Macro Photography: The Complete Guide to Breathtaking Macro Images

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What is macro photography? How can you get started capturing macro photos? And what are some easy tips and techniques to take your macro images to the next level?

That's what this article is all about.

I'm going to share *everything* you need to know about macro photography – so that, by the time you've finished this article, you'll be well on your way to becoming an

expert. Specifically, I'll discuss:

- The two pieces of gear you need to take stunning close-up shots
- The best lighting for vibrant colors
- How to create a scrumptious, creamy background blur
- How to capture consistently sharp macro images
- So much more!

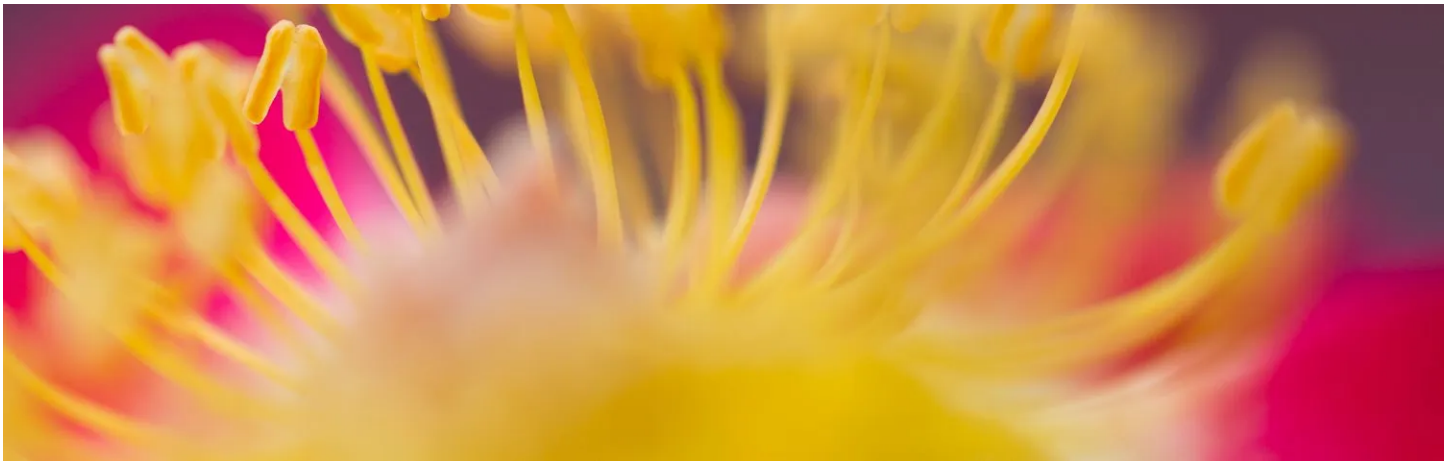
Let's jump right in.

What is macro photography?

Macro photography refers to photographing at *high magnifications*. This may involve the use of a specialized macro lens, which is designed to capture detailed, close-up photos.

Technically speaking, a true macro photo creates an image on the camera sensor that's the *same size* as the scene in real life, also known as 1:1 magnification. So if you were to photograph an inch-long flower, the flower would need to take up an inch of your camera sensor.

This image was captured with a macro lens at or near 1:1 magnification (in real life, those anthers were *tiny*!):

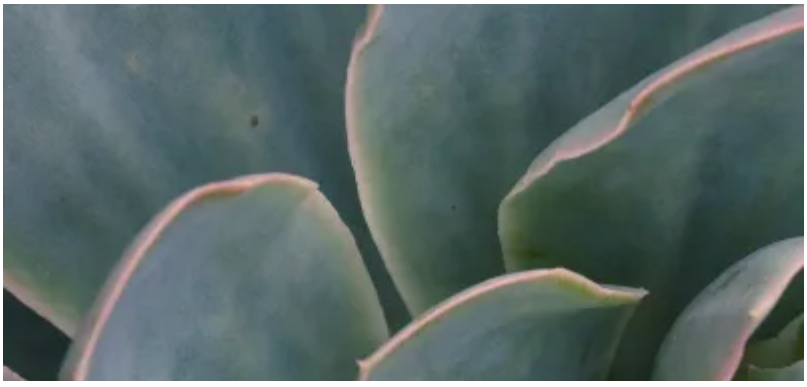


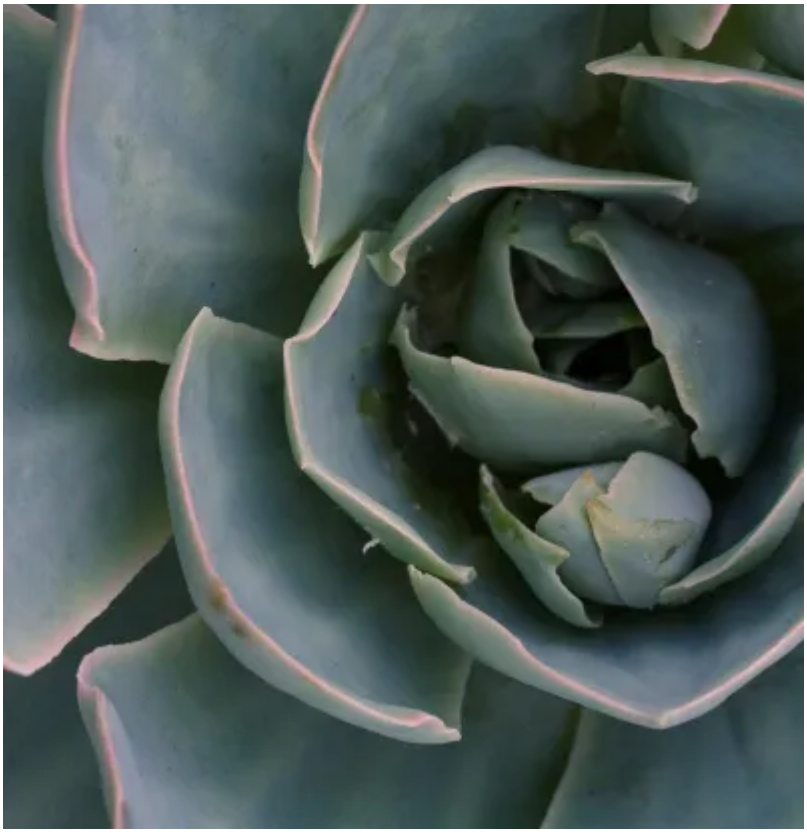
But in general, the term “macro photography” is much broader. It includes true macro photos, but also general close-up images of flowers, insects, leaves, food, and more.

For instance, here’s a photo of a relatively large flower:

Is it a close-up photo? Yes, definitely. Would most photographers happily refer to it as “macro photography”? I think so. But it certainly didn’t involve 1:1 magnifications (and it probably could’ve been taken with a non-macro lens).

The same is true of the succulent image below. It’s close up, it’s not “true macro photography,” but I’d still call it “macro photography:”





The two essential pieces of macro photography gear

Getting started with macro photography is easy, and you *don't* need thousands of dollars worth of gear.

Instead, I only recommend two items:

1. A camera
2. A close-focusing accessory

Let's take a look at both these pieces of equipment in greater detail:

Choosing a camera

It may seem blatantly obvious, but every macro photographer needs a camera.

What kind of camera is best? I highly recommend a camera that offers interchangeable lenses; they tend to produce the highest-quality photos, and as you become more experienced, you can upgrade your lenses without needing to purchase a new camera. Plus, interchangeable lenses will just make your life a *lot* easier if you ever decide to shoot landscapes, portraits, architecture, etc., because you can buy lenses specifically for those purposes.

But as long as your camera can change lenses, you don't need to be picky. Any DSLR or mirrorless model from Canon, Nikon, Sony, Fujifilm, Panasonic, Olympus, or Pentax will work just fine (and there are plenty of other brands *not* mentioned on that list that will work, too).

And if you don't want to shell out for a DSLR or mirrorless camera, that's okay, too. Even a smartphone will let you shoot macro photos, provided you have the right close-focusing accessory, as discussed in the next section:

Choosing a close-focusing accessory

Most cameras cannot automatically focus up close. So in order to capture macro photos, you'll need some sort of *magnifier*.

Here, you have a few options. If you already own a lens (such as an 18-55mm kit lens or a 50mm lens) you can purchase a close-up filter, which will mount to your setup and let you shoot at high magnifications. Extension tubes are another option, which go between your camera and your lens and allow for closer focusing.

But while close-up filters and extension tubes do work, they come with some serious drawbacks. Close-up filters tend to reduce image sharpness, and both options reduce your shooting flexibility. That's why I recommend a macro lens for the best shooting experience.

Which macro lens you choose doesn't make a major difference; as long as the lens can get you close – 1:2 or 1:1 magnification is ideal – then you'll be able to capture stellar images.

Is any other gear necessary?

If you've done any reading on macro photography, you're probably wondering: What about artificial lighting? What about a tripod? What about a focusing rail? Aren't those important for good macro photography?

Honestly, while artificial lighting, a sturdy tripod, and a macro focusing rail can certainly be helpful for some types of macro photography, they're definitely not a requirement. (I rarely use those items, myself.)

So I'd recommend getting started *without* such accessories. Then, if you decide you want greater stability, you can grab a tripod; if you decide you want precision focusing, you can grab a focusing rail; and if you decide you want to modify the light, you can grab artificial lighting. But they're not always necessary, and there are plenty of professionals who work handheld with only natural light.

Make sense?

Macro photography settings

Macro photography is a technically demanding genre. So you need to pay careful attention to your settings when shooting.

Here are my three essential recommendations:

1. Set your camera to Aperture Priority or Manual mode

Pretty much every camera offers a series of modes: Aperture Priority, Shutter Priority, Program, etc.

And I highly recommend choosing either Aperture Priority or Manual mode.

Aperture Priority lets *you* choose your aperture and ISO setting, while your camera chooses the shutter speed. I discuss aperture more in the next section, but taking control over the aperture goes a long way toward creating stunning macro photos.

Manual mode lets you choose the aperture, the shutter speed, *and* the ISO. Personally, I shoot almost exclusively in Manual mode, as I find it offers the most flexibility and creative control. It can take some getting used to, though, so if you like the idea of shooting in Manual mode but don't feel comfortable adjusting all your camera settings, start with Aperture Priority, then switch to Manual as you become more experienced.

2. Carefully choose your aperture for perfect depth of field

The aperture is a hole inside your lens that opens and closes depending on your camera's aperture setting.

Aperture is a key part of exposure (along with shutter speed and ISO). But aperture *also* affects the depth of field: the amount of your image that's sharp.

By selecting a *small* aperture (also known as a *high* f-number, such as f/16), you'll end up with a result like this one, where most of the subject is in focus:

And by selecting a *large* aperture (i.e., a small f-number, such as f/2.8), you'll end up with an image like this, where very little of the subject is in focus:

Because macro photography occurs at such high magnifications, depth of field is already pretty limited. (The closer you are to your subject, the smaller the depth of field, all else being equal.)

So it's pretty tough to get a shot with a sharp subject *and* a sharp background, even if you shoot at f/22. However, you'll still need to carefully consider your aperture. Certain macro photographers like to keep their entire subject sharp from front to back, and they'll often shoot at f/13 or f/16.

Whereas other macro photographers like to create a so-called *soft-focus effect*, where you only get a sliver of your subject in focus.

Neither choice is wrong, and both types of macro photography can look great when executed properly. Just make sure you're thinking about the aperture for every shot you take. That way, you get the artistic result you're after.

3. Use manual focusing for the sharpest results

These days, cameras and lenses offer *amazing* autofocus systems. You can capture birds in flight, cars at high speeds, airplanes taking off, and so much more.

Yet even the best autofocus systems come with a major weakness:

High-magnification focusing.

Unfortunately, autofocusing on objects at macro magnifications is just really hard. Which is why, for the best macro photos, you'll need to focus manually.

This may sound intimidating, but it's actually quite easy. Simply switch your lens from autofocus to manual focus (most lenses have a switch on their side). Then turn the focus ring until you achieve the point of focus you're after.

You'll get the hang of it pretty quickly. And pretty soon, you'll want to focus manually all the time!

(Quick tip: If you're struggling to focus on a close-up subject, try setting your focus *first*. Then let go of your focus ring and rock your camera back and forth until the plane of focus is exactly where you want it.)

Macro photography lighting

For macro photography, I recommend you start with natural light. Don't buy any flashes or studio strobes or ring lights, especially not at first.

Instead, take advantage of the sun and all it offers. Here are the two best times of day to do outdoor macro photography:

Cloudy midday

Cloudy light is great for macro photography. It's soft, it's flattering, and it makes colors look super vibrant.

Here's a photo I took on a cloudy afternoon:

Do you see how the colors really pop? That's thanks to the cloudy lighting.

Unfortunately, cloudy light early and late in the day doesn't work so well – the sky will be dark, and you'll struggle to get a nice, bright image. So if the sky is cloudy, make sure to head out toward the middle of the day.

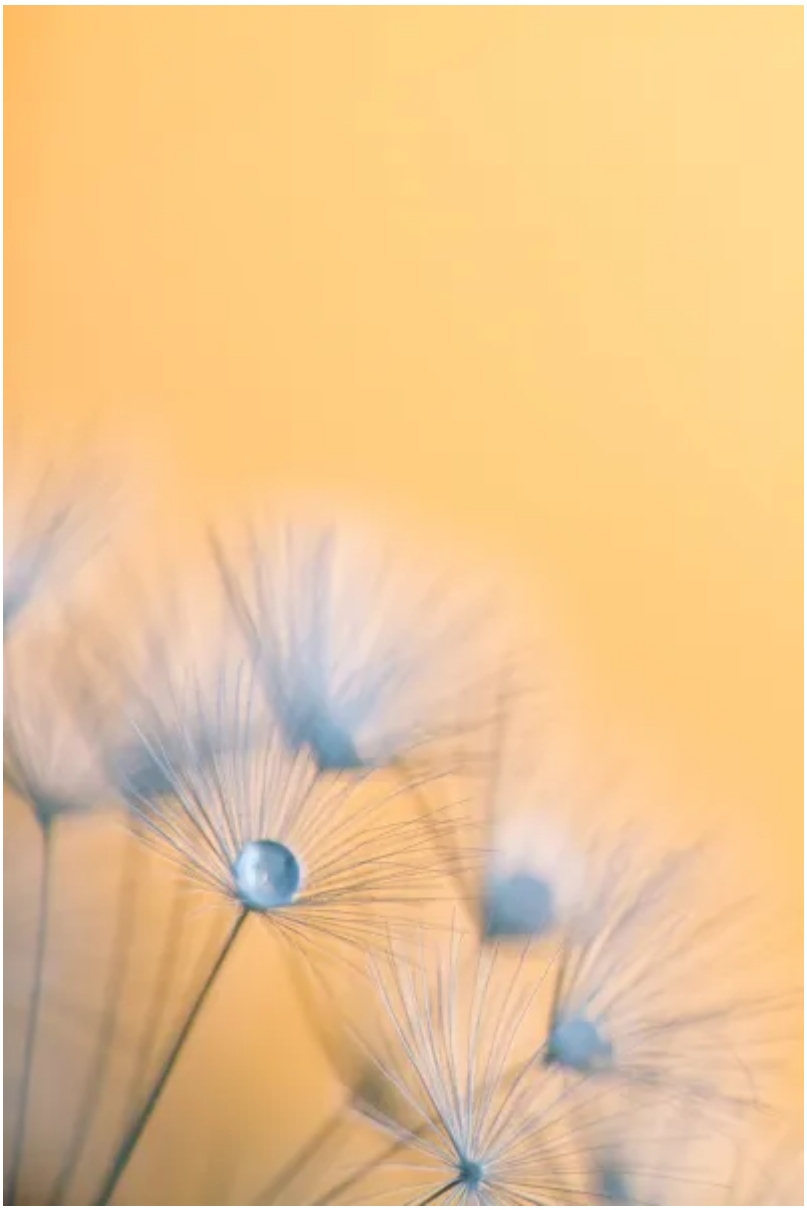
Sunny mornings and evenings

The golden hours – that is, the first hour or two after sunrise and the last hour or two before sunset – are beloved by pretty much all photographers, and for good reason:

They offer soft golden light that looks *magnificent*.

Thanks to golden hour lighting, I love doing macro photography early in the morning and late in the day. Colors look beautiful, and you can create all sorts of interesting

lighting effects. Here's an image shot around sunset (the orange color of the setting sun provided a beautiful backdrop):



The one caveat is that the sky needs to be clear. Too much cloud cover, and you'll lose the beautiful light. Then you'll have to cope with dim, cloudy light – and as I explained in the previous section, it doesn't work so well for macro shooting.

Don't do macro photography when the light is harsh

This is probably the number one mistake I see beginner macro photographers making. If you head out when the light is harsh, you'll end up with bad exposures, ugly colors, and unflattering shadows, no matter *how* skilled you are as a photographer.

When is the light harsh?

Basically from a couple of hours after sunrise to a couple of hours before sunset, assuming you have no cloud cover. Midday (i.e., high noon) is the absolute worst for macro photography, but a few hours to either side is also pretty bad, at least at most latitudes.

(If you *do* have lots of cloud cover, then shooting at midday is completely fine.)

So shoot when the light is good, as discussed above. And avoid shooting when the light is harsh.

Tips for macro photography beginners

Now that you're familiar with the macro photography basics, I'll share a few tips and tricks to improve your macro photos.

1. Carefully position your subject for maximum impact

I've talked a lot about macro settings and lighting, but I'd also like to emphasize a third corner of the macro photography triangle:

Composition.

Composition in macro photography is a *huge* deal; by positioning your elements in different areas of the frame, you can achieve very different end results. In fact,

composition can be the difference between a boring, snapshot-like image and a stunning, please-let-me-print-this-and-hang-it-on-my-wall image. (No joke.)

But how can you create stunning compositions?

I'd recommend starting with the rule of thirds. By positioning your subject a third of the way into the frame, you can achieve a nice harmony while maintaining plenty of visual movement (also known as *dynamism*).

You might also experiment with centered compositions, where you place your main subject right in the center of the frame. Centered images tend to look pretty intense, and they work especially well if you have a symmetrical subject.

Once you've learned the basic composition guidelines, such as the rule of thirds and symmetrical symmetry, I'd recommend playing around with different image layouts. Find a nice macro subject, then position it in various parts of the frame. You might think about doing macro minimalism, you might try including diagonals, you might consider incorporating triangles or the rule of odds; basically, there are all sorts of different options, so have fun with them!

2. Increase the distance between your subject and the background

At the start of this article, I promised to explain how to achieve beautiful, blurred macro backgrounds. Part of it has to do with using a wide aperture for a shallow depth of field. But there's another key part, too:

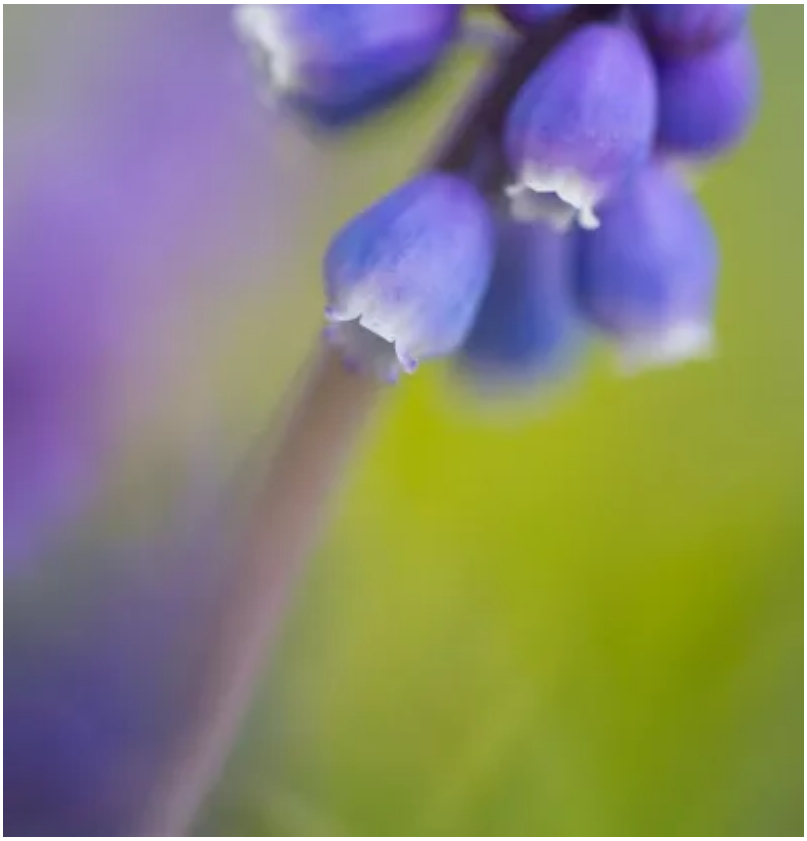
Make sure your *subject* is as far from the *background* as possible.

It's a simple trick, but it makes a huge difference.

Now, you can increase the subject-to-background distance in two main ways:

1. You can find a subject that's far from the background. So if you want to photograph a tulip, find one that's far from the trees or fence or grass behind it.
2. You can change your position so that the area behind your subject recedes. For instance, by getting down low to the ground, the area behind your subject will often change from the grass (near to your subject) and become distant trees or distant flowers (far from your subject). And you'll get a much better blur.

For the image below, I wanted to create a nice background blur while shooting some grape hyacinths. I didn't have too many flowers to choose from, so I got low to the ground – I was practically lying face down in the flower bed! – and I shifted my camera back and forth until there was a nice distance between my main subject and the flower behind it. This was the result:



3. Shoot into the sun for beautiful lighting effects

I'm a huge fan of creative macro photography. And one of my all-time *favorite* ways to generate jaw-dropping creative effects is to position my subject between the camera and the sun so I can shoot straight into the light.

It'll give you images like this, with lots of cool lighting effects in the background:

All you have to do is find a nice subject, get up close, and make sure it's in front of the sun. I do recommend trying this technique around sunrise or sunset – that's when the effect tends to look the best.

A note of caution: Don't look through your camera directly at the sun, especially at high magnifications. If you're using a DSLR, I'd really recommend switching to Live View (where you shoot with your camera's rear LCD).

But as long as you're shooting safely, you'll have a *lot* of fun!

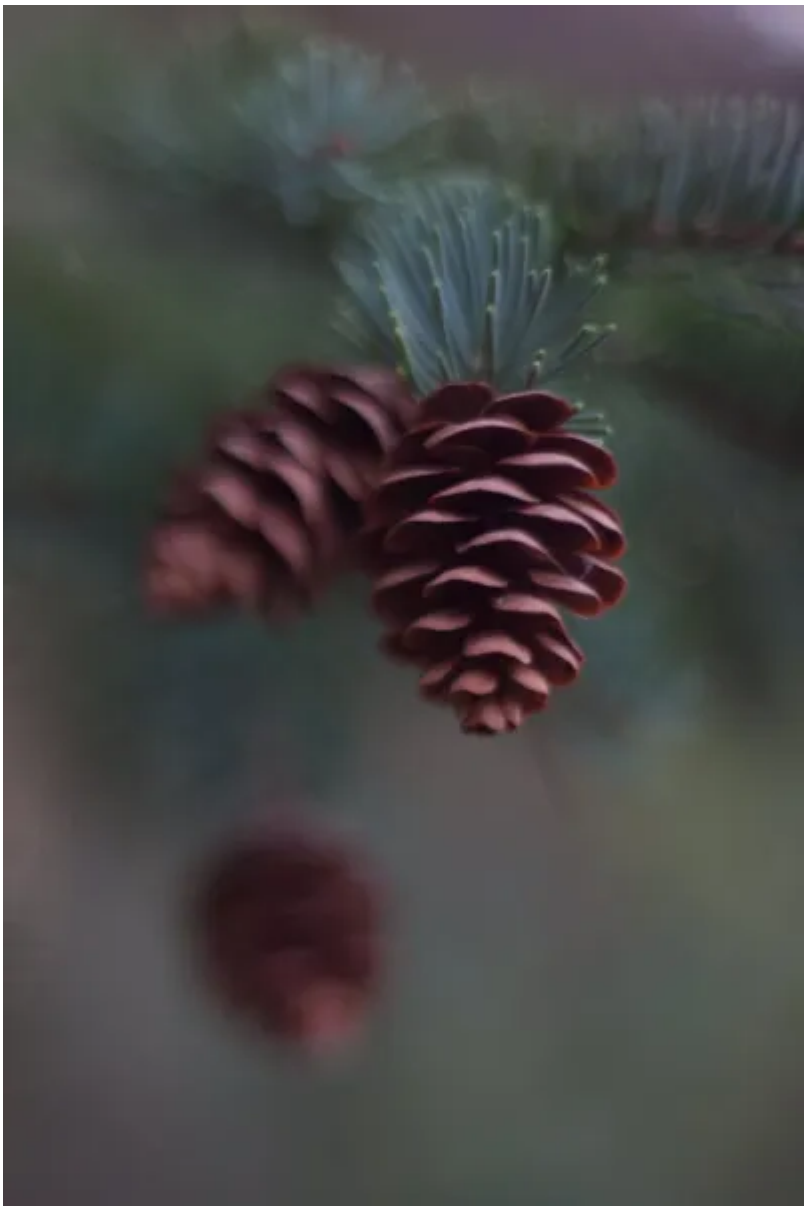
Macro photography: conclusion

Macro photography is an incredibly rewarding genre of photography – and if you remember these tips, you'll be well on your way to some great shots.

So grab your camera, make sure you get a close-focusing accessory, and head outside!

Now over to you:

Do you have any questions about macro photography we didn't answer in the article? Do you have any macro photography tips or pointers? Share your thoughts in the comments below!



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