



# MACRO PHOTOGRAPHY

PHOTO **WORKSHOP**

Develop your talent



**HAJE JAN KAMPS**

# Macro Photography Photo Workshop

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# **Macro Photography Photo Workshop**

**Haje Jan Kamps**



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# About the Author

**Haje Jan Kamps** graduated with a degree in International Journalism from Liverpool John Moores University, and resolutely decreed he would never work in journalism again. Instead, he started working as a freelance photographer and writer. As part of his company, Haje founded [www.photocritic.org](http://www.photocritic.org). The Web site became one of the most-visited photography blogs when one of his creations — a macro extension tube made out of a Pringles can — spread rapidly over the Internet via blogs and news Web sites.

A couple of years later, Haje decided that he preferred keeping photography as a hobby. Naturally, he started a career in journalism. Haje currently works as an editor for an automotive magazine and lives in Bristol, England. When he is not working, writing, or taking photos, Haje sleeps because there isn't a lot of time left in the day.





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For Shuu-shuu.

# Introduction

The fascination photographers have for macro photography is similar to the obsession astrologers have with the sky above: There is a vast unknown to be discovered. You don't necessarily need the most expensive equipment, but you do have to go looking for it.

Look around you. Can you see anything worth having a closer look at? If your answer is no, you might not be looking hard enough. Don't worry, that is one of the things this book will help you with. In addition to giving you the tools, the theory, and the skills you need to be able to take good up-close photos, I hope the photos in this book inspire you to the point that your shutter-finger twitches like that of a gunslinger outside a saloon at high noon.

Throughout this book, I touch on all the aspects of macro photography. After a brief introduction, I jump straight into the equipment you need to work on macro photography. I talk about lighting for a while before getting into the proper photography stuff. Everyday objects, flowers, and insects are popular topics in macro photography, so I've given them a chapter each to really get your creative juices flowing. My personal favorites are photographing textures and abstract objects, so there are chapters on those topics as well, along with an interesting section about how you can use macro photography to capture the human body!

Finally, I show you how you can use digital image-editing techniques to fix small problems with your photos, and

there are lots of tips on how to make your photos stand out more. If you still haven't had enough of macro photography (and why would you—it's a fantastic field well worth exploring), I've created a list of other resources you might want to look at in Appendix A.

Throughout this book, I might use some photography slang and jargon. If you find yourself struggling at any point, leaf to the back of the book, where I've compiled a glossary with words you might have trouble with. Learn them all by heart, and you can impress everyone at your local photography club with random technical terms!

Use this book as a technical guide and source of ideas and inspiration. However, don't ever let it tell you what to do. Amazing photography springs from photographers who know all the rules, but break them for good reason.

Grab a camera and some macro tools, then get out there and break some rules.



**About This Photo** *This photo of a match-head was taken with an extension tube I made myself out of an empty*

*Pringles can. It was the birth of an obsession: macro photography.*

# Chapter 1: First Steps Into a Macro World



[What is Macro Photography?](#)

[The Challenge of Macro Photography](#)

## [Can I Afford to be a Macro Photographer?](#)

## [Why Anyone Can Take Great Macro Photographs](#)

### [Try It Now](#)

You have purchased a camera, and you are ready to explore the world of tiny subjects, details, and small things. There is a whole new world out there to be explored, with a vast number of exciting opportunities. Everywhere around you there are fascinating patterns, shapes, and items that look amazing if you get close enough.

By the end of this chapter, you will have your first tastes of macro photography, you will understand some of the theory behind it, and you will see some astounding photos that give you something to aim for as you start honing your macro photography skills.

## **What is Macro Photography?**

Macro photography is the art of taking pictures of subjects up close. Some photos might be of relatively large things — such as a hummingbird or a large flower — and others might be of minuscule objects, such as the compound eye of a fly. However, macro photography isn't just about taking pictures of small things; it can also be detail shots of bigger subjects. In fact, some of the photos in this book are detail photos of skyscrapers!

To many macro photographers, taking pictures is about capturing phenomena, items, and events that cannot easily be seen with the naked eye. A droplet falling onto a plate (see 1-1), a hummingbird in flight (see 1-2), or bubbles rising up in a glass of champagne can be seen

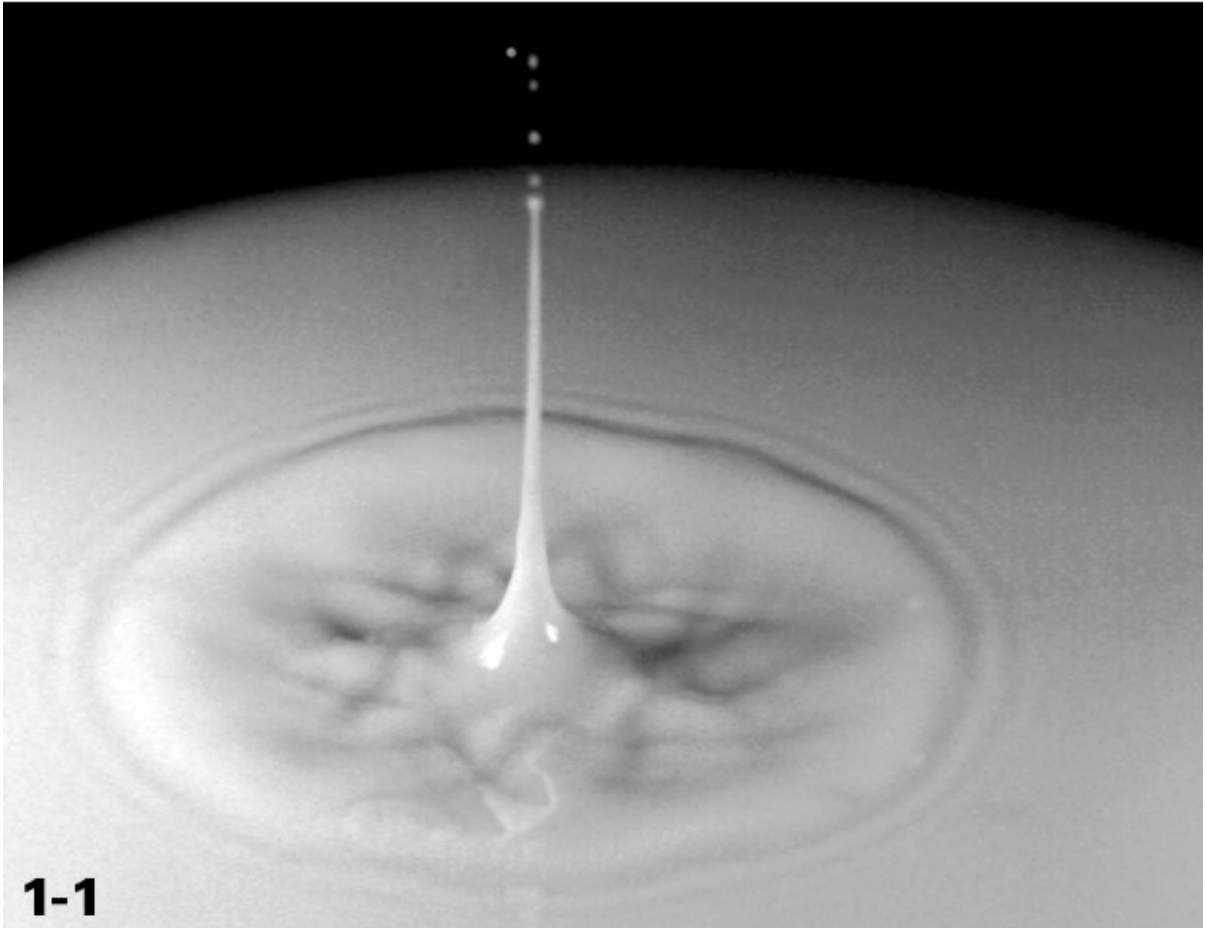
every day; but, unless you freeze their motion, it is impossible to fully appreciate their beauty or study them in detail. The delicate structure of a bubble or the intricate detail of an orchid might remain forever mysterious to us.



**Capturing a droplet as it hits a surface is one of the extremely specialized branches of macro photography. It isn't easy, but it's worth a try; you will be amazed at what you can capture. Learn more about photographing everyday objects — including falling droplets — in [Chapter 4](#).**

If you are curious about the technical definition of a macro photograph, that is a grayer area. Historically, the definition was that the image had to be on the scale of 1:1 on the negative. This means that if you took a picture of a coin, you could put the coin on the developed negative, and the picture of the coin was exactly the same size as the coin.

Some sources claim that to be considered a macro photograph, the subject has to be the same size as — or larger than — its reproduction in print, as illustrated in 1-3. In other words, when you have your images printed, the prints you receive have to be a 1:1 reproduction of the coin. To me, this seems a bit impractical, because almost any photo you take can be a macro photo: You just need to enlarge the negative.



**1-1:** *This photo of milk falling into a saucer was lit with 2x500W floodlights. Taken with a Canon 135mm f/2.8 Soft Focus prime lens. 1/4000 sec., f/3.5 at ISO 100.*

Ultimately, the definition of macro photography has changed over time — and digital technology has changed it even more. Macro photography has morphed into the act of taking pictures of small areas of a larger subject or of small subjects. That is as good a definition as any. I'm not here to split hairs; I'm in the business of taking pictures of them.

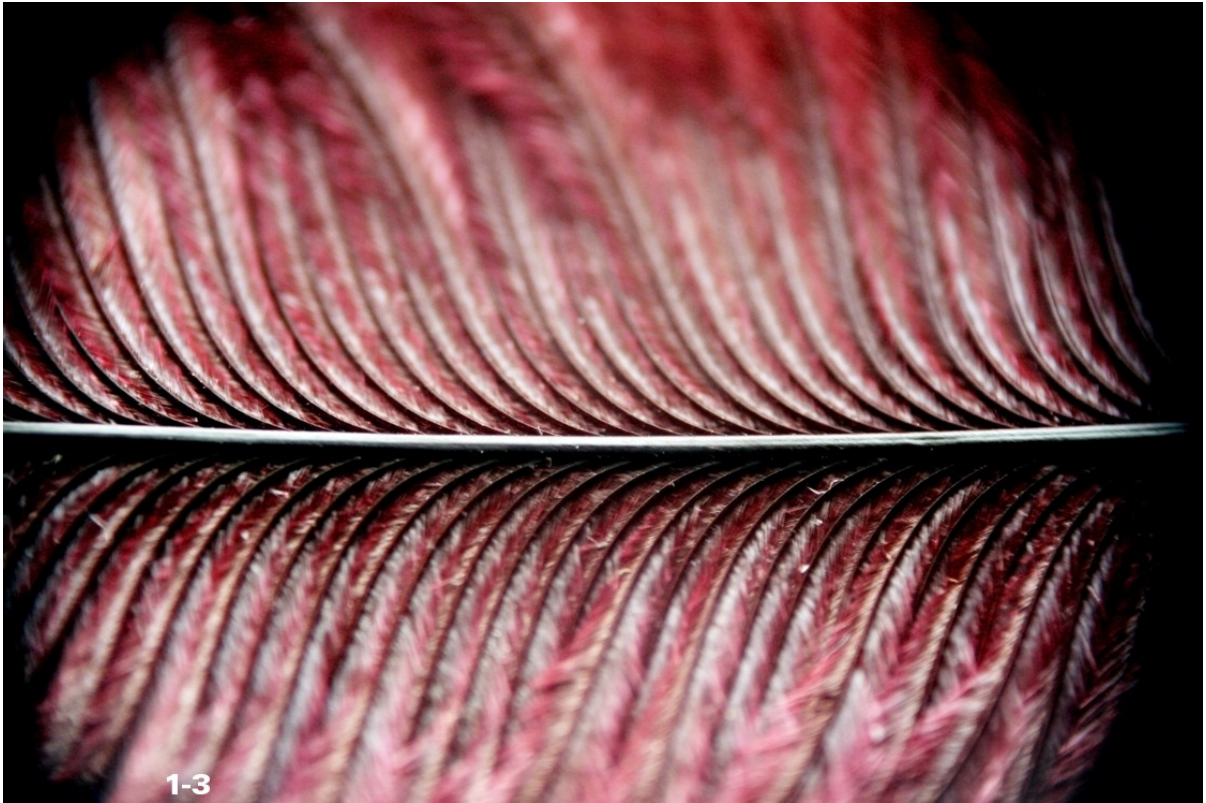
It is important to remember that anything can become a macro subject. Although two of the most eye-catching areas of macro photography are insects and flowers, you can explore many other subject options up close. The



textures and shapes of foodstuffs, for example, might make an interesting theme for a macro photography project. Different fabrics, types of paper, animal furs, mechanical objects, and even the human body can make for exciting exploration.



**1-2:** *Hunting hummingbirds wins two prizes: Most rewarding and most frustrating photograph ever. It isn't impossible; it just takes a lot of patience and practice. Taken with a Canon 50mm f/1.8 mkII prime lens. 1/500 sec., f/6.3 at ISO 200.*



**1-3:** *Macro photography allows you to get extremely close to your subjects, such as this feather. Taken with a Canon 55mm macro lens, 1/60 sec., f/5.6 at ISO 400. Photo by Hillary Quinn.*

Have you ever flown in an airplane over your own house and looked down, only to realize how different everything looks from a distance? You have that same kind of perspective when you get into macro photography — the world can be observed from an entirely different perspective, and the rules of how you see things drastically change. The wristwatch you have worn for five years, and look at every day, might be a patchwork of fascinating, fine scratches, beautiful materials, and intricate reflections — and that's just on the outside. The inside harbors a wide array of small cogs, levers, and springs, or a collection of exciting electronic components.

Teaching yourself to see macro photography opportunities everywhere you look is half the battle in finding the most rewarding photos. It is quite satisfying to have friends look long and hard at a photo on your wall, say they love the look of it, but admit they don't know what it is. The stunned look on their faces after you explain what they are looking at is priceless.

## **The Challenge of Macro Photography**

Taking photos of small areas of larger subjects, of tiny subjects, or of small items is a rather refreshing approach to photography. Landscapes and portraits are great, of course, but you can see plenty of people nearly everywhere you go, and if you want landscapes, you can go for a walk in the countryside. In addition, you can choose to re-interpret these classic themes as macro photos. You can't express the grandeur of a landscape as a macro photograph, but you can pick out details representative of where you are, as illustrated in 1-4. Portraiture can be done with an up close twist on things, too, commonly by photographing someone's eye (see 1-5), but as with other photography, only your imagination limits your ideas.

Macro photography is challenging because many of the rules that apply to other branches of photography are meaningless when you start getting close enough for the results you want. If you want to partake in extreme macro photography, you end up very close to your subjects. In many cases, such as when photographing insects, you might find that your lens practically touches what you are trying to photograph, which creates a variety of

challenges that do not occur in other types of photography.



1-5



**1-4:** *Figure 1-4 is an example of a landscape in macro form. The connotations of barbed wire give it a sinister feel. Taken with a Canon 28-135mm f/3.5 macro lens. 1/350 sec., f/3.5 at ISO 100. 1-5:* *In figure 1-5, the dramatic circular shapes make a striking photograph. Taken with a Canon MP-E 65mm f/2.8 macro lens and a MT-24EX macro Twin Lite flash. 1/125 sec., f/16 at ISO 100. Photo by Daniela Bowker.*

## **Focus and Depth of Field**

Focusing is one of the biggest challenges you encounter in macro photography. To get sharp photos, your focusing has to be accurate, because the closer you are to your subjects, the lower your depth of field (DOF). A low DOF means that only a limited depth of your image is in focus. See 1-6 for an example of a photo that demonstrates the limited DOF you have in macro photography.





Find out everything you need to know about macro photography equipment in [Chapter 2](#).

A high DOF means that a lot more of your photograph is in focus. For macro purposes, limited DOF means that the amount of your subject that is in focus is drastically lower than if you were to take portrait photos, for example.



**1-6:** *A brushed metal surface shows how rapidly an image falls out of focus. The area in focus is less than a millimeter wide. Taken with a Canon MP-E 65mm f/2.8 macro lens and a MT-24EX macro Twin Lite flash. 1/125 sec., f/5.6 at ISO 100.*

In addition to a limited DOF, most methods of taking macro photographs render the focusing ring on your lenses useless. With few exceptions, if you're going in close enough, you have to focus by moving your whole camera closer to — or farther away from — your subject.

This does take a bit of practice, but it isn't nearly as difficult as it sounds. There are a few things that help you focus better. For example, a sturdy tripod with a macro focusing rail makes the process infinitely easier because you can make minute changes to your focus, evaluating as you go.

## **Lighting**

When working with macro photography, lighting is a serious challenge. Getting in close to your subject is easy if you use the right combinations of equipment, but generally, you lose a lot of light in the process. This means that you must use longer shutter times. When you consider how sensitive macro photography is to focusing and movement of the camera, the subject, or both, these longer shutter times can present a problem. One solution is to use artificial lighting, as was done in 1-7.

When your camera is very close to what you are photographing, much of the light you need is blocked out, just when you need it the most. You can help this by making the best of available light. Using reflectors to guide the light where you want it, using diffusers to make the light more omni-directional, and reducing shadows and fill-flash can help you get extra light where you want it. Finally, it is possible to do macro photography in a studio where you have full control over all the light, for maximum flexibility.



1-7