Macro Image of Spiders Look Larger Than Life

Adam Schmidt

Spiders have a misconception as being a nuisance, a pest or scarry. They are creepy looking creatures when you look at them closely. It may be hard to ignore their multiple eyes and hairy legs, but they are beneficial creatures.

This image shows the spider around a 1:1 ratio. You can see it's many hairy legs and creepy looking eyes and face. You may be taken back by it finding it creepy but try not to judge it based on its looks.

A Spider's Eyes

Not many creatures have multiple eyes around their head like spiders do. Their eyes and how they interpret things around them is very interesting. They don't see the world like you and I as you may imagine with multiple eyes. However, they still use two eyes as their main vision.

A spider has two main eyes. They use those eyes to track their prey and sense depth. Their other eyes are almost like sensors. They don't see things well out of them but they use them to instead see movement and other things in the world around them.

People view spiders as pests and squash them when they see one in their home. Spiders are not pests they eat pests. They spin complex webs to capture fly's and other insects. Those insects are the pests in gardens.

If you have ever had a garden, you know how annoying it is when you walk out to see hundreds of bite marks on the plants you put in a lot of time and effort into. You won't see a spider eating those leaf's but you will see insects munching away.

Techniques

Different magnifications

Using different lenses with different magnifications allows different views of the subject. An image of the spider with magnification of 1:1 or 1x is very different from an image of magnification of 10x.

This image shows the spider as a whole. The scale of the image makes you seem like you are the same height as it. This was shot at 1x. Just at the start of macro.

The second image is at a high 10x magnification showing each little hair on the spider's furry leg. They are two very different images.

Focus stacking

Macro lenses have a very shallow dept of field meaning the amount that is focus is very small. Focus stacking is a technique where different focused images are stacked together in post processing creating one image with more in focus. All the images of this spider have been focus stacked from anywhere between 30 to 200 images.

This image shows how much is in focus of the spider's abdomen.

With multiple images taken on a focus rail and stacked with software the end result is a fully in focus abdomen.

Equipment used

Any stand or tripod where you can attach your camera will work. There are cheaper macro rails that allow you to shift the focus manually. Any lights will work however typically softer light will work better with the focus stacking software.

Below is the equipment I used:

- Canon R5
- Laowa 25mm 2.5-5x macro
- Laowa 100mm 2x macro
- Mitutoyo optics camera system
- Copy stand
- Stackshot macro rail system
- Fiber optic tungsten lights
- Two ping pong balls to diffuse lights

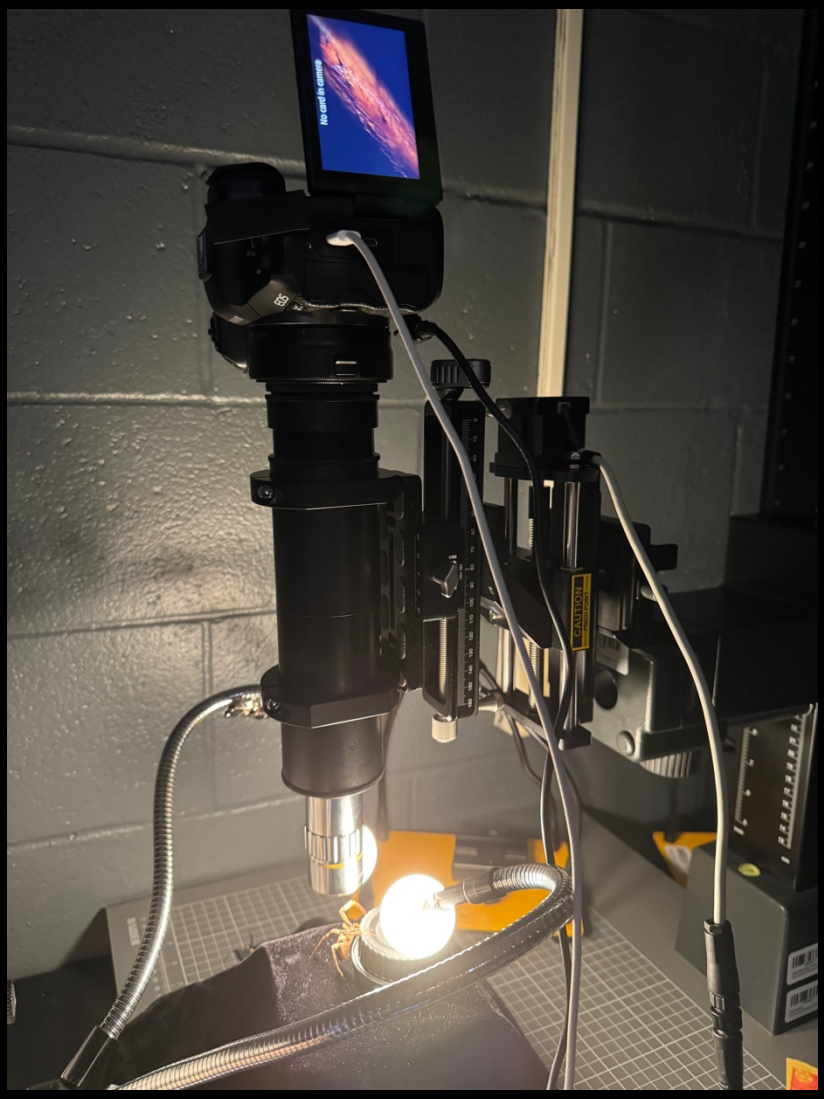
There is no need to have everything on the list to be able to capture cool macro photos.

Focus Stacking Software

As for software I used Zerene Stacker which is dedicated to focus stacking. Helicon is also popular dedicated software, but Photoshop has stacking as well. Photoshop will work good for simple subjects however if you have complexity and want control, I recommend purchasing a dedicated software.

Setup for images

Each image uses a very similar setup. Both of the fiber optic lights on each side of the subject. The ping pong balls were cut and attached to diffuse the light. The camera was set on the focusing rail and between 30 to 200 images were taken based on the magnification and the amount required to have everything in focus. The focusing rail was either on the stand looking down at the subject or on the table looking at the subject.



The image on the page shows the setup to capture the 10x image. The subject is set up below the Mitutoyo 10x optics lens system attached to the focus rail on the copy stand. The fiber optic lights are on each side lighting the subject. The other lenses were used for other magnifications.

About the author

My name is Adam Schmidt. I am currently studying Photographic Sciences in my last year at Rochester Institute of Technology. Photographic Sciences allows me to photograph things that you cannot see with just your naked eyes which I find very interesting. Whether that be macro, high speed, or infrared imaging. I enjoy exploring and photographing nature in my free time.

Contact information:

Instagram: @adam.schmidt.photography

Email: arschmidt64@gmail.com

Website:

adamschmidtphoto.myportfolio.com/

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