

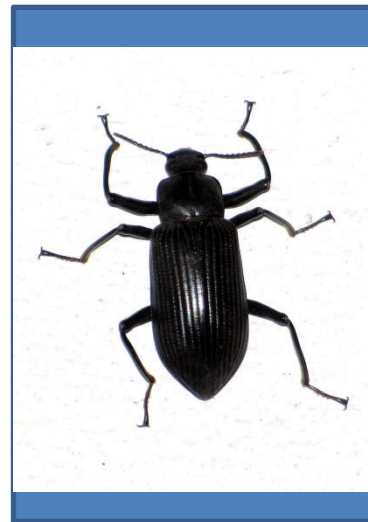
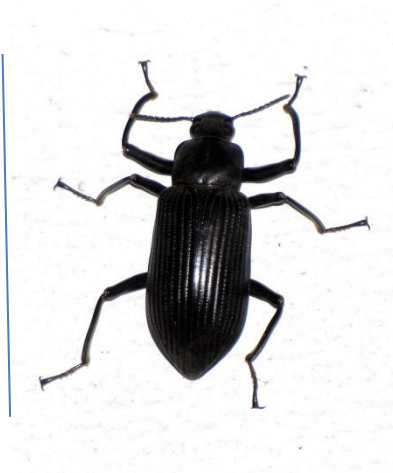
Macro Photography

An Introduction

What Does Macro Mean?

- Macro photography is the capture of images at life size or greater on a camera sensor or film i.e. Ratio of 1:1
- A 30 mm object in life will be 30 mm on the camera sensor if using a macro lens at its closest focus distance

30 mm



36 mm

24 mm

What is it Used For?

- Taking close up photographs of small subjects or parts of subjects such as insects, jewellery, flowers etc
- Medical and dental photography (as opposed to Micrography which is taking photos using a microscope)
- Detailed product photography / document copying
- In the main most of us will be using it for bug and flower close ups

You don't HAVE to shoot at 1:1 with a macro lens to get decent shots of insects.

- If they are skittish, stand back and use a long lens.
- You don't have to fill the frame. Get as close as your lens and subject will allow and crop later.
- Sometimes a compact camera and live view works well. You can stand back and extend your arms towards the subject – less likely to spook them.
- Go for the bigger ones!

What Equipment is Needed?

- Camera – DSLR, Mirrorless, Compact, Film – they all work
- Lens – specialised macro lens capable of 1:1 reproduction and very close focussing ideally but there are other options
- Tripod – not always essential (or desirable)
- Lighting – flash or other artificial lighting can be helpful
- Various – remote release, clamps, diffusers, reflector, extension tubes, bellows, reverse rings, close up lens, focussing rails etc but most of these are optional

Macro Friends and Enemies

- FRIENDS - Good light
Low ISO
High shutter speeds
Calm weather if shooting outdoors
Compliant subjects
Tripod / Cable Release / MUp / Electronic Shutter
- ENEMIES - Poor light
High ISO
Low shutter speeds
Wind
Skittish subjects
Camera movement if handheld
Depth of Field

Improve Your Chances

You can beat most of the Enemies by improving lighting. It is so important it can be helpful to carry your own with you.

- Flash / Ringlights
- LED's, Torch, Light Tent, Anglepoise
- Reflector
- Studio lighting if indoors and static
- Practice, Patience and Persistence!

Depth of Field

- Photographing anything close up and magnified will result in shallow depth of field (DoF).
- At 1:1 setting on a Macro lens DoF can be as little as 4 mm
- To achieve decent DoF will need a small aperture setting (f8 or smaller)
- Downsides of this are that good lighting is needed for fast shutter speeds with moderate apertures.

Note: Diffraction at small apertures can soften an image.
Noise at high ISO settings.



Focus

Getting focussing right is one of the key elements of successful macro photography. But it isn't easy!

- Option 1 - Use Continuous Autofocus

Usually for moving subjects but works for handheld static shooting to help overcome camera/subject movement

- Back button focus

- Option 2 - Use Manual focus

Macro lenses can hunt during autofocus especially if light or contrast is poor so manual focus can be a good bet.

Technique is important

- Rocking
- Live View and Focus Peaking



Image Stabilisation

- Lens Based
- IBIS (In Body Image Stabilisation)
- Hybrid
- Some macro lenses don't have it. But if you do have any form of image stabilisation switch it on and make use of it when shooting handheld

Back to Equipment

While a specially designed Macro lens is arguably the best option for macro photography there are alternatives that can produce good results:

- Extension tube/s + standard lens
- Reversed standard lens
- Close up magnifying lens filters
- Telephoto lens
- Flash

Tips for Handheld Shooting

- Stealth – move slowly and quietly
- Brace – kneel if you need to get low, brace the camera
- Breathe – take a deep breath and hold it while you shoot
- Drive Mode – select multiple frame rate and fire a burst
- Time of Day – early morning or evening best for bugs
- Background – not always master of this
- Respect – don't harm your subject or environment

A Word About Post Production

- Macro images will be greatly magnified on screen.
- So will marks, fluff, stray hairs and other unsightly blemishes that weren't noticed when you took the shot.
- Sensor dust will show up more at small apertures.
- Be prepared to spend a bit of time cleaning up an image in Post. It is a shame to spoil an otherwise good image by allowing distracting marks etc to catch the eye.

PLAYTIME

