THE PINHOLE CAMERA

A Practical How-To Book for Making Pinhole Cameras and Images

BRIAN J. KRUMMEL
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BRIAN J. KRAMMEL
To my wife, Susanne, and our three wonderful children.

☞ John 3:16-21
No book would be complete without a proper thanks to my friends and family. Writing a book is a huge undertaking, with hundreds of micro-tasks, that requires much time and extreme patience. I had several key people help me in the creation of this book and I am truly grateful for their contributions, criticism, and suggestions.

* Devon Christopher Adams for kindly editing my book and finessing my rough thoughts and ideas into a polished gem
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* Sean Krummel for your Red Hot Tip camera illustration
* My father for introducing me to the mystery and magic of photography
* Susanne Krummel for your immeasurable patience, constructive and honest criticism, and proofreading/editing contributions throughout the entire project

I would also like to thank each featured artist for contributing an autobiography and a photographic image. The selected artists lend a broad diversity to this book and to the pinhole art form on a global scale. Without the combined efforts of everyone previously mentioned, this book would simply have remained a concept.

An extensive historical record of pinhole can be found in the wonderful book *Pinhole Photography: Rediscovering a Historic Technique* by Eric Renner. His devotion to the art form is reflected in the renewed interest of many pinhole photographers worldwide. Any attempt to re-document the history of pinhole photography would diminish Renner’s organization, Pinhole Resource, and the preservation of pinhole photography accomplished through that organization. Pinhole Resource published the *Pinhole Journal*, a valuable resource dedicated to the craft, from 1985 until 2006. The concepts found in Renner’s book and within the complete archive of *Pinhole Journal* have served as a solid foundation, a fountain of ideas, and an endless source of inspiration for my own work.
Honestly, I never thought that I would write a book and I do not consider myself a stellar writer. I presume that all writers wonder why they are creating a particular piece, if it will be read, if it will be worth the effort, and if anyone will care. I personally had all of those thoughts and doubts although the reason that I wrote this book has always remained clear and firm—create a clean and easy to understand how-to manual that anyone could follow and understand.

The pinhole process began for me when I grew tired of the predictability of conventional cameras and lenses. Going back to the basics, I found a book on the pinhole technique. After the initial learning curve, I felt invigorated with the potential of this art form. Once I understood the principles of camera and pinhole creation, my mind flourished with ideas of how I could make cameras out of anything.

I held a pinhole workshop in conjunction with a gallery exhibition. It was surprising how many people showed up from the local photo community to learn about this simple yet enigmatic form of art. With the success of that workshop, I held another series where I opened the curriculum to include advanced topics such as curved film planes and 35 mm matchbox cameras. I was overwhelmed with the expressed interest in my work (what I would only classify as science experiments in many cases).

My initial audience and feedback for pinhole imaging was the online photo community of Flickr.com. On Flickr, I met so many additional people from around the world who were interested in my ideas as well as sharing their own concepts and creations. It was my goal to consolidate all of the lessons that I had learned in my exploration of the art form into a condensed how-to handbook for new pinhole artists.

I am not the first nor the last artist to explore pinhole photography. Many talented artists have been around longer than myself. I am grateful for the artists who began forging the way for pinhole photography. It is now your duty to carry that creative torch and chart new and exciting paths of progress.

~ Brian J. Krummel, 2009
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Part One: Introduction to Pinhole Photography

This section is designed to give you an overview of pinholing. You will learn about the signature trademarks of a pinhole image and how these characteristics can be used creatively.

A brief synopsis of pinhole cameras, techniques, and printing methods will be introduced to give you an idea of the many possibilities.

Finally, the practical organization of this book is described, allowing you to plan and work through the many examples and exercises.

With this brief introduction, you can start creating your own cameras in Part Two.
In a Nutshell

I get mixed reactions when I say that I am a pinhole photographer and that I create images with a tin can. Some people think that I am joking and simply laugh, while others are intrigued by the creative possibilities. They want to know how to make a camera, what kind of film to use for the images, and the difficulty level in getting started. They are curious, bright-eyed, and eager to learn about the many possibilities; these people are probably just like you. Hopefully you are reading this book to broaden your photographic skills, to push into a new realm of art, and to try something new.

Let’s start with the basics. This is all you really need to remember about pinhole photography.

**THIS IS THE ART FORM, ESSENTIALLY, IN A NUTSHELL:**

- A pinhole camera is simply a camera without a lens
- A pinhole camera can be constructed from practically any light-tight container
- A pinhole camera is fundamentally a very sophisticated light leak
- A pinhole is created by drilling a tiny hole in a piece of thin metal
- A pinhole converges light rays to form an image within the camera
- A pinhole image can be captured on sensitized materials such as film and paper
- A pinhole image exposure can range widely from seconds to months
- A pinhole image features an extreme depth of field
- A pinhole photographer is limited only by his imagination

Every advanced concept from multiple pinholes to solargraphy, found further in this book, will build off of these simple principles and open endless options for variation and experimentation. There are other subtle points that serve as an advantage: pinhole photography is relatively inexpensive compared to current digital cameras and media, the do-it-yourself nature of the hobby is fun while challenging your inner creativity, the scientific principles simultaneously educate children and adults, and your images will truly be one-of-a-kind photographic enigmas that will draw attention and stand out from the crowd.
David. 2007

This full-sized reproduction of David is located in the Forest Lawn Cemetery in Glendale, CA. A tin can was loaded with black and white paper. The camera was placed at the statue’s feet and exposed for several minutes under an overcast sky. The curved film plane heavily distorts the image; notice the tree line at the top of the frame. The ominous clouds are rendered as a fluid-motion twist, almost like a ladder reaching towards Heaven.

Previous Page:

This whimsical plastic egg was converted into a pinhole camera. I painted the interior with several coats of black spray paint. I drilled a hole in the dinosaur’s eye and placed a small pinhole in position. The camera accepts small paper negatives, approximately 1” x 1”. 
Signature Characteristics

Now you should be familiar with the building blocks of a pinhole image and camera. Most likely when you see a pinhole photograph, you immediately notice that something is different. Different can be very good, especially for an open-minded artist! Explore these differences and characteristics that make pinhole photography exciting.

Soft & Surreal

A pinhole image is typically characterized by a soft focus or dreamlike effect. This surrealism can be attributed to many variables: motion blur, extreme depth of field, lack of linear distortion, or exaggerated scale. Vignetting is sometimes used to enhance the final image. This can be added digitally or simply appear as a natural occurrence.

The usual imperfection of an inexact pinhole lends to the softness of an image. While you can buy precise laser-drilled pinholes, most artists choose to create their own. Chapter 2 addresses the topic of homemade pinholes versus commercial grade products.

Combine two or more of the above characteristics and freely photograph mundane daily activities. Transform them into magical scenes, full of expression and feeling, with pinhole photography.

Welcome Home War Hero. 2008

While visiting Cocoa Beach, FL, I found a picturesque park near the water. I captured this stoic hero’s pose, gazing into the skies, on my Pinholga camera loaded with Arista EDU Ultra 400 film. A combination of creative elements led to this pleasant surprise: the 400 speed film was too fast and the negative was overexposed, the camera was hand-held so motion blur occurred, and the grainy film was developed in Agfa Rodinal which only accentuated the grittiness. The dark mood was enhanced with Adobe Photoshop tools.
Motion Blur
A typical pinhole exposure can take five to 60 seconds depending on the camera's focal length, light-sensitive material, and lighting conditions. Compare this to the accelerated shutter speeds of current cameras: 1/250, 1/500, and 1/1000 of a second. The inherent nature of the small pinhole extends the exposure, although faster film can help you in decreasing the exposure time. Learn more about exposure in Chapter 4.

Motion is accentuated by long exposure times, rendering the movement of people and objects into blurred shapes and distorted figures. This is one benefit of pinhole photography that can be exploited. It is possible to eliminate all people from a crowded street or room, simply by extending the duration of your exposure.

Move your camera during an exposure for an alternative in motion blur. It is more than likely that you will end up with an interesting double exposure too! Chapter 2 offers suggestions on cameras featuring multiple pinholes where the contrast between subject and exposure adds drama to your final image. Be bold and brave! Your primary goal should be employing unconventional techniques.

Extreme Depth of Field
Depth of field is defined as the portion of an image that appears sharp. A pinhole will render everything in your image with the same relative sharpness, from foreground to background. Of course, there are variables that effect the amount of sharpness such as your pinhole diameter in relation to the focal length of your camera. The extreme depth of field is one of the most powerful concepts available in pinhole photography, setting the art form apart from conventional image-making.
While driving through rural Pennsylvania, I found this VW graveyard in a front yard. I placed my camera on the car, directly behind the chrome hood emblem. The foreground of the image is filled with the black car, but multiple derelicts are still captured in the background.
Lack of Linear Distortion
It is typical with traditional lenses and cameras that some distortion will occur in extreme wide angle photography. This distortion is always apparent in the curving or convergence of vertical lines. For example, if you traditionally photograph a tall object such as a building with a wide angle lens, the vertical lines of the building will lean inwards. In pinhole photography, there is zero linear distortion if you adhere to two minor guidelines: your camera must be parallel to your subject and your film plane must be flat. Curved film planes are a complete exception!

Top: Cabin in the Woods. 2008
I used a Diana+ toy camera on the pinhole setting with Fujifilm 800. The smaller 35 mm film was dwarfed inside the medium format camera which allowed exposure to the entire film base, including sprocket holes. Turn to Chapter 3 to learn more about Sprocket Hole image-making.

Bottom: Hungry Pigeons I. 2007
I photographed my son chasing hungry pigeons in a city park. The ultra wide angle captured the pavement detail as well as the buildings in the background. Since the camera was parallel with the buildings, there is no linear distortion in the vertical lines. I used a Holga camera with a Polaroid back and Type 84 film.
Exaggerated Scale
Manipulation of scale can be employed to create unique and wonderful images. The scale of an object in your image is directly related to the proximity of the pinhole. Objects closer to the pinhole will be larger than those further away. With this simple reality, a rock or toy in the foreground can be transformed into something menacing or dominant in relation to the other objects in your composition. Keep in mind that every subject in a pinhole image is in the same relative focus. With a wide angle camera, you can be certain that everything immediately past the pinhole will begin to project on to your film or paper, appearing in your final image.

Top: Dinosaur Parade II. 2008
This image was created with a matchbox camera and the two frame exposure overlaps in the middle. The frayed black edges are created by the cardboard cutout, which acts as a mask, inside the matchbox. Learn how to make your own 35 mm matchbox camera in Chapter 7.

Lower Left: A simple matchbox can be transformed into a camera with minimal effort. This camera was used to create the image above of 2” tall plastic dinosaurs, on inexpensive color negative film.

Right: Barren Tree. 2007
For this image, I used a cylindrical popcorn tin can and a 10” x 5” paper negative. The exposure time was ten minutes under a cloudy spring sky. The curved film plane distorted the vertical lines in the tree, elongating the branches into a bizarre life-like creature. Ironically, this negative was extremely overexposed and nearly unsalvageable, but today I consider it one of my finest lo-fi photographs. Review Chapter 6 for tips on reviving dead negatives through the magic of Adobe Photoshop.
Why Shoot Pinhole?

Now that you are moderately familiar with pinhole and its characteristics, let’s get honest. Is pinhole photography for you? If you are still undecided, review this last set of reasons to make the leap to pinhole. Here are a few more points to ponder about getting back to the basics of image-making.

Refocusing on Fundamentals
The do-it-yourself philosophy is usually the main attraction for new students. You will find a comfort and ownership in your work by experiencing the complete process, from camera construction to image creation. This freedom has become a creative elixir for many photographers with a background in conventional image-making.

A gigantic realm of opportunities will become apparent when you design and create your own camera. The shape of a container, size of the pinhole, and duration of exposure are creative choices that will enable you to capture extraordinary images that are usually impossible to create with traditional cameras and lenses. Pinhole imaging requires no focus, framing or composition. The artistic possibilities of this art form will challenge your creativity and allow you to see commonplace surroundings from a novel perspective.

Cost Effectiveness
It is inexpensive to build a pinhole camera compared to the cost of traditional cameras and lenses. Supplies can be found around the house and at most hardware and department stores. Peruse flea markets, secondhand stores, and garage sales year-round for tin cans and unusual containers that can be transformed into imaginative cameras. It becomes easier to

Mystery of LA IV. 2007
Magic happens when you relinquish exacting control of your image-making and let accidents happen. This unpredictable image was taken in Los Angeles, CA, and shot inside a cylindrical container. All that I recognize is a single palm tree at the bottom. The rest is a mystery to me!

Cameras are everywhere! A simple camera can be made from any tin can or any light-tight container. Look around your house and find something that you never expected to use as a camera and give it a try! Learn about basic camera construction in Chapter 1.
experiment with different film formats, focal lengths, and creative apertures when you build your own cameras from scratch.

Once you exhaust the possibilities of your homemade camera, simply recycle the camera or give it away to a friend. Pinhole photography is defined as a series of endless experiments. Try a technique and either master it or move on to other concepts and avenues of expression.

In Chapter 10, you will learn how to assemble a basic black and white darkroom for a minimal investment of time and money. A darkroom will extend your opportunities for creating interesting work while minimizing your dependence on pricey professional labs.

In the end, you should feel a freedom from the sometimes prohibitive and extraordinary costs associated with photography.

**Portable & Inconspicuous**

To boldly go where no camera has gone before! When I was young, my father was a fanatic of both the Star Trek television series and James Bond movies. Pinhole photography is like space exploration in the fact that there is a small percentage of conquered territory and much left to be discovered. The flexibility of the art form allows you to improvise your own rules regarding camera construction and image-making. Much like science fiction, pinhole introduces a whole new world of pictorial opportunities.

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**Super Round Up, 2007**

This image was taken, with a 35 mm film canister camera, while in motion on an amusement park ride. I stood upright and grabbed the bars with two hands. Each hand contained a film canister as my thumb, substituted for a shutter, covered the pinhole. As the ride went vertical and spun around, I released my thumbs from the pinholes to create the exposure on photographic paper. One camera received a 20 second exposure, while this final image received a ten second exposure which proved to be fine for the cloudy sky conditions. Toning was added in Adobe Photoshop. The 35 mm film canister is inconspicuous for extreme duration exposures. Learn how to create exposures that last months, with the Solargraphy technique, in Chapter 4.
Most of us have seen James Bond, maneuvering from one precarious situation to another, employing one of many fantastic gadgets including a miniature camera ring, laser Polaroid camera, tape recorder camera, and an underwater infrared camera. With the creation of fine art, we must flex the imagination and think along the same lines of science fiction, James Bond, and Star Trek. You will find the oddity of pinhole photography as a viable means of self-expression and worthy of pursuit.

The portability of some pinhole cameras provide a few advantages over traditional cameras. Imagine the following scenarios that are possible with pinhole: take your camera on a roller coaster, take your camera underwater, or leave your camera outside for months at a time (recording the sun’s path across the sky). Truly amazing and original images can be obtained by thinking in an unconventional manner. Review the Creative Opportunities in each chapter for ideas, inspiration, and experiments.

With pinhole cameras created from household objects, less attention will be drawn to your creative attempts. This is of course assuming that your camera is not ostentatious and that you are not trying to draw attention. One of my favorite approaches to candid street portraiture is to use a camera made from a coffee cup, soda can, or other familiar consumer product.

The disadvantage of making an inconspicuous camera is that you will be eventually misunderstood. In our post 9/11 society, the world has adopted a uniform paranoia especially towards photographers. Common sense should always be used along with ample good judgement when photographing in public spaces. Authorities have little interest in or leniency towards strange cameras or suspicious objects constructed from household objects that do not match the environment.

Once while visiting Santa Monica Pier in California, I left a cylindrical tin can in the middle of the boardwalk. A security guard immediately stopped me and asked what I was doing. Even with an extensive description, she did not fully understand (or possibly believe) my intentions. Should you find yourself confronted with a zealous authority figure, it would be wise to have an unloaded camera available for discussion.

**Alternative Printing**

Once you understand the principles of pinhole, you can create a camera in any shape or size of your choosing that produces a specific sized negative suitable for contact printing. There are many beautiful and intriguing alternative printing processes available to the creative photographer including: cyanotype, gum bichromate, platinum, palladium, and Van Dyke.

The contact printing process is encapsulated in the next few sentences. Ordinary cotton paper is coated with a non silver-based emulsion. A contact print is made by sandwiching the coated paper and a pinhole negative, while a piece of thick glass or printing frame holds everything in precise position. The combination is then exposed to ordinary white light. Light transfers the negative image to the coated paper and forms a positive image.

For each process, you must make a contact print from a negative of equal size. If you want to make an alternative process print that measures 16” x 20” in size, you will need an equivalent negative. Traditional master photographers such as Ansel Adams and Edward Weston used expensive large format equipment that produced 8” x 10” or 11” x 14” film negatives. However, they were not shooting pinhole, so it is not an exact apple-to-apple comparison. With pinhole photography, we eliminate the need for such cumbersome and cost-prohibitive cameras, lenses, and film.
You should make a conscious effort to try new techniques and printing processes. The sense of adventure and experimentation partners well with the adventure of shooting pinhole since you never can be sure of your result.

In addition to the traditional and historical alternative processes previously mentioned, there are many more that should be researched and explored. These unconventional techniques are a marriage of the analog and digital worlds. This combination of analog and digital is exciting and should not be dismissed. By using the liquid emulsion or Lazertran processes, you can apply your photographs to 3D surfaces such as wood and bone. Even though Polaroid technology is fading quickly, we will touch on the transfer and emulsion lift processes. With a few household supplies and some photocopied images, you will learn the photocopy transfer method. Finally, you will see how to tone your artwork with ordinary black tea.

You will find a richer collection of creative options once you have filtered through everything in this book. Hopefully you will see that you have endless possibilities for creating your own masterpieces. The processes of acrylic transfer, inkjet transfer, cyanotype, Van Dyke, tea toning, Polaroid techniques, photocopy transfer, and Lazertran will be explained in Chapter 6.

**Wyeth’s Tree House III. 2008**

Mod podge transfer from inkjet print. I found this ancient tree house in a backyard of a home that we once considered buying. The digital image was modified in Adobe Photoshop to boost colors and contrast. The image was inspired by the work of American painter, Andrew Wyeth, who I was researching at the time. Explore the acrylic transfer process, similar to the mod podge technique, in Chapter 6.
Low-fi pinhole image-making is a soothing remedy for the fast paced, digital world of today. Technology does not make you an artist; your creativity and ingenuity shapes your path. By practicing pinhole photography, the obstacles of camera and lens will be removed and replaced by optimism and enthusiasm for your art form.

**Got GAS?**

Our current society subscribes to overabundance and dependency on the more-is-better philosophy. It is easy to get entangled in the digital revolution, finding ourselves surrounded and influenced by emerging technologies.

Gear Acquisition Syndrome (GAS) is a psychological condition, that affects many creative individuals including musicians and artists, characterized by the constant purchasing of new gadgets in hope of improving their art form.

If you find yourself obsessing about any of the points to the right, you may be fixating on your camera gear. One foolproof way to beat a case of GAS is to make a change in the way you photograph. Rather than feeling paralyzed by your lack of camera gear, take a time-out from what you are accustomed to and try something new.

**Determine if you have GAS by considering the following questions:**

* Do you feel that if you had a better camera (such as a medium format, large format, or one with more megapixels) that you could produce a better photograph?

* Do you feel that if you had a better lens for your camera (the newest or fastest) that you would be able to capture more unique images?

* Is it imperative that you have a digital camera so that you are able to see your image immediately upon completing the exposure?

* Do you feel that image quality is important in a print larger than 11” x 14”, but you rarely find yourself making large works of art?

* Do you feel that you need a specific brand of camera to create images with a specific feel to them?

---

**Try pinhole and cave into creativity rather than craving materialism.**

Left: This Trail’s End Popcorn camera was used to create The Obelisk. Paper negatives are approximately 10” x 5” and curved in the camera.

Right: The Obelisk. 2007

I made this image at a local cemetery in Pittsburgh, PA. Exposure was 30 seconds in full sun. The curved film plane distorted all vertical lines and created this dreamlike image. I did not flip the image horizontally after scanning, so the writing appears backwards and adds to the surreal feeling. Here are the secret ingredients to making this cool image: a popcorn tin, a pinhole, and a piece of black and white photographic paper. That’s all!
Embrace Technology
This book is not a collection of anti-digital photography propaganda, but merely a focus on alternative ways to see more creatively. There are more people today adopting photography as a hobby than ever before. This can be widely attributed to the affordability, usability, convenience, and progress of digital photography. Digital technology can be a feasible tool for pinhole imaging, but it must serve the artist in creative self-expression. It can not simply serve as a substitution or function as a tool of convenience over quality.

There is a resurgence of traditional photographic artists and interest in alternative processes. I consider it a privilege to have received my formal education in traditional photographic techniques including film, camera, and darkroom processes prior to the advent of digital photography. Some photographers are opposed to the use of technology for image creation, editing, or printing. I believe that there can be a balance between the old and the new and that pinhole photography can be a combination of historic processes and emergent technologies.
About This Book

Artists of all ages can comfortably complete most techniques within this book. If you are a complete novice, start with the Beginner Tracks to become familiar with basic concepts. As you feel comfortable with the basics, tackle the Advanced Tracks and finally dive into each Creative Opportunity. Keep an eye out for the Red Hot Tips which will offer an extended perspective.

**Beginner Track**

This book is outlined in a logical, linear way so that you can learn as much as you need to in order to get started. In the Beginner Track, the focus is on basic pinhole techniques that will get you started quickly. The non-technical approach to this track will allow you to by-pass the specifics and simply see results without concentrating on the scientific or creative aspects. Black and white photographic paper has been adopted as the light-sensitive material for beginners as it is more forgiving to exposure times and less expensive than film.

**Advanced Track**

When you have grasped the fundamentals, you can easily jump back into a section to learn more advanced concepts. The Advanced Track will augment the Beginner Track information while expanding your knowledge and understanding of pinhole techniques, materials, and ideas.

**Creative Opportunities**

Each Creative Opportunities section is a conglomeration of beginner and advanced techniques, concept application, and innovative approaches designed to broaden your artistic purview.

**Author’s Words of Advice**

It is quite easy, as an artistic creature, to get carried away with your art. There will always be the urge to buy new equipment as frontiers in digital technology expand rapidly. The creative voice inside of you will always demand to be satisfied. Pinhole photography is a remedy for today. You will not need to invest much money in materials to complete most of the exercises found in this book.

Photography should be a social event. If you have a network of creative friends, study this book with another artist. I believe that you have enough of an introduction to the art form, so dive right into Chapter 1 and best of luck!

I would love to hear what you think about the book and proposed concepts. General suggestions, questions, and comments are always welcomed at our website www.ThePinholeCamera.com!

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**RED HOT TIPS**

The Red Hot Tips are a collection of useful suggestions, hints, and points to ponder. These wisdom nuggets will be scattered throughout the book and will be bound in a red box, formatted just like this one. The content will range from building your own gear to highlighting new techniques.
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**The Pinhole Camera** is a practical how-to manual for making pinhole cameras and images. The techniques contained here are not difficult to master, and soon you will find yourself constructing your own cameras and making wonderful, innovative images. The content is divided into four parts, spanning fourteen comprehensive chapters. The Beginner Track, Advanced Track, and Creative Opportunities serve as an intuitive structure to the topics and techniques introduced so that both beginners and advanced artists can work at their own pace.

**Part One** introduces the art form of pinhole photography, discussing the benefits and opportunities.

**Part Two** thoroughly describes the pinhole process: from creating your own camera and pinhole, selecting a light-sensitive material, exposing your image, developing and evaluating negatives, and finally, printing your own photographs.

**Part Three** is the workshop section that highlights topics such as converting cameras and setting up a black and white darkroom.

**Part Four** illustrates the community of pinhole photographers worldwide. Each featured artist shares with you one image along with their own personal pinhole philosophy. The combination of artists and selected subject matter is a wonderful testimony to the creative images achieved with pinhole photography.

Brian J. Krummel, a photographer by formal training, completed a BA in Arts from Pennsylvania State University in 1996, focusing on photography as a creative discipline. Brian’s passion about photography has led him to continue his own photographic experimentations and explorations over the years with a variety of tools and techniques, which most recently included branching off into the interests of lo-fi, toy camera, and pinhole photography.

Brian has gained media exposure through television, newspapers, and websites for his on-going work that has been published in photographic magazines and online media. He also teaches workshops where emerging artists can learn the hands-on basics of pinhole photography.

Like many artists, Brian enjoys a parallel creative career and owns his own interactive firm. Brian works in the Pittsburgh, PA area and lives with his wife and three children in a quiet city suburb. Brian can be reached online at www.thepinholecamera.com.

“I highly recommend this how-to book to educators looking for innovative pinhole techniques as well as the DIY photographer. The big bonus is that because of the images throughout and the showcase section, *The Pinhole Camera* doubles as a photography coffee table book. Get two, one for the darkroom, and one for the coffee table.”

— Blue Mitchell, Editor, *Diffusion* magazine

“The Pinhole Camera is so much more than a pinhole book. Though the whole and simple process of pinholing is summed up on one of the first pages of the book, Brian Krummel manages to squeeze in just about every aspect of pinholing in this encyclopedia.”

— Malin Fabbri, Editor, AlternativePhotography.com

Author of *From Pinhole to Print* and *Blueprint to Cyanotypes*