), are published in the journal of the Royal Institution of Great Britain. Wedgwood and Davy produced very faint, fleeting images on paper, leather, and glass. Their efforts to halt the action of light and thus permanently fix their images were unsuccessful.



Fig. 1 Bayard family home, Breteuil, France (plate 13)

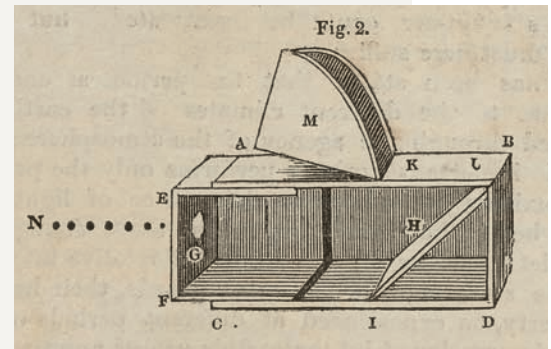


Fig. 2 Diagram of an early nineteenth-century camera obscura from *The Saturday Magazine*, no. 362 (February 24, 1838): 8

A camera obscura, or “dark chamber,” was the ancestor of the modern camera. By the 1830s the inventors of photography had developed one consisting of an oblong, closed box fitted at one end with an adjustable lens to focus on a subject. Light rays traveled in a straight line through the lens and hit the chemically treated, light-sensitive paper on the inside back of the camera. The resulting images were reversed laterally (left to right). The first single-reflex camera with a mirror enclosed appeared in 1861. The light bounced off the mirror and hit the sensitized paper or plate so that the image would no longer be reversed.

1804

Bayard’s parents take ownership of the family home on place de l’Abbaye in Breteuil (fig. 1). It has been in the Bayard family since 1753.

1806

OCTOBER 30 Bayard’s brother, Louis-Emmanuel, joins the seminary of Amiens. He will become a priest based in Bourges.

Chronology

Carolyn Peter

This chronology records pivotal moments in the life and career of Hippolyte Bayard. Selected milestones in the early history of photography are shown in **bold**.

ABBREVIATIONS

- AdBA Académie des beaux-arts
- AdS Académie des sciences
- SFP Société française de photographie
- SLBA Société libre des beaux-arts

1815

APRIL 1 Bayard is admitted as a day student to a minor seminary in Beauvais, about eighteen miles from Breteuil.

1816

French inventor Joseph Nicéphore Niépce (1765–1833) creates fleeting negative images on paper coated with silver chloride at the back of a camera obscura (fig. 2).

About 1818–early 1820s

Bayard possibly has apprenticeships with notaries in Breteuil and/or Senlis and likely goes on to work as a clerk during this period.¹

1822

JULY 11 Artist and scenic painter Louis-Jacques-Mandé Daguerre (1787–1851), in partnership with academically trained painter Charles Marie Bouton (1781–1853), opens the Diorama in Paris—a spectacle where large-scale, painted scenes seem to come to life with the shifting effects of light.

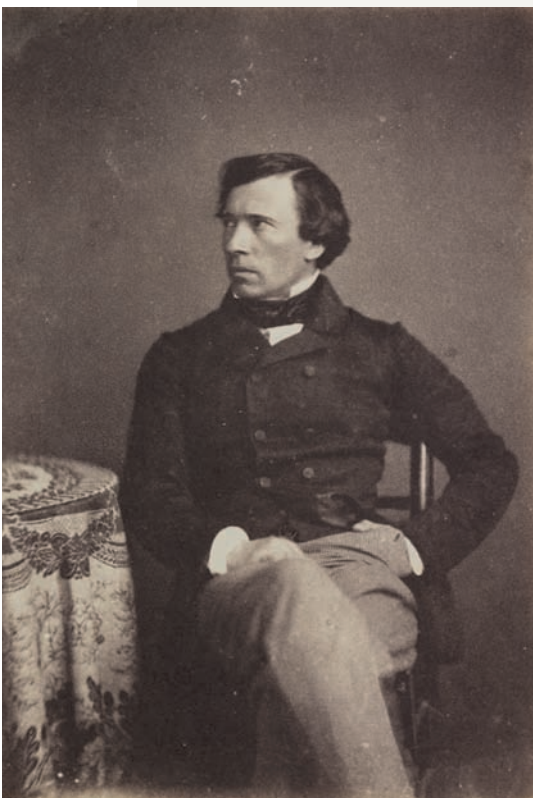


Fig. 3 Julien Vallou de Villeneuve (French, 1795–1866), Portrait of Edmond Geffroy, 1853. Salted paper print, 16.2 × 11 cm (6³/₁₆ × 4¹/₁₆ in.). Kansas City, Nelson-Atkins Museum of Art, Gift of the Hall Family Foundation, 2017.44.23.14

By 1824

Bayard moves to Paris, probably with his childhood friend Edmond Geffroy (1804–1895), an aspiring painter and actor (fig. 3).

M. Bayard (Hippolyte)		Né le 20 ^e Janvier 1801, à Breteuil - Oise.	
29 Janvier 1825	1 ^{er} Janvier 1825	Commissaire de classe	1,000
11 Mars 1826	1 ^{er} Janvier 1826	id.	1,200
1 ^{er} Mars 1826	1 ^{er} Janvier 1826	id.	1,400
27 Mars 1826	1 ^{er} Janvier 1827	id.	1,700
10 Janvier 1827	10 Janvier 1827	id.	1,900
29 Mars 1827	1 ^{er} Janvier 1828	id.	2,100
7 Janvier 1828	1 ^{er} Janvier 1828	id.	2,300
9 Janvier 1828	1 ^{er} Janvier 1828	id.	2,500
23 Mars 1828	1 ^{er} Janvier 1828	id.	2,700
20 Mars 1828	1 ^{er} Janvier 1829	id.	2,900
1 ^{er} Mars 1829	1 ^{er} Janvier 1829	id.	3,100
1 ^{er} Mars 1829	1 ^{er} Janvier 1830	id.	3,300
1 ^{er} Mars 1830	1 ^{er} Janvier 1831	id.	3,500
1 ^{er} Mars 1831	1 ^{er} Janvier 1832	id.	3,700
1 ^{er} Mars 1832	1 ^{er} Janvier 1833	id.	3,900
1 ^{er} Mars 1833	1 ^{er} Janvier 1834	id.	4,100
1 ^{er} Mars 1834	1 ^{er} Janvier 1835	id.	4,300
1 ^{er} Mars 1835	1 ^{er} Janvier 1836	id.	4,500
1 ^{er} Mars 1836	1 ^{er} Janvier 1837	id.	4,700
1 ^{er} Mars 1837	1 ^{er} Janvier 1838	id.	4,900
1 ^{er} Mars 1838	1 ^{er} Janvier 1839	id.	5,100
1 ^{er} Mars 1839	1 ^{er} Janvier 1840	id.	5,300
1 ^{er} Mars 1840	1 ^{er} Janvier 1841	id.	5,500
1 ^{er} Mars 1841	1 ^{er} Janvier 1842	id.	5,700
1 ^{er} Mars 1842	1 ^{er} Janvier 1843	id.	5,900
1 ^{er} Mars 1843	1 ^{er} Janvier 1844	id.	6,100
1 ^{er} Mars 1844	1 ^{er} Janvier 1845	id.	6,300
1 ^{er} Mars 1845	1 ^{er} Janvier 1846	id.	6,500
1 ^{er} Mars 1846	1 ^{er} Janvier 1847	id.	6,700
1 ^{er} Mars 1847	1 ^{er} Janvier 1848	id.	6,900
1 ^{er} Mars 1848	1 ^{er} Janvier 1849	id.	7,100
1 ^{er} Mars 1849	1 ^{er} Janvier 1850	id.	7,300
1 ^{er} Mars 1850	1 ^{er} Janvier 1851	id.	7,500
1 ^{er} Mars 1851	1 ^{er} Janvier 1852	id.	7,700
1 ^{er} Mars 1852	1 ^{er} Janvier 1853	id.	7,900
1 ^{er} Mars 1853	1 ^{er} Janvier 1854	id.	8,100
1 ^{er} Mars 1854	1 ^{er} Janvier 1855	id.	8,300
1 ^{er} Mars 1855	1 ^{er} Janvier 1856	id.	8,500
1 ^{er} Mars 1856	1 ^{er} Janvier 1857	id.	8,700
1 ^{er} Mars 1857	1 ^{er} Janvier 1858	id.	8,900
1 ^{er} Mars 1858	1 ^{er} Janvier 1859	id.	9,100
1 ^{er} Mars 1859	1 ^{er} Janvier 1860	id.	9,300
1 ^{er} Mars 1860	1 ^{er} Janvier 1861	id.	9,500
1 ^{er} Mars 1861	1 ^{er} Janvier 1862	id.	9,700
1 ^{er} Mars 1862	1 ^{er} Janvier 1863	id.	9,900

Fig. 4 Hippolyte Bayard's work history at the Ministry of Finance, 1825–63. Paris, Centre des archives économiques et financières, no. IC30741

1825

JANUARY 1 The Ministry of Finance in Paris first records Hippolyte Bayard as an employee. He works as a fourth-class clerk in Direct Contributions (a tax department) and receives an annual income of 1,000 francs (fig. 4).

1827

Niépce produces a lasting photograph by coating a pewter plate with bitumen of Judea and lavender oil and exposing it at the back of a camera obscura for several days to the sunlit view from his window. He names his process *héliographie* (sun writing).

DECEMBER Niépce travels to England to visit his ailing brother. Unable to secure an invitation to present his work to the Royal Society, he leaves six heliographs and a *mémoire* [paper] with friend and Society member Franz Bauer (1758–1840).

1828

FEBRUARY Bayard becomes a fourth-class clerk in the General Secretariat of the Ministry of Finance with an annual salary of 1,700 francs (fig. 5).



Fig. 5 Philippe Benoist (French, 1813–ca. 1905), *Rue du Rivoli, Ministry of Finances and of the Navy*, ca. 1824–71. Lithograph, 29 × 37.5 cm (11¹/₁₆ × 14³/₄ in.). Paris, Musée Carnavalet-Histoire de Paris, E37

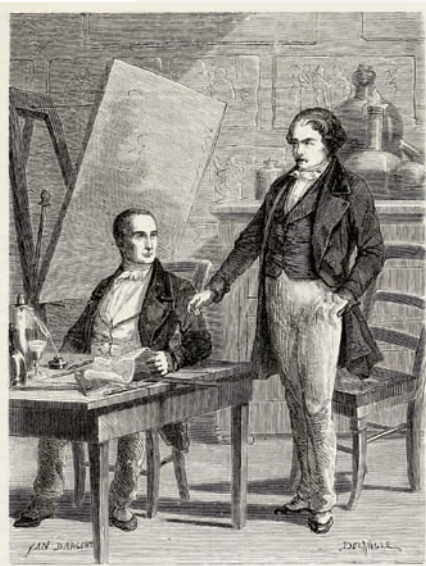


Fig. 6 *Niépce Reading to Daguerre, after Their Association, His Description for His Process for Fixing Images from the Camera Obscura* from Louis Figuier, *Les merveilles de la science, ou, Description populaire des inventions modernes* (Paris: Jouvett et Compagnie, 1869)

1829

DECEMBER 14 Niépce partners with Daguerre to collaborate on methods for fixing images using light-sensitive chemicals and optical devices (fig. 6).



Fig. 7 Eugène Devéria (French, 1805–1865), *Portrait of Amaury Duval*, ca. 1840s (?). Oil on canvas, 65.4 × 54.2 cm (25³/₄ × 21⁵/₁₆ in.). Autun, Musée Rollin, H.V.55

1830

JANUARY Bayard is promoted to third-class clerk with an annual salary of 1,900 francs.

Through Geffroy, Bayard establishes a friendship with Eugène Emmanuel Amaury-Duval (1808–1885; fig. 7), a student of the painter Jean-Auguste-Dominique Ingres (1780–1867). Together with Amaury-Duval, Bayard and Geffroy, who had probably painted and drawn together during their youth, likely paint together at the Louvre and in Amaury-Duval's home studio.

1833

Bayard's mother, Marie-Elizabeth-Adélaïde Vaconsin Bayard, dies in Breteuil.

JULY 5 Joseph Nicéphore Niépce dies in St. Loup-de-Varennes, Burgundy.

1834

William Henry Fox Talbot (1800–1877) obtains "photogenic drawings" without the use of a camera obscura. He does so by placing plant specimens and other objects directly on writing paper coated with salt and a solution of silver nitrate. After the objects are exposed to the sun, a second application of salt fixes the images, making them permanent. Their lights and darks are reversed, and the images are laterally reversed. Talbot does not make his discovery public.

1835

Daguerre succeeds in realizing an image by coating a metal plate with salts and silver, exposing it to sunlight, and then "developing out" the invisible "latent" image by using mercury vapors. His images are laterally reversed, but the lights and darks are correct. He shortens the exposure time significantly—from eight hours to thirty minutes—but the results are unstable.

SEPTEMBER 27 Art critic Arsène Houssaye (1815–1896) mentions Daguerre's photographic experiments in his article on the Diorama in the *Journal des artistes*.

1837

JUNE 13 Isidore Niépce (1805–1868), son of Joseph Nicéphore, signs a contract with Daguerre to share the Daguerre/Niépce process through a public subscription scheme at 1,000 francs each.

1838

JANUARY Bayard is promoted to second-class clerk in the Ministry of Finance with an annual salary of 2,500 francs. Bayard's contemporaries, including Eugène Durieu (1800–1874), later write that Bayard began his experiments into the light-sensitive properties of silver chloride during this year. In the text that accompanies his October 18, 1840, photograph *Le Noyé* [The Drowned Man] (plates 8–11), Bayard writes that he has been experimenting for almost three years.

Daguerre invents the "Daguerréotype," a method for producing images on polished silver-plated copper that is more reliable than his and Niépce's earlier processes. The silver-plated copper is exposed to iodine vapors that merge with the silver to create iodized silver. The plate is then developed with mercury vapors and fixed with table salt. The exposure time is three to fifteen minutes. Daguerre does not divulge the details of his process. Toward the end of the year, however, he meets with François Arago (1786–1853), an eminent astronomer, politician, and permanent secretary of the AdS, to discuss his discovery.

1839

JANUARY 6 Henri Gaucheraud publishes an article about Daguerre's invention. Titled "Fine Arts: The Daguerreotype," the article appears on page 1 of *La Gazette de France* and is translated into English for publication in the *London Literary Gazette* on January 12.

JANUARY 7 Arago makes an official announcement at the AdS regarding Daguerre's discovery of the daguerreotype. Thus, the official scientific body of France signals its recognition of Daguerre (in collaboration with Niépce) as the inventor of photography and, with nationalistic pride, claims France as the country where this significant finding was made. Though the details of Daguerre's process are not revealed, Arago hopes to drum up public support to convince the government to compensate Daguerre.

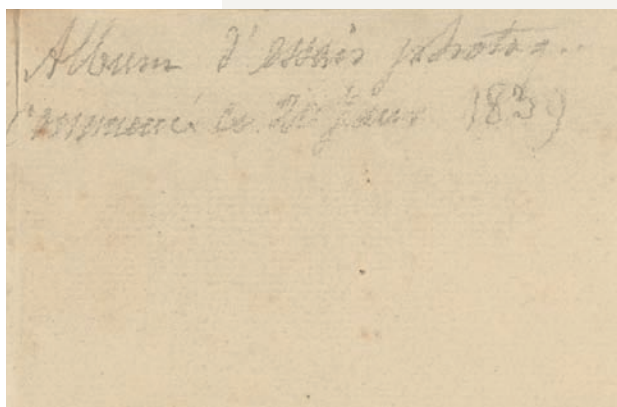


Fig. 8 Hippolyte Bayard (French, 1801–1887), Inside cover of *Album d'essais*, 1839. Cover: 22.8 × 30.5 cm (9 × 12 in.). Paris, Société française de photographie, SFP 24 ALB 518

JANUARY 20 On the inside cover of an album, Bayard notes this day—his thirty-eighth birthday—as the date he begins this album (today known as *Album d'essais* [Album of Experiments]; fig. 8), to which he will ultimately add 355 examples of his early work.

JANUARY 25 Scientist Michael Faraday (1791–1867) shows samples of Talbot's 1835 photogenic drawings to the Royal Institution.

JANUARY 31 Talbot gives a lecture at the Royal Society explaining in general terms his experiments with paper soaked in silver chloride. He is not fully satisfied with his results; the images are reversed and negative.

EARLY FEBRUARY Bayard notes in his album that he has made his first worthwhile photographic experiments on paper. These are likely photogenic drawings, created by placing objects directly on paper treated with light-sensitive chemicals.

FEBRUARY 5 Bayard invites César Despretz (1791–1863), chemist and assistant professor of physics at Paris's Faculté des sciences, to view his first photogenic drawings.

FEBRUARY 23 Talbot's latest findings are published in *The Athenaeum: Journal of Literature, Science and the Fine Arts*.

MARCH 20 Bayard realizes his first successful direct positives on paper using a camera obscura (see figs. 36–39). This process does not involve a negative. Unlike Talbot's photogenic drawings, however, the light and dark values appear correctly. His method requires fewer steps and is thus more time efficient than Daguerre's daguerreotype or Talbot's photogenic drawing (if Talbot had chosen to create an image where the lights and shades are correct by printing a positive from the negative). Two days later Bayard shows the prints to painter-lithographer Henri Grévedon (1776–1860) and possibly painter Daniel Saint (1778–1847). The exposure time is about an hour; by April he has reduced it to about a half hour.

MAY 13 Bayard shows his photographic samples to AdS member, physicist, and mathematician Jean-Baptiste Biot (1774–1862).

MAY 20 Bayard shows his direct positive prints to Arago, who probably discourages him from announcing his process and continues to support the work of Daguerre.

JUNE 10 Bayard shortens his exposure time to fifteen minutes for photographs of sculptures, twenty minutes for landscapes.

ABOUT JUNE OR JULY Bayard buys a new lens with a 600-franc award from the Ministry of the Interior. This is Bayard's first governmental recognition, although it pales in comparison to the remuneration Daguerre will receive.

JULY 9 The French Chamber of Deputies votes to award Daguerre an annual pension of 6,000 francs and Isidore Niépce one of 4,000 francs for life in exchange for the rights to the daguerreotype process.

JULY 14–LATE AUGUST As part of an art exhibition held to benefit victims of the January 1839 Martinique earthquake, Bayard displays thirty examples of

his direct positives at the auction house Hôtel des Commissaires-Priseurs in Paris. He is the only photographer included in what is now widely considered to be the world's first public exhibition of photography and the first art exhibition to include photography (fig. 9). Articles about his work are published in *Le Moniteur Universel* (July 22), *Le Constitutionnel* (August 3), and the *Journal des débats* (August 26).²

AUGUST 1 The French Chamber of Peers also votes in favor of Daguerre's and Niépce's pensions.

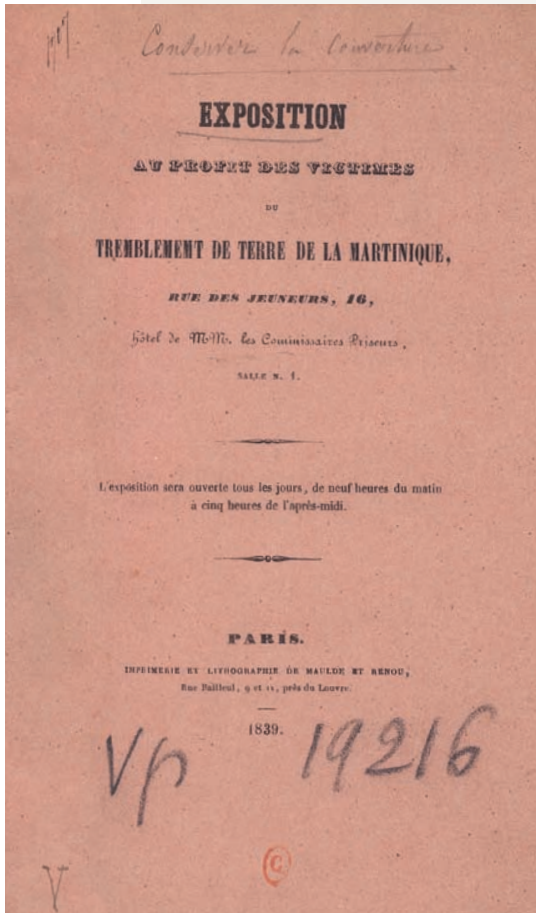


Fig. 9 Cover of *Exposition au profit des victimes du tremblement de terre des la Martinique* (Paris, 1839). Paris, Bibliothèque nationale de France, VP-19216

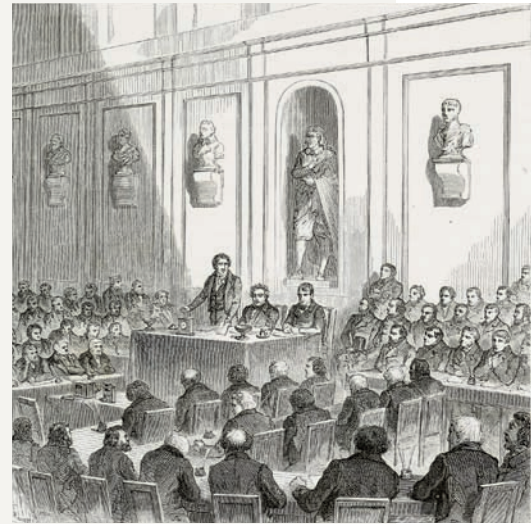


Fig. 10 August 19, 1839, Meeting at the Institut de France. Announcement of Daguerre's Process from Louis Figuier, *Les merveilles de la science, ou, Description populaire des inventions modernes* (Paris: Jouvett et Compagnie, 1869)

AUGUST 19 Arago reveals the details of the daguerreotype process at an AdS meeting also attended by members of the AdBA and by Daguerre himself. Daguerre's process is made available to the world free of charge (fig. 10).

SEPTEMBER 1 Josef Hamel (1788–1862), an emissary of the Russian tsar, sends to the Imperial St. Petersburg Academy of Sciences photographic samples by Nicéphore Niépce along with a daguerreotype camera—a camera obscura designed and constructed to Daguerre's specifications by his brother-in-law, Alphonse Giroux (1776–1848). Hamel had sent images and instructions regarding Talbot's process earlier in the year from England.

ABOUT SEPTEMBER 7 Daguerre's manual on his daguerreotype process is released.

SEPTEMBER 19 With little support from the AdS, Bayard seeks recognition from the AdBA. He writes asking to submit some of his direct positives for study.

OCTOBER 26 Bayard demonstrates his process to the AdBA, with thirty-six academicians in attendance.

OCTOBER 30 An AdBA committee meets to review Bayard's process. On November 2, Désiré Raoul-Rochette (1790–1854), secretary general of the AdBA, presents a report on the committee's findings.

NOVEMBER 11 Bayard deposits with the AdS a sealed envelope (*pli cacheté* no. 141)³ and two photographs explaining his “latent image” method, using silver nitrate, potassium iodine, and mercury vapors. While they do not carry legal weight, *plis cachetés* help establish the date of a discovery. The lights and shadows are reversed in this latent print process.

NOVEMBER 13 The AdBA's highly favorable report is published in *Le Moniteur Universel*.⁴ It touts Bayard's direct positive process as being very advantageous to artists for its pleasing appearance as well as its accuracy in lights and darks, its portability, and its ease of use. Three hundred and fifty copies of the report are printed as a booklet and distributed throughout the Institut de France.

LATE 1839 Hamel sends a report to the Russian Academy of Sciences discussing the state of photography in France, along with three direct positives by Bayard given to him by the artist. He also includes a print etched from a heliographed plate by Dr. Alfred François Donné (1801–1878), biologist and physician who would soon develop microphotography.

BY DECEMBER 1839 In Philadelphia, Dr. Paul Beck Goddard (1811–1866) begins conducting experiments with early American photographer Robert Cornelius (1809–1893) on daguerreotypes. They introduce bromine into the process and succeed at shortening exposure times from minutes to seconds.

1840

FEBRUARY 10 Biot presents to the AdS works and findings by Talbot and compares them to Bayard's. Biot writes that the lights and shadows are true to life in Talbot's samples, something Bayard has yet to accomplish in his latent images (though he had done so with his direct positive process).

FEBRUARY 24 Bayard sends a letter to Arago describing his direct positive technique.⁵ It is recorded in the meeting minutes of the AdS.

FEBRUARY 29 An act of death is declared for Bayard's father, Emmanuel Bayard.

SEPTEMBER Thanks to chemistry with a higher light sensitivity, Talbot perfects a new method of making photographic negatives with significantly shorter exposure times—dropping from minutes to seconds. He coats a sheet of paper with silver salts and exposes it to light. The resulting image is quite faint or invisible. After then coating the sheet with a chemical solution that includes gallic acid, the image “develops out”—becomes darker and more legible. Talbot names his process the calotype (“beautiful impression”). This technique is most closely related to the gelatin silver negative/positive process that would become the dominant photographic method of the twentieth century (fig. 11).

OCTOBER 18 Bayard produces three variants of *Le Noyé* (plates 8–11). He attaches a text to one of them suggesting that his (fictional) suicide was caused by the government's support and recognition of Daguerre instead of him.

OCTOBER 21 Bayard writes to the AdBA requesting permission to submit further examples of his work.

OCTOBER 31 Bayard returns to the AdBA to share his progress over the past year. The AdBA is particularly impressed by six prints of the bust of architect Charles Percier (see fig. 44) and reaffirms its



Fig. 11 John Moffat (Scottish, 1819–1894), *William Henry Fox Talbot*, 1864. Carbon print, printed 1948 by Harold White, 52.4 × 43.1 cm (20⁵/₈ × 16¹/₈ in.). Rochester, George Eastman Museum, gift of Mrs. Alden Scott Boyer, 1981.2541.0001

support for Bayard in a letter to the minister of the interior.

1841

JANUARY Bayard donates two prints to the SLBA lottery to help victims of flooding in the South of France. He will offer four more prints on paper for the subsequent catalogue supplement.

FEBRUARY 6 Bayard writes to the AdS requesting that his November 8, 1839, *pli cacheté* no. 141⁶ be opened to prove he had discovered three latent image processes in 1839 prior to Talbot. Once opened, the letter is read at the Academy's February 8 meeting.

FEBRUARY 8 Talbot files a patent in England for his calotype process. Professional and amateur photographers now must pay for a license to use his process.

APRIL In a presentation to a committee of the SLBA early in the month, Bayard produces a photograph of a bust of Percier as well as a negative photogram. The committee recommends he be awarded a silver medal, which he receives on April 27.

JULY 30 AND AUGUST 5 Bayard meets twice with Welsh photographer Reverend Calvert Richard Jones (1804–1877), an associate of Talbot, in Paris.

1842

Bayard is promoted to first-class clerk in the Ministry of Finance with an annual salary of 3,200 francs.

MARCH 23 Bayard is awarded 3,000 francs from the Société d'encouragement pour l'industrie nationale.

1843

APRIL 23 Bayard is listed among the most adept photographic artists in France in an article by Jules Garnier in *Le Moniteur Universel*.⁷

MAY 29 Bayard meets with Talbot during the Englishman's extended visit to Paris. Fellow French photographers Hippolyte Louis Fizeau (1819–1896), Victor Regnault (1810–1878), and Jean-Louis Lassaigne (1800–1859) are also present, and Biot may have attended as well. This is the first and only known meeting between Bayard and Talbot (see fig. 33).

AUGUST Architect Félix Duban (1798–1870) commissions Bayard to photograph the Château de Blois in the Loire Valley. Bayard makes a daguerreotype of the château's François I staircase (plate 165). Bayard has begun working in photographic processes beyond his own.

1844

Nicolaas Henneman (1813–1898), Talbot's associate, opens The Reading Establishment in Reading, England, an enterprise where Talbot's salted paper negatives can be mass printed and other photographers can send their own negatives to be printed.

1845

JULY 1 Bayard is promoted to principal first-class clerk in the Ministry of Finance with an annual salary of 3,600 francs.

SEPTEMBER Bayard returns to Breteuil with camera equipment and creates daguerreotypes of himself and his sister (plates 49, 50).

OCTOBER 13 Bayard deposits with the AdS *pli cacheté* no. 586,⁸ describing a photographic process using Whatman vellum, a paper produced in England. It creates a latent image that is made visible with a solution of concentrated gallic acid.

1846

Bayard begins to sell prints at 10 rue Vivienne. This may have been the shop of Frederick Sinnett, an English printseller at 10 passage Colbert, which opens off rue Vivienne.

DECEMBER 14 Bayard deposits with the AdS *pli cacheté* no. 694. In his cover letter, he writes that one negative can produce forty thousand positive copies.⁹ He attaches thirty-six examples.

1848

FEBRUARY–JUNE The French Revolution of 1848 leads to the collapse of the July Monarchy. Following the abdication of King Louis-Philippe on February 25, France's Second Republic is proclaimed. Sometime in the spring, Bayard photographs the remains of the upheaval—a barricade and the torn-up cobblestones just around the corner from the Ministry of Finance (plates 94, 95).

1849

JUNE 1–JULY 30 Bayard shows images at the *Exposition nationale des produits de l'industrie agricole et manufacturière* and is awarded a silver medal.

1851

JANUARY The Société héliographique, the world's first photographic society, is established in Paris. Bayard is a founding member.

The French government's Commission des monuments historiques establishes the Mission héliographique to photograph France's architectural monuments. Bayard is one of five photographers selected, along with Édouard Baldus (1813–1882), Gustave Le Gray (1820–1884), Henri Le Secq (1818–1882), and Auguste Mestral (1812–1884).

APRIL 14 Bayard writes to the AdS requesting that his December 14, 1846, *pli cacheté* no. 694 be opened to prove he had previously discovered a method capable of making thousands of prints.¹⁰ In this letter, he also describes another photographic process to prepare highly light-sensitive papers that need only be exposed for one minute in the sun or at least one hour by a Carcel oil lamp.

MAY 1–OCTOBER 15 Bayard shows seventeen albumen prints of views and monuments of Paris and Rouen as well as images of bas-reliefs and plaster statuettes, all made from glass plate negatives at London's Great Exhibition. He is awarded a prize medal—an award for outstanding excellence. Bayard's friend Jules Claude Ziegler (1804–1856; fig. 12), an accomplished painter, ceramist, and photographer, serves as a juror at the Great Exhibition. Ziegler studies photography with Bayard and, like Bayard, researches the light properties of colors.

JULY 10 Daguerre dies in Bry-sur-Marne, where he had retreated in 1841. By 1845 Daguerre had ostensibly ended his photographic career.



Fig. 12 Nadar (Gaspard Félix Tournachon, French, 1820–1910), [Jules Claude] Ziegler, *Painter*, 1854–56. Albumen silver print, 22 × 16.3 cm (8⁵/₈ × 6³/₈ in.). Los Angeles, J. Paul Getty Museum, 84.XM.436.406

1853

MARCH 31 The Société héliographique is officially dissolved.

APRIL 1 Bayard is promoted to fourth-class deputy in the Ministry of Finance with an annual salary of 4,000 francs.

Bayard collaborates with François-Auguste Renard (1806–1890) on reproductions of works of art for Louis-Désiré Blanquart-Evrard's (1802–1872) large-scale photographic books *Musée photographique* and *L'œuvre de N. Poussin*. Bayard makes some of the photographs on his own. Around this same time, Blanquart-Evrard also publishes Bayard's views of Église de Saint-Pierre à Louviers, Église de Notre-Dame à Mantes, and Rouen (fig. 13) in *Souvenirs photographiques*.

1854

JANUARY 3–LATE FEBRUARY Bayard exhibits photographs of a bas-relief and a copy of an engraving at the Photographic Society of London's first exhibition, held at the Society of British Artists on Suffolk Street, Pall Mall, London.

Bayard collaborates with Renard on reproductions of works of art published in Blanquart-Evrard's photographic volumes *L'art contemporain: Architecture, peinture, sculpture* and *L'art religieux: Architecture, sculpture, peinture* (second series).

NOVEMBER 15 The SFP, successor to the Société héliographique, is established; Bayard is a founding member and serves on its administrative committee until 1859.

DECEMBER After numerous legal battles, all coverage under Talbot's photographic patent is voided.

1855

MAY 15–NOVEMBER 15 Bayard displays a series of prints he had exhibited in 1839 as well as photographic reproductions of works of art including the Venus de Milo, bas-reliefs, and engravings by Wille at the Exposition Universelle's Palais de l'industrie in Paris. Bayard is awarded a first-class medal (fig. 14). Ziegler writes a survey of the photographic section of the exhibition that highlights Bayard's accomplishments.¹¹



Fig. 13 Hippolyte Bayard (French, 1801–1887), *Rouen*, ca. 1853, published in *Souvenirs photographiques* (Lille: Blanquart-Evrard, 1853). Salted paper print, 19.1 × 25.2 cm (7¹/₂ × 9¹⁵/₁₆ in.). Los Angeles, J. Paul Getty Museum, 84.XP.345.55



Fig. 14 Albert Désiré Barre (French, 1818–1878), First-class medal, Exposition Universelle, Paris, 1855. Silver with leather case with gold lettering, diam: 6 cm (2 $\frac{3}{8}$ in.). Los Angeles, Private collection

Paul Périer (1812–1897) mentions Bayard in his summary of the exhibition’s photography.¹²

AUGUST 1–NOVEMBER 15 Bayard presents some of his earliest works, along with albumen and collodion prints, at the SFP’s first exhibition, in the society’s meeting rooms at 11 rue Drouot, Paris.

1856

AUGUST 23 At the Exposition Universelle in Brussels, Bayard displays the same frame of photographs from 1839 that he had shown at the Paris Exposition Universelle of 1855. He also presents photographic reproductions of art. He is awarded a medal “outside of the competition” for his pioneering works from 1839.

December 21, 1856– May 15, 1857

Bayard presents work at the SFP’s second exhibition, at 35 boulevard des Capucines. He also donates the exhibited examples of Talbot’s photographs “fixed by sodium chloride” to the SFP.

1857

JULY 1 Bayard is promoted to third-class deputy in the Ministry of Finance with an annual salary of 4,500 francs.

1858

Having developed a photographic engraving process in 1852, Talbot devises an improved method. Both can be considered the precursors to the photogravure process that will become widely used.

1859

APRIL 15–JULY 1 Bayard serves as a juror for the SFP’s third exhibition, at the Palais des Champs-Élysées.

1860

JANUARY 1 Bayard is promoted to second-class deputy in the Ministry of Finance with an annual salary of 5,000 francs.

OCTOBER 2 Bayard; Charles Albert d’Arnoux, known as Bertall (1820–1882); and Périer, silent partner, banker, critic, and member of SFP, establish a photographic studio at 15 bis rue de la Madeleine, a short walk from the Ministry of Finance. (Rue de la Madeleine will later be renamed rue Boissy d’Anglas.)

1862

MAY 1–NOVEMBER 1 Bayard and Bertall show portraits and photographic reproductions at London’s International Exhibition. They win a prize medal.

1863

FEBRUARY 3 Bayard is decorated as a Chevalier of the Legion of Honor, the highest French civil and military award of merit (plate 204).

MAY 1–AUGUST 31 Bayard and Bertall exhibit at the SFP’s fifth exhibition, at the Palais de l’Industrie. Bayard also serves as a juror.

OCTOBER 1 Bayard retires from the Ministry of Finance.

1864

MAY 1-AUGUST 31 Bayard and Bertall exhibit at the SFP's sixth exhibition, at the Palais de l'Industrie. Bayard also serves as a juror.

1865

MAY 1-JULY 31 Bayard and Bertall exhibit at the SFP's seventh exhibition, at the Palais de l'Industrie. Bayard also serves as a juror.

1866

Bayard becomes secretary general of the SFP, a position he will hold until 1881.

FEBRUARY 24 Bayard, Bertall, and Périer's partnership is dissolved. Bertall retains the studio until 1875.

1867

APRIL 1-NOVEMBER 1 Bayard and Bertall exhibit works at the Exposition Universelle in Paris.



Fig. 15 Bayard and Bertall (est. 1860), Portrait of Hippolyte Bayard in the Bayard and Bertall studio, ca. 1860–66. Albumen silver print, 7.3 × 7.5 cm (2⁷/₈ × 2¹⁵/₁₆ in.). France, Private collection



Fig. 16 Hippolyte Bayard (French, 1801–1887), Still Life, undated. Oil on canvas, 40 × 52.8 cm (15³/₄ × 20³/₄ in.). France, Private collection

1869

Bayard moves to Nemours, settling close to where Edmond Geffroy lives with his wife, Eulalie. He spends much of his time painting with Geffroy. He may have also collaborated on photographs with a Captain Roger, who later donated works by Bayard to the Château-Musée de Nemours (fig. 16).

1877

SEPTEMBER 17 Talbot dies at Lacock Abbey in England, after spending his later years studying the Assyrian cuneiform and publishing many important translations.

1878

Bayard's sister, Elizabeth-Mélanie Bayard, dies in Breteuil. Bayard returns to Breteuil to sell the family home.

1881

FEBRUARY 4 Bayard is named honorary secretary general of the SFP.

1887

MAY 14 Bayard dies in his rented home on the quai des Petits-Fossés in Nemours. He is buried in the Saint Pierre-lès-Nemours cemetery, across a walkway from Eulalie Dupuis Geffroy, Edmond's wife. Edmond Geffroy will be buried in the same grave as Eulalie when he dies in 1895.

JULY Twelve aunts and cousins on Bayard's mother's side, from the Vaconsin and Nervet families, are named his heirs. They invite Louis-Alphonse Davanne (1824–1912), president of the SFP, to come to Nemours to select from Bayard's photographs and materials for the SFP's collection. Davanne chooses over eight hundred works. It is believed that the family retained the album *Photographic Drawings on Paper: Collection No. 2*.

1892

APRIL 20–SEPTEMBER Bayard's photographs appear in the *Première exposition internationale de photographie et des industries qui s'y rattachent* in Paris.

1900

APRIL 14–NOVEMBER 12 Bayard's work appears at the Paris Exposition Universelle in an exhibition of historical photography.

1904

Place de l'Abbaye in Breteuil is renamed place Bayard.

1913

SEPTEMBER 30 The association Friends of Hippolyte Bayard is founded in Breteuil. Its commission of a bust of Bayard by sculptor Raoul Jean Josset (1892–1957), as well as plans for an exhibition and other events, are impeded by World War I.

NOVEMBER 21 The first retrospective exhibition of Bayard's photographs, organized by Georges Potonniée (1862–1949), is held at the SFP.



Fig. 17 Unknown photographer, Bust of Hippolyte Bayard by Raoul Jean Josset (French, 1892–1957) (plate 13)

1922

JULY 14 Josset's bust of Bayard is finally installed, without fanfare, on place Bayard, across from the family home (fig. 17).

1925

JULY 4–20 The SFP presents a large-scale exhibition on the history of photography curated by Potonniée and Gabriel Cromer. More than twenty works by Bayard are on view throughout the exhibition.

1936

JANUARY 16–MARCH 1 Thirty-two of Bayard's works are featured in a historical section of the *Exposition internationale de la photographie contemporaine* at the Pavillon de Marsan, Musée des arts décoratifs, Paris.

1937

MARCH 17–APRIL 18 Bayard's work is represented in the exhibition *Photography, 1839–1937*, curated by Beaumont Newhall at the Museum of Modern Art, New York.

1950s

By the early 1950s the Bayard album *Photographic Drawings on Paper* is owned by the city of Breteuil or its mayor.

1959–60

NOVEMBER 28–JANUARY 18 The exhibition *Hippolyte Bayard: Ein Erfinder der Photographie; Aus der Sammlung der Société française de photographie*, curated by Otto Steinert, is presented at the Folkwang Museum in Essen, Germany.

1969

Works by Bayard owned by the French collector, historian, and dealer André Jammes travel to the Philadelphia Museum of Art and other venues until 1972.

1970

Chicago photography collector Arnold Crane purchases the Bayard album *Photographic Drawings on Paper* from Librairie Alain Brioux, Paris.

1974

OCTOBER 23 Bayard's *pli cacheté* no. 586, dated October 13, 1845, is opened at the AdS meeting at the request of Jammes. It describes a latent image negative/positive process on English vellum paper.¹³

1984

The J. Paul Getty Museum purchases the Bayard album *Photographic Drawings on Paper* from Crane. The album becomes part of the Department of Photographs foundational collection.

1986–87

Hippolyte Bayard: Naissance de l'image photographique, an exhibition curated by Jean-Claude Gautrand and Yves Faure, is presented at the Maison de la culture, Amiens; Palais de Tokyo, Paris; and Fondation nationale de la photographie de Lyon. A portion of the exhibition is featured at the Marcel-Dassault Hall, Breteuil, January–February 1987.

2001

NOVEMBER 16–17 A colloquium and an exhibition organized by Breteuil's Société historique are held in Breteuil in honor of the two hundredth anniversary of the year of Bayard's birth.

2019

The Commune of Breteuil purchases Bayard's family home with plans to create a residency for artists working in nineteenth-century photographic processes along with a display on Bayard and his family.

- 1 There is no documentation to confirm this.
- 2 P., F. 1839; Thoré 1839; *Journal des débats* 1839.
- 3 See "Hippolyte Bayard's Recipes" in this volume (hereafter "Recipes"), Set 1, Letter A.
- 4 Raoul-Rochette 1839.
- 5 "Recipes," Set 2, Letter A.
- 6 "Recipes," Set 1, Letter B.
- 7 Garnier 1843.
- 8 "Recipes," Set 3, Letter A.
- 9 "Recipes," Set 4, Letters A and B.
- 10 "Recipes," Set 4, Letter C.
- 11 Ziegler 1855.
- 12 Périer 1855.
- 13 "Recipes," Set 3, Letter A.

Karen Hellman

**HIPPOLYTE
BAYARD**

Inventor

Hippolyte Bayard (1801–1887) occupies a paradoxical place in the history of photography: he is perhaps best known as the least-known inventor of the medium. Though he would ultimately receive France’s highest accolade, the Chevalier of the Legion of Honor, his fame never came close to that of his contemporaries Louis-Jacques-Mandé Daguerre (1787–1851) and William Henry Fox Talbot (1800–1877), whose accomplishments were highly touted and who were much better connected than Bayard. Daguerre was entrenched in Paris’s artistic and scientific milieus and Talbot, a polymath and an aristocrat, was a member of the Royal Society in London. In contrast, Bayard worked as a civil servant and pursued photography in his spare time. He was seen as a reticent perfectionist who refused to share his processes openly with the photographic community. From his first chemical experiments to his early exhibitions, to his later cofounding of photographic societies and a portrait studio, he operated with a “do-it-yourself” mentality, pursuing his photographic investigations in his own way and in his own time.

Bayard’s precise, individual approach is on display in an 1839 “recipe” for one of his photographic processes (fig. 18). Written in brown ink on ordinary writing paper, it begins with the timing, down to the minute, and then carefully documents the chemical steps that led to the manifestation of an image on paper.

Early Years

Bayard was born in Breteuil-sur-Noye, France, in the northern region of Picardie. Surrounded by verdant farmland and situated on major routes between Amiens to the north and Paris to the south, Breteuil was a small provincial town that served as a local seat of government. Both sides of his family had been well established in the area since the 1700s. His mother, Marie-Elizabeth-Adélaïde Vaconsin, came from a family of locksmiths, bootmakers, and profes-

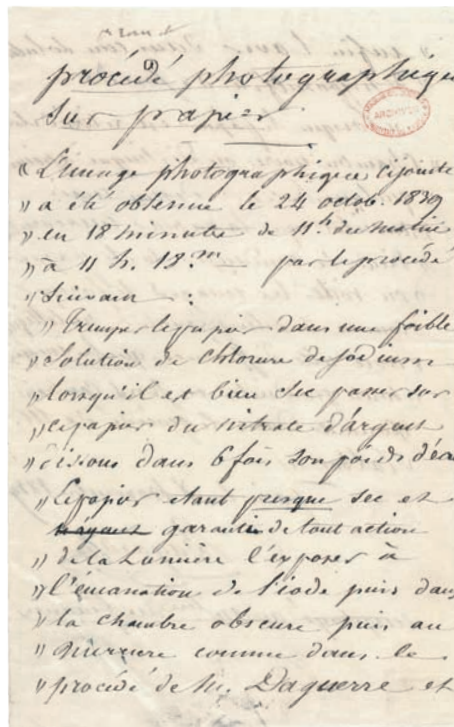


Fig. 18 Hippolyte Bayard (French, 1801–1887), letter to the Académie des sciences, dated November 8, 1839, deposited November 11, 1839, pp. 1–2. Paris, Archives of the Académie des sciences, pli cacheté no. 141

photographic process on paper

The photographic image attached was obtained on the 24th of octob. 1839 in 18 minutes from 11 o'clock in the morning to 11:18—by the following process:

Soak the paper in a weak Solution of sodium chloride[,] once it is very dry[,] spread on the paper silver nitrate dissolved in 6 times its weight of water...¹

sional gardeners. His father, Emmanuel, grandfather Louis Bayard, and other relatives worked in regional offices of justice and administration.² Bayard had an older brother, Louis-Emmanuel; a sister, Elizabeth-Mélanie; and a paternal uncle, Henry Cyr Charles Aimé Bayard, who lived in the family home. Edmond Geffroy (1804–1895) was Bayard’s closest childhood friend, and the two often explored the countryside together, sometimes hunting with Geffroy’s father. It has been assumed that both boys were drawn to the arts—Bayard practiced drawing and Geffroy was interested in theater and painting.³ The friends would remain close until Bayard’s death.

A frequently recounted anecdote from Bayard’s childhood involves his father, an eminent justice of the peace who liked to grow peaches. Emmanuel Bayard supposedly developed a method of labeling his fruit through

photosynthesis, which involved wrapping each peach in a colored-paper stencil of his initials so that the surrounding skin would darken as the fruit ripened. This use of sunlight to create an indelible mark is often cited as a potential catalyst for Bayard's embrace of photography (fig. 19).⁴

At the age of fourteen, Bayard was admitted as a day student to a minor seminary about eighteen miles from Breteuil, with the goal of becoming a priest; it isn't clear whether he completed his studies there. Later, perhaps inspired by his father's successful government career, Bayard probably trained as a clerk with a local notary.

Bayard and Artists in Paris, 1820s–30s

In 1824 Bayard and Geffroy moved to Paris, joining a mass migration of youths to the

capital. With his clerical training from Breteuil, Bayard found employment as a clerk in the Ministry of Finance; he would work there for more than four decades. The extroverted Geffroy entered the Comédie-Française, where he would become a lifelong actor, inventing characters and designing costumes.⁵ Geffroy took painting lessons with Eugène Emmanuel Amaury-Duval (1808–1885), a student of the Neoclassical painter Jean-Auguste-Dominique Ingres (1780–1867), who was known for his lifelike, antique-inspired portraits. With his innate interest in art, Bayard probably accompanied Geffroy on visits to Ingres's studio. This friendship with Amaury-Duval expanded Bayard's creative network,⁶ and the latter's vivid renderings of historical as well as present-day sitters informed by his famous teacher likely influenced Bayard's later photographic portraits. A drawing of Bayard by Amaury-Duval, dated 1867, points to their enduring friendship (fig. 20).⁷



Fig. 19 Glucq (French, active late 19th century to early 20th century), "History of Photography," *Imagerie d'Épinal*, no. 3838 (December 31, 1884)



Fig. 20 Eugène Emmanuel Amaury-Duval (French, 1808–1885), Portrait of Hippolyte Bayard, 1867. Pencil and chalk on paper, 48.3 × 37.5 cm (19 × 14¾ in.). Paris, Société française de photographie, SFP 117 DA 1

Bayard's circle of acquaintances included illustrators and painters of miniatures, crucial members of Paris's artistic scene of the 1830s. Among them: Daniel Saint (1778–1847), one of the most respected miniature painters of his time; Henri Grévedon (1776–1860), a notable lithographer of theater and art personalities; and Paul Gavarni (1804–1866), a caricaturist of contemporary figures. Both Grévedon and Gavarni were also friends of Daguerre, placing Bayard within a social milieu that would overlap with his life in photography. During this time he befriended the painter Jules Claude Ziegler (1804–1856; plate 79), another student of Ingres, whom he would instruct in photography. Bayard would later connect with the younger illustrator Charles Albert d'Arnoux (1820–1882), known as Bertall (plates 184–200), whose unfiltered observations of Parisian society would populate newspapers and satirical journals as well as the novels of realist writer Honoré de Balzac. In the 1860s Bayard and Bertall would open a photography studio together—a testament to their camaraderie and shared interests. Lacking the social and political connections of Daguerre and Talbot, Bayard depended on these relationships to provide the support and stimuli that would sustain his photographic pursuits, which were further buoyed by a steady income and a fascination with and impulse to experiment in the new medium.

First Discoveries

We will never know precisely why Bayard decided to embark on photography, but, given his friendships with artists and lithographers who also knew Daguerre, Bayard had likely heard of Daguerre's photographic attempts as early as 1835, around the time they were first disclosed.⁸

Daguerre had collaborated with an earlier inventor, Joseph Nicéphore Niépce (1765–1833), until the latter's sudden death. By 1835 Daguerre had succeeded in capturing a “latent

image”—an invisible image that could be made visible through chemical development—but the process was still unreliable and the images fairly unstable. Daguerre's eponymous “daguerreotype” process would not be announced until January 1839, and his technique for producing images on silver-plated copper would be made public only in August of that year.

According to Bayard's contemporaries, his own investigations into the light-sensitive properties of silver chloride originated in 1838.⁹ In contrast to Daguerre's use of metal, Bayard chose paper as a support, and his notations in the *Album d'essais* [Album of Experiments], held by the Société française de photographie (SFP), record his initial forays into paper photography on January 20, 1839, his thirty-eighth birthday. From there his experiments progressed rapidly, for only two weeks later, on February 5, he showed some of his first paper negatives to physicist César Despretz (1791–1863).¹⁰ Bayard's entries of March 20 attest to his earliest successes creating direct positives on paper using the camera obscura, an artist's tool made of a wooden box with a lens that casts an image onto a sheet of glass. He did not wait to share this news; on March 22 he showed his first achievements to Grévedon.¹¹

Emboldened by his colleagues' enthusiasm and his many explorations in the ensuing weeks, Bayard approached members of the Académie des sciences: physicist and mathematician Jean-Baptiste Biot (1774–1862) on May 13, followed by a visit with the influential astronomer and politician François Arago (1786–1853) a week later. Permanent secretary of the Académie des sciences and director of the Paris Observatory, Arago was one of the first individuals with whom Daguerre had shared his process in 1838. Enamored of the daguerreotype's precision and its ostensible possibilities for the French government, Arago had thrown his support behind Daguerre in early 1839. He would soon arrange for the French photographer to receive a lifetime pension in return for

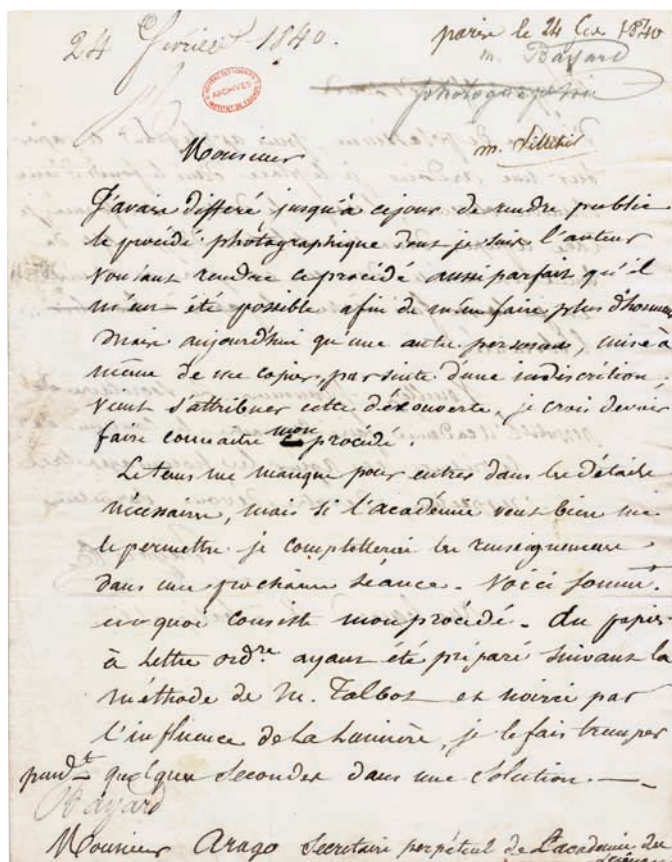


Fig. 21 Hippolyte Bayard (French, 1801–1887), letter to François Arago dated February 24, 1840, p. 1. Paris, Archives of the Académie des sciences, Pochette de la séance 24 février 1840 (see “Recipes,” Set 2, Letter A)

the rights to his method. Possibly biased by his support of Daguerre, Arago dissuaded Bayard from publicly announcing his discoveries.¹²

In July 1839 Bayard presented examples of his direct positive prints (his “second process,” described below) in what is now recognized as the world’s first display of photography in an art exhibition. Held to benefit the victims of an earthquake in Martinique, the exhibition also included paintings by contemporary artists as well as celebrated figures such as Nicolas Poussin (1594–1665) and Rembrandt van Rijn (1606–1669). To make this leap within months of his earliest experiments was extraordinary, as was Bayard’s recognition that the future of photography as an art lay in exhibitions. This

one—covered in French newspapers such as *Le Moniteur Universel*, the official journal of the French government—brought Bayard widespread publicity.¹³

Nonetheless, his photographs would be outshone and outpublicized amid Arago and Daguerre’s August revelation of the daguerreotype process to members of the Académie des sciences and the Académie des beaux-arts.¹⁴ Seeking to build institutional support for his own discoveries, in September Bayard wrote to the Académie des beaux-arts asking to submit some of his direct positives for study, and in October he demonstrated his process to a group of academicians. Having agreed with Arago not to further publicize his invention, on November 8, 1839, Bayard forwarded documentation on his latent image process (his first process) to the Académie des sciences in a *pli cacheté* (sealed letter), perhaps thinking that at least in the future he could claim his invention’s precedence. That future moment came sooner than he anticipated. After learning in February 1840 of another paper process possibly similar to his direct positive, Bayard sent a letter to Arago, describing his process (fig. 21). He explained that he lacked the time to enumerate every detail of his method and promised to submit a fuller description to a future meeting. In February 1841 he sent a letter to the Académie requesting that they open the November 1839 *pli cacheté* (see “Recipes,” Set 1, Letter B).

Bayard’s direct positive process on paper is the method most unique to Bayard and the one with which he is frequently credited in histories of photography.¹⁵ Prompted by the success of Daguerre’s positive images on copper, Bayard turned to the creation of positives on paper. He employed silver chloride to blacken the paper in the sun and then dipped the sheet in potassium iodide before exposing it in the camera obscura. The result: the image’s highlights were rendered as light, and the darks appeared dark in the final print—a direct positive (fig. 22).¹⁶ Although his images were less impressive than those on the polished, mirror-like surfaces of