Close up and Macro Photography



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Close up and Macro Photography

Most people associate close-up and macro photography with spring and shooting outdoors, capturing subjects such as small insects, flowers and other plants in the outdoors; macro photography can be done at any time of the year, including indoors, and there are a lot of different subjects to capture!

For those just getting started with this category, indoors is more forgiving and easier. This article, will take a look at what goes into getting started with close-up and macro photography, whether you're shooting indoors or outside around your home.

What Does 'Macro' Mean?

In the most common sense, 'macro photography' means 'life-size'. You think of this in terms of magnification first and separation distance second.

Basic Kit

To capture true macro shots, you'll need a camera that can has interchangeable lenses. Depending on how much magnification you want, you may need a lens specifically designed for close-up work. Many zoom lenses are labeled as being macro zooms. This means that they may be able to deliver up to 1/4 life size. Working indoors, you will need a source of light. This could be flash, a continuous lighting system, or even a desk lamp with a diffused source.

A true macro lens delivers an image to the sensor that is one times life size, so if the subject is 3/4" long in real life, it would be a 3/4" long image on the sensor. This is how to get large images in post processing, because the image at the sensor size is life size. A general macro lens of any focal length will deliver 1x life size on the sensor. Focal length in a macro lens is not about magnification, it is about distance between the front of the lens and the subject, what is often called standoff distance.

In general, you want more standoff distance, than less because it gives us more space between the front element and the subject. This allows for effective use of a lens hood and helps reduce shadows created by the lens when it is in very close. While You can get macro lenses with focal lengths at 40mm, 50mm, 65mm, 85mm, 100mm, 105mm and 180mm to name a few, the most popular focal length is the 100-105 range. It allows for 1x life size and a reasonable standoff distance while maintaining a fast f/2.8 maximum aperture.

You want a fast lens to maximize the autofocus performance although you will probably not be shooting at f/2.8 for close up work because of the razor thin depth of field.

You already know that the closer you are to the subject, the lower amount of depth of field you get at any given aperture. This is why macro lenses will often have apertures that can go very small to deliver increased depth of field.

While you can use a macro lens for non-close-up work, you are paying more because a true macro lens is a very specially designed lens. Construction is designed to mitigate the diffraction that occurs in general purpose designs at small apertures. The lens elements are arranged to deliver a flat focus field corner-to-corner, suitable for document, stamp and coin imaging. Manufacturers will often put enormous effort into their macro lenses and while they are fixed focal length, they are also often the sharpest lenses in a manufacturer's stable.

I Want More Than Life Size

In the early years of Photography all lenses and focus were manual. You would use a bellows device to move the lens towards and away from the film plane. Some manufacturers made extremely effective bellows units that would even allow for focusing wide open and only stop down for the shot, just like a normally attached lens. By placing a macro lens on a bellows, you move the lens away from the body, increasing the effective magnification.

Bellows are a rare beast today, but you do have fixed length extension tubes. Good tubes will protect automatic aperture control and some even allow for autofocus. Be cautious with cheap no name tubes as they very often do not mount up properly or may not hold the lens properly. The longer the tube, the more magnification you get.

Stability

As you know from long telephotos, you all shake to some extent. This gets really exacerbated with macro lenses when you want small apertures for lots of depth of field, as this drives slower shutter speeds. Work from a tripod is a generally applicable rule. Some people who use extension tubes add a focus rail that allows simple back-and-forth movement of the camera lens combination to provide more precise focus adjustment.

It is recommended to use a remote release cable to trip the shutter and avoid camera movement from physically pressing the button.

Seeing Focus

There are a number of tricks to check focus for macro. The cheapest is to go to manual focus and then use Live View. The bigger LCD can help you focus precisely and adding a loupe with a magnifier will help even more.

Another option is a right angle finder. You remove your eyecup and clip this unit on. It allows you to look down into the viewfinder when the camera is low, and they often have a magnifier built in. Sadly all manufacturers use different sizes in their viewfinder frames so you have to get one specifically for your camera.

Lighting

Get a good quality gooseneck or spring arm architect style desk lamp. and look into a 5500K daylight balanced compact fluorescent bulb,

The lamp reflector should be finished in white inside instead of silver and to look for a wider rather than narrower bowl. Then get a roll of white parchment paper and tape a piece of paper over the front.

The CFLs don't get really hot, and parchment paper is made to be used in ovens. Good CFL bulbs are already nicely frosted but some are less so, h the additional diffusion provided by the parchment paper.

Another option is to make a small frame of PVC pipe and cover it with a white shower curtain liner. This makes a larger source and you shine your light through it.

Once you decide that continuous light is a good route for you, and you want something more agile and multi-purpose, consider some form of continuous photographic lighting.

You can use flash for macro work. You will need to experiment more. Flash has a lot more output, so it can deliver enough light at f/32 without multi-second exposure times.

There are also special purpose flashes called ring lights that surround the lens with a ring of light. It's designed for copy work, so the light tends to be rather flat, although the better units allow for different power settings on the left and right flash tubes. These ring lights are very special purpose because they are typically low powered with limited range. A good alternative for this would be compact LED Lighting such

Putting it All Together

So you have your camera, your suitable lens, a simple light source, your tripod and a remote cable release. Now, you can find a subject. You don't have to go far because your home is filled with things that reveal fascinating textures, patterns and colours when photographed at or near life-size. You might have plants and flowers in your garden, or even your local florist that's opened can provide you with lovely flowers. The local art supply store will have peacock feathers and other items You may have a fishing tackle box in your home – fishing flies are great macro subjects. such as rings and earrings also make great subject ideas. a tight close-up of an opened box of crayons or coloured pencils. They may sound like simple subjects, but can make amazing shot up close! Take a look in and around your house for subjects that you wouldn't typically see in 'macro' shots!

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Bio

My name is David Wright.

I have many years experience writing procedures on how to test high tech electronic equipment. Re wrote technical manuals so that the average person could understand them.

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My documenting skills are excellent paying attention to details satisfying the toughest ISO auditors.

I have enhanced my writing skills by successfully completing a course in Writing for Children's literature.

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I have had a Camera in my Hand since 1965 Gone pro In 1999

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I am now at a point in life I would like to share my knowledge with the world and the best way I know how is by Print either electronically or Hard copy paper.

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