

FROM THE FIRST PHOTO ON PAPER TO THE DIGITAL REVOLUTION



THE CONCISE FOCAL ENCYCLOPEDIA OF PHOTOGRAPHY

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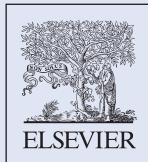
**The Concise
Focal Encyclopedia
of Photography**

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The Concise Focal Encyclopedia of Photography

From the First Photo on Paper
to the Digital Revolution

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Mark Osterman is process historian for the Advanced Residency Program in Photograph Conservation at the George Eastman House International Museum of Photography and Film. Mark is a recognized expert in the technical evolution of photography and leads a series of demonstrations and workshops in his area of expertise worldwide. Osterman frequently demonstrates the pre-photographic techniques, the earliest photosensitive methods of Niépce and Daguerre through gelatin emulsion for papers and plates.

A graduate from the Kansas City Art Institute, Osterman has taught studio and darkroom photography for 20 years at the George School in Bucks County, Pennsylvania prior to coming to the George Eastman House.

With his wife France Scully Osterman, Scully and Osterman are widely recognized as the foremost experts in the collodion process in all its variants. Through their research, writings, workshops and exhibitions the Ostermans have been the single most important influence in the current revival of collodion in fine art photography.

Grant B. Romer is currently the Director of the Advanced Residency Program in Photograph Conservation at the George Eastman House International Museum of Photography and Film. He has been active as an educator and advocate for the conservation of photographs and a specialist in the history and practice of the nineteenth century photography, particularly the daguerreotype. He has lectured extensively world-wide as well as having held numerous fellowships and visiting professorships.

A graduate of the Pratt Institute and the Rochester Institute of Technology, Romer joined the staff of the International Museum of Photography and Film at George Eastman House in 1978 when he became its Conservator. He has also served as curator of numerous exhibitions, most notably the permanent historical survey gallery of the museum, and recently, "Young America—The Daguerreotypes of Southworth and Hawes."

Romer is recognized, internationally, for his broad understanding of photography and unique perspectives on the importance and nature of the medium.

Nancy M. Stuart is the Executive Vice President and Provost of The Cleveland Institute of Art. From 1984–2002 she held various faculty and administrative positions including Associate Professor of Photography, Associate and Acting Director of the School of Photographic Arts and Sciences, as well as the Associate Dean of the College of Imaging Arts and Sciences at

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Rochester Institute of Technology. She also served as Applied Photography Department Chair. She began teaching photography in 1975 at Lansing Community College.

As an artist, she has addressed various social issues through her work. Her most recent published project, *DES Stories: Faces and Voices of People Exposed to Diethylstilbestrol* (VSW Press, 2001) explores the impact of accidental chemical exposure on the lives of forty individuals. One portrait from the book was chosen for the John Kobal Portrait Award Exhibit at the National Portrait Gallery in London.

Nancy completed her Ph.D. at the State University of New York at Buffalo in the Graduate School of Education. She lives with her husband David and two children, Sarah and Stuart, in Chagrin Falls, Ohio.

J. Tomas Lopez is a Professor of Art and Art History as well as the Director of Photography/Digital Imaging at the University of Miami. Professor Lopez is nationally and internationally known for his large-scale digital prints ranging from underwater photography to politically charged flags. He has been showcased in over 100 group exhibitions and 25 solo exhibitions. His work is included in many permanent collections: The Smithsonian Institution, National Gallery of American Art, La Bibliothèque Nationale de France (Paris), The International Museum of Photography, and many museums, public, and private collections. He has been with the University of Miami since 1994 where he lives and works with his wife Carol. Professor Lopez has been a recipient of the Florida Individual Artist Grants program, the Cintas Foundation Fellowship, and the NEA Award in the Visual Arts.

Acknowledgments

As I reach the conclusion of this project, I am reminded of the more than 1500 email files in my archive, the countless word and image files as well as the **GIGABYTES** of data that were required to produce the *Fourth Edition*. This book—a representative portion of the *Fourth Edition*—represents the work of a world wide photographic community and because of the method in which the original revision was undertaken, it has been suggested that the *Fourth Edition* wrote and illustrated itself.

From the beginning of this process, it was my objective to achieve the quality and successes of the first three editions, but to do so in a new and different way. This book is the work of many talented people and it includes the cumulative knowledge and experience of many dedicated professionals, many whom I do not know. Although I have never worked on a project this complicated, the journey was one of great discovery, adventure and challenges. My heart felt thanks to all the authors and photographers for sharing their expertise and in the end, creating the wonderful and diverse content for both the fourth and concise editions.

I had much help and support during the time it took to produce this and the *Fourth Edition*. Words alone cannot begin to express my appreciation to Diane Heppner, the book's acquisition editor who started this journey for me by supporting my application for the editor-in-chief position. I am grateful for that support but more importantly, I am sincerely grateful for her advice, which she shared freely during the various phases of creating, producing and publishing the *Fourth Edition*. The creation of the *Concise Edition*, which was built from content produced for the *Fourth Edition* was supervised by Valerie Geary and Brandy Lilly, who did a wonderful job given the short time this edition was provided. I am also grateful for the support of Dr. Zakia and Dr. Stroebel, the editors for the *Third Edition* who were supportive of my selection as editor-in-chief. I was also fortunate to have the unanimous support of Professors Andrew Davidhazy and Bill DuBois, the administrative chairs in the School of Photographic Arts & Sciences who endorsed my involvement in this project from the beginning. The School of Photographic Arts and Sciences is a very special place where my students and colleagues are a source of inspiration, knowledge and creativity, which is shared daily through their work and passion for photography.

The first step in revising the *Fourth Edition* was proposing a revision strategy and getting the proposal approved. With the approval in hand, identifying and persuading section editors to join the team was the next challenge I faced. Finding the right people was very slow and difficult, but once the editors were committed to the project, the results they produced were well worth the struggle. The expertise and networking accomplished by Professor Tom Lopez, Nancy Stuart Ph.D., and Mark Osterman and Grant Romer was truly remarkable. Their wealth of personal knowledge and their invitations to authors reached deep into communities that only experts in their fields could access. This book represents what is possible when a group of dedicated and brilliant editors, authors, and photographers who are passionately involved with photography commit to a project.

Early on during the conceptual phase of this revision, I reached out to Mr. Tony Bannon, the Director of the George Eastman House about a possible collaboration with the Museum and its collections. The idea to explore the collaboration was quickly embraced and became very important to me knowing this revision would include some of the world's important photographs that were held in the Museum's world-renown collections. Once supported, the Museum's associate curator, Sean Corcoran, as well as Todd Gustavson, the curator of the technology collection, selected and delivered excellent suggestions to illustrate so many of the essays.

xviii Acknowledgments

Many others offered help and encouragement throughout the various stages of this production. Becky Simmons, Kari Horowicz, and Amelia Hugill-Fontanel from the RIT Wallace Memorial Library provided many helpful insights when I was at various stages of producing this book and needed to do more research. The RIT Special Collections at the library also provided a number of important pictures taken during RIT's 100 year history of teaching photography.

There were countless others that offered encouragement during the adventure along the way including my parents, who more than 25 years ago supported my pursuit of a second degree in photography. I wish I had enough pages to list all of my collaborators that helped prepare me for this challenge. In the end though, the love and support of my wife Laurie and my children Jonathan and Leah, made this work possible. Their support and understanding of my passion for new adventures gave me the confidence to take on this challenge for which I am forever grateful. Their love was never more evident when I was in the final stages of finishing on-time when there did not seem to be enough time.

Michael Peres

June 2007

Introduction

The first edition of *The Focal Encyclopedia of Photography* was published in 1956 at a time when innovations in silver halide technology, photographic tools, and practices were growing exponentially. Reading the Introduction to the *First Edition* published by Hungarian author Andor Kraszna-Krausz, the first chairman of the editorial board, provided an interesting chance to compare how much imaging technology has changed since that time while the applications have changed more slowly. In fact some things have actually stayed the same. I might also add that it is an achievement for this, or any, book to be available 50 years after its initial printing.



Various covers and title pages from 50 years of editions.

This *Concise Edition* was produced using selected content which was created for the complete revision of the *Fourth Edition*. The content in the *Fourth Edition* was undertaken at a time when great changes are being experienced in all technologies associated with photography. The book's format was created to provide a concise and comprehensive resource sharing the breadth of photography at the time when both film and digital practices co-mingled and users were firmly entrenched in both technologies. The content was written in a narrative style to allow subjects to be explored from both the theoretical and the applications perspectives. It was decided that subjects would be grouped thematically rather than alphabetically. The decision to allow subjects to be explored this way is less traditional for modern encyclopedias, and it was my hope that this would lead to a photographic resource that is uniquely different in this era of electronic resources. The exploratory writing style was selected to enable users to see how a subject is widely defined and then be able to use the ever-increasing resources found on the web in a complementary manner. Additionally, the use of photographs in this edition has created a completeness that prior editions were unable to achieve.

Images were supplied by authors, photographers, organizations, and from the Technology and Image Collections at the George Eastman House International Museum of Photography and Film. The response to the *Fourth Edition* has been excellent thus far and so the *Concise Edition* has been produced to share selected content to a group of readers who might not require the completeness of the *Fourth Edition*.

While photography can be defined as both a subject and a practice, it is also unique in that it uses the same technology when practiced as art or science. No event in the developed world occurs without cameras being present. Cameras are found virtually everywhere in medicine, at birthday parties, in art museums, in cellular telephones and at natural disasters. The power of the image and the consequences photography brings to bear are often overlooked at the time of the picture making during daily events, yet the capturing of such routine events sometimes can be compelling evidence of events long gone. In 1888 when Kodak and George Eastman branded the expression "you push the button and we do the rest" for the Kodak marketing campaign of the time, little could the world have imagined the penetration photography would have into everyday life world-wide in the 21st century.

xx Introduction

Producing *The Focal Encyclopedia of Photography* at this moment in history has created many new questions as a consequence of the pace of all the changes the industry and users wrestle with. When I use the digital tools that are re-defining photography today I often wonder, will the majority of my digital pictures made in this era be readable tomorrow by my children or colleagues? Will the images of this era survive the journey of time, when the equipment required to make and see them is changing at rates never before experienced in this medium? Although the complex technical problems surrounding this issue are explored in several essays in the contemporary section of this book, the future is still an unsettled place for photographers who are anxious about these changes and evolution. Therese Mulligan, Ph.D. suggests “that we might consider for a minute that this era in photography must have practical and cultural circumstances that were similar to the era when photography was first practiced in the 1830’s. The new is often met with trepidation and this is the nature of change. However, how do digital technologies present opportunities and new possibilities for interpretation, communication and art? Do they co-exist with photography and deepen its significance or is the converse the future?” I am sure you will find this book to be a real treasure and full of surprises.

*Michael Peres
Editor-in-Chief
June 2007*



HISTORY AND EVOLUTION OF PHOTOGRAPHY

MARK OSTERMAN

George Eastman House International
Museum of Photography and Film

GRANT B. ROMER

George Eastman House International
Museum of Photography and Film

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Contemporary Thoughts on the History of Photography

GRANT B. ROMER

George Eastman House and International Museum of Photography and Film

All photographers work today with historical perspective. They know that the technology they use has an origin in the distant past. They know photography has progressed and transformed over time, and they believe the current system of photography must be superior to that of the past. They are sure they will witness further progress in photography. These are the lessons of history understood by all, and none need inquire any further in order to photograph.

Yet photography has a very rich and complex history, which has hidden within it the answers to the fundamentally difficult questions: “What is photography?” and “What is a photograph?” All true photographers should be able to answer these questions for themselves and for others. To do so, they must make deep inquiry into the history of photography.

Recognition of the importance of history to the understanding of photography is evidenced in the title and content of the very first manual of photography published in 1839, *The History and Description of the Process of the Daguerreotype and Diorama*. Most of the early inventors of photographic processes gave account of the origin of their discoveries not just to establish priority but also to assist comprehension of the value and applications of the technology. When the entire world was childlike in understanding the full potential of photography, this was a necessity.

Many histories of photography have since been written for many different reasons. Each historian, according to his or her interest and national bias, placed certain details large in the foreground, diminished others, and represented most by a few slight touches. By 1939, the hundredth anniversary of photography, a much-simplified chronological story had been told, more or less fixed and repeated ever since. In essence it



FIG. 1 A representative period portrait of inventor Samuel F. B. Morse, ca. 1890, by Abraham Bogardus. Albumen print. Courtesy of the George Eastman House Collection, Rochester, New York.

goes as follows: Photography emerged in the first quarter of the 19th century in Western Europe out of the exploration of the properties and effects of light, the progress of optics and chemistry, and the desire to make accurate and reproducible pictorial records of visual experience.

The first processes were relatively limited and were rapidly improved by the efforts of many through better lenses, camera design, and chemical innovation. One process yielded commercial dominance to an easier and better one until gelatin emulsion technology brought a new era of photography in the 1880s, which was to continue into the

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