

# Macro Photography

Presented by:

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The Winning Shot Sports Photography



# What is Macro Photography?

- Macro photography is close-up photography of small subjects, including things like bugs and flowers.
- It is an image whose subject is reproduced to at least 1:1. That means that the image on the camera sensor or film plate is the same size, or even bigger, than the real-life subject.



# Depth of Field

- Definition
  - The zone of acceptable sharpness within a photo that will appear in focus.
  - This zone will vary from photo to photo.
  - Some images may have very small zones of focus which is called shallow depth of field.
  - Others may have a very large zone of focus which is called deep depth of field.
  - Three main factors that will affect how you control the depth of field of your images are: aperture (f-stop), distance from the subject to the camera, and focal length of the lens on your camera.



# Depth of Field - Aperature

- Using the aperture (f-stop) of your lens is the simplest way to control your depth of field as you set up your shot.
- The lower your f-stop, the smaller your depth of field. Likewise, the higher your f-stop, the larger your depth of field.
- For example, using a setting of f/2.8 will produce a very shallow depth of field while f/11 will produce a deeper DoF.
- Because most macro images are produced in low light and with a longer focal length, the depth of field is often very shallow.



# Shallow Depth of Field



# Lighting – 3 Types



## Natural Light

Sunlight is free

Available during daytime

Natural effects

Effective for video



## Continuous Light

Flexible and adaptable

Always visible

Easy to control

Effective for video

Low thermal output (LEDs)



## Flash

Bright & powerful

Good for large subjects

Good for fast moving subjects

Great for super sharp images

# Lighting – Natural Light

- Outdoors, the best light for macro photography is a bright, overcast sky where the thin cloud diffuses sunlight and acts as a giant softbox.
- Using the sun makes us dependent on the time of day, time of year and the weather.



# Lighting – Continuous

- Continuous light is on all the time.
- This can include the lightbulbs in the lamps of your home as well as LEDs and more specialized bulbs for photography.





# Lighting - Flash

- Flash with a diffuser



# Cameras You Can Use

- Phone Camera
- Point and Shoot Camera
- DSLR



# Camera Phone

- Everyone has one.
- Some newer phones have a macro mode on them.
- There are macro lenses that can be attached to the camera on the phone.



# Point and Shoot Camera

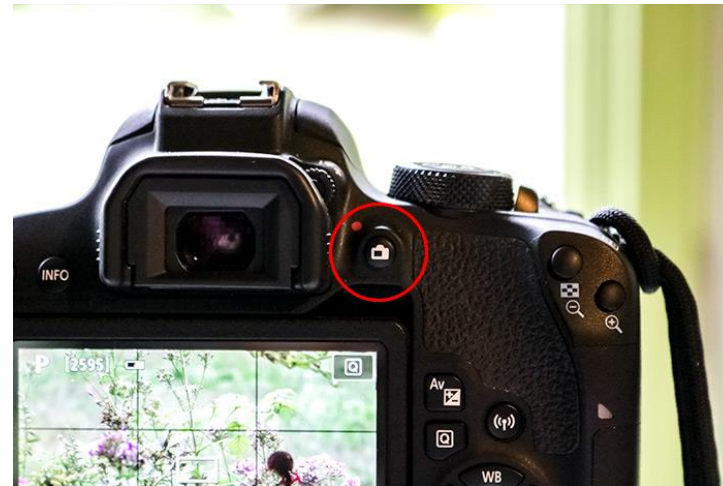
- Select Macro Mode

- When selected it will tell your camera that you want to focus on a subject closer to your lens than normal.
- Macro mode will also usually tell your camera to choose a large aperture so that your subject is in focus but the background is not.
- This is can usually be set by selecting the *flower* pictograph on the command wheel.



# Point and Shoot Camera

- Switch to the *live view* mode
  - you will compose your image directly on the camera built-in LCD screen, which sees directly through the lens.



# DSLR

- You can use the lenses you already have
- You can add equipment that expands the capability of your existing lenses
- You can buy dedicated lenses that are made specifically for macro photography.



# Using your Current Lens

- Best lens for this is a 50mm prime or fixed focal length lens.
- You remove your 50mm lens from the camera and turn it around so that the front side of the lens, which usually faces the subject, is facing the camera.
- If you have a steady hand you can “free lens,” or simply hold the lens against the camera to shoot; if you want more stability or a more permanent setup, you can purchase a specially made threaded adaptor called a reversing ring, which holds the reversed lens to the camera.



# Expanding your Current Equipment

- Extension Tubes
  - These are hollow cylindrical spacers that are attached between the lens and the camera mount to increase the extension of your lens.
  - The longer the extension tube, the closer you can get to a subject and still focus, and the closer you get, the higher the lens magnification becomes.





# Expanding your Current Equipment

- **Close Up Filters**

- Close-up filters are like screw-on magnifiers for your lens.
- Typically sold in sets of four, they're simple, straightforward accessories that do one thing only: they shorten your lens' minimum focusing distance so you can take sharp pictures of very close objects.
- They work the same way that a standard magnifying glass works, by using a curved glass to alter light so that objects appear bigger.



# Macro Lenses

- These highly specialized, sophisticated lenses can focus from infinity to at least a 1:1 magnification factor at their closest focus setting, which means the image is reproduced life size on the sensor.
- A shorter focal length of 50mm or 60mm will work fine for subjects like plants, flowers, and inanimate objects that can be photographed from a very close distance.
- Subjects like insects or wildlife that are dangerous or easily frightened must be photographed from farther away, so a longer focal length of 100mm or more is needed.



# Taking Macro Photos

- Practice make perfect – Shoot a lot of photos
- Depth of Field
  - The closer you get to your subject, the shallower the depth of field (the region of sharp focus) becomes, and this effect can make it very difficult to get your entire subject in focus.
- Use manual focus if available
- Stabilize your camera as much as possible
  - Use a tripod and shutter release





Go out and discover a whole new world of Macro Photography!





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