MACRO & CLOSE-UP PHOTOGRAPHY

Nancy Mack
November 2022

small worlds

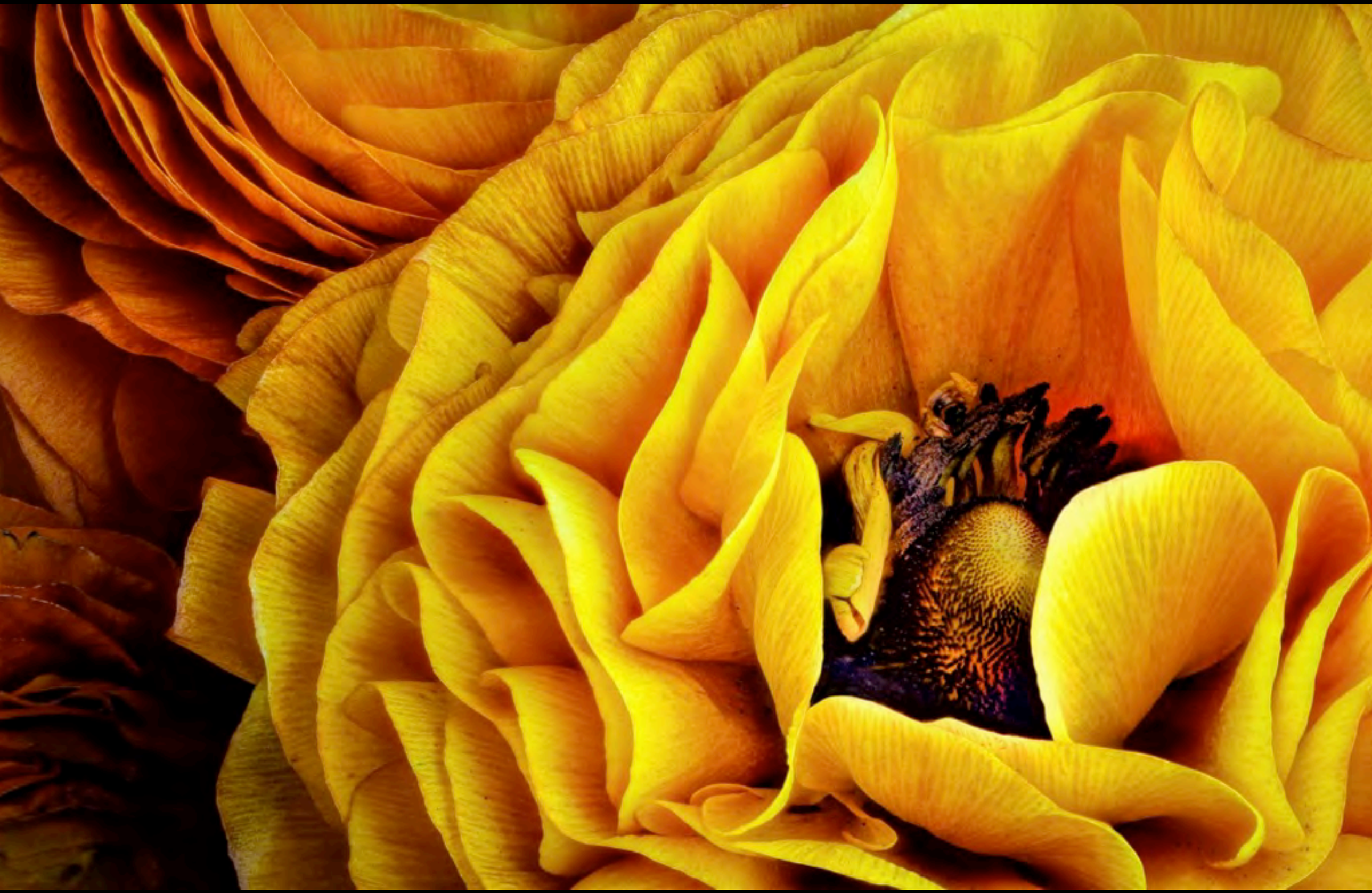
Macro photography encompasses images taken with a macro lens, or a lens with close focusing capabilities.

Other terms that may serve well are “close-up photography”, “detail photography” or “intimate (micro) landscapes.”

However, it is close-up photography that gives a bit of context. Instead of filling the frame with your subject, you include enough of the environment to give the subject a sense of presence and place.

This option lets you explore more compositional choices and allows sharing small worlds that people generally miss.

True macro is 1:1 ratio or closer (meaning what you're are shooting is life-size or larger on the sensor). Close-up allows for magnification with additional elements and maybe other tiny details. Both are beautiful. You can concentrate on true macro or maximize the use of your macro lens by stepping back and taking in more of the scene.



this presentation

NOTE:
I find it hard to edit my own work...
I include everything I find!

Consequently, there is more information on each slide than there is time on a Zoom, so I will not go into detail on each one.

Dennis will post the .pdf file -
re-visit the sections that might interest you and follow the links. This way you can add to your own photography techniques.

topics

- Small Worlds
- this presentation
- definition: macro vs. close-up
- magnification ratios
- lens selection & accessories
- camera settings
- subject matter/techniques
- shooting inside/outside
- focus-stacking
- post processing
- references

it started in film days

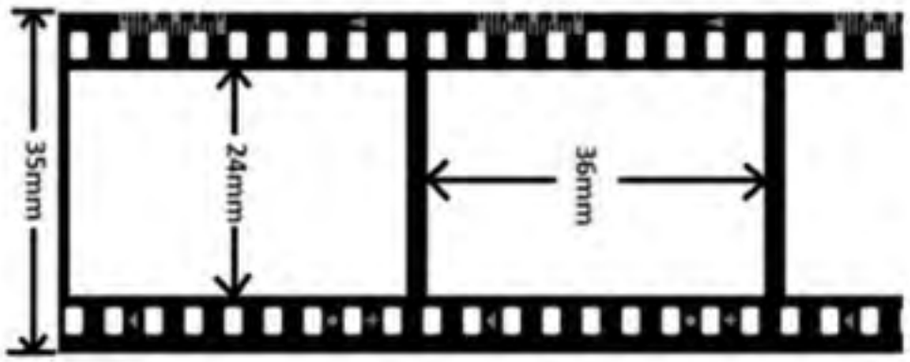
Historically, 1:1 was measured with a film format. A full-frame DSLR has a 35mm image sensor format (36mm × 24mm). Historically, 35mm was one of the standard film formats.

WHAT IS A 35MM EQUIVALENT FOCAL LENGTH?

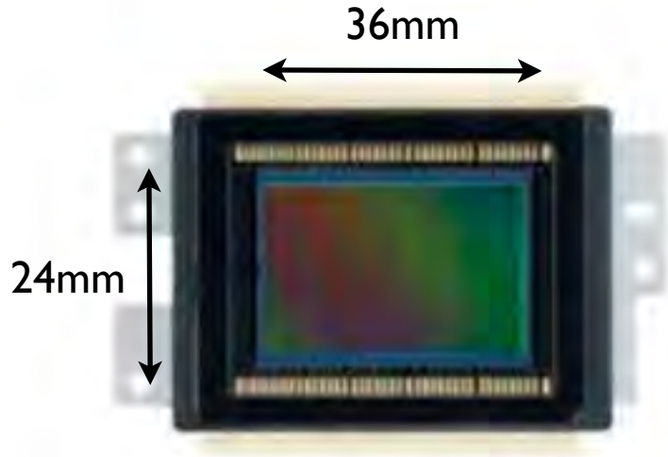
You may have come across the term "35mm equivalent" when viewing information about digital camera lenses and their focal lengths.

The term 35mm equivalent focal length is a comparison of the field of view seen through a digital camera lens compared to the field of view produced by the older 35mm film cameras.

35mm cameras were the most commonly used cameras before digital cameras became the norm. They were called 35mm cameras because the actual width of the film that was used with them (including the sprocket holes for advancing the film) was 35mm.



Portion of a 35mm Film Strip (click to enlarge)



Digital Camera Image Sensor

The diagram of the film strip above shows the dimensions of the 35mm film including the 24mm X 36mm imaging area. (the light capturing area of the film)

Easy Basic Photography

https://www.easybasicphotography.com/35mm-equivalent.html

defined

There is a difference between “macro” and “close-up” photography and the two are often confused.

“Macro” is usually measured in relation to a traditional 35mm camera sensor (although modern sensor sizes will differ) and the subject appears life-size on the sensor. “Close-Up” is anything half life size or smaller on the sensor.

The exact dimension of a “35mm sensor” measures 36×24mm, which is in reference to 35mm film, which was the most common film size before digital cameras came around.

So, how does this relate to macro photography? Macro photography is measured in reproduction ratio or magnification ratio:

A lens that has a reproduction ratio of 1:1 means that however large the subject is in real life, it will be that size on your camera's sensor.

If the ratio is 2:1, then the lens makes the subject twice the size of the sensor. **If the ratio is 1:2, the subject is half its true size.** Magnifications of about 1:3 to 1:10 would generally be considered to be "closeups" and not truly macro images.

True Macro

That means that the subject is reproduced on the sensor at it’s real life size.

For this memory card, a final image with 1:1 magnification ratio looks like this.

sensor = 36mm x 24mm
memory card = 32mm x 24mm

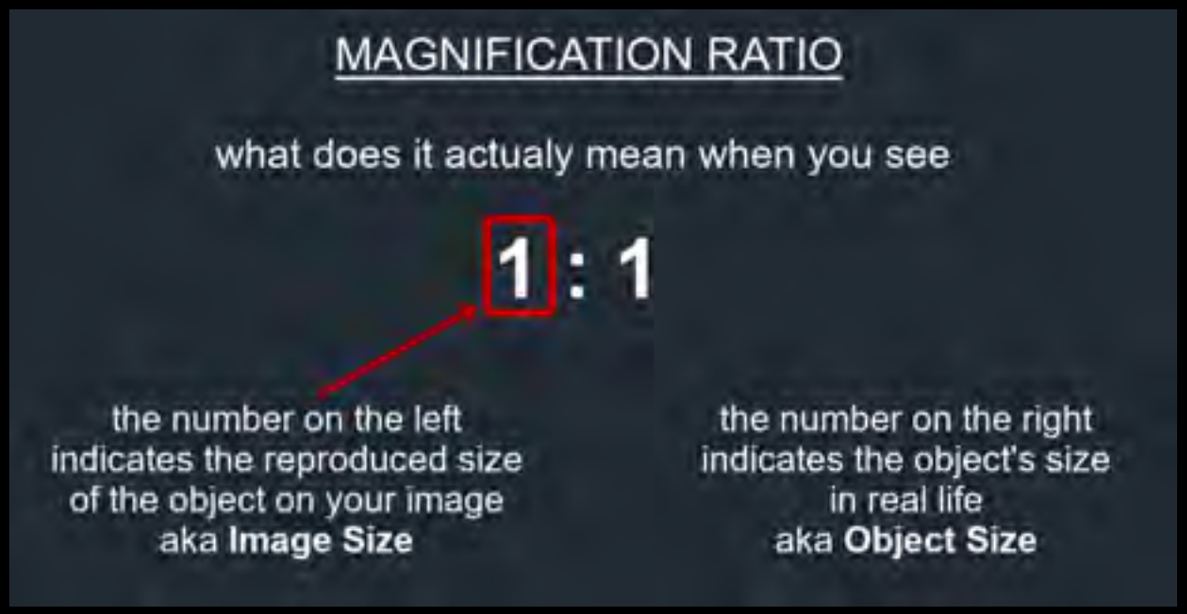
lens barrel markings

A macro lens barrel has markings which designate true macro: 1:1 and other distances ranging from 1:2 to 10.

Lens Markings (on a Nikon 105mm macro lens):
1 1:1, 1:2, 1:3, 1:4, 1:6, 1:8, 2, 2:5, 3, 4, 5, 7, 10, infinity

Nikon 105mm macro lens

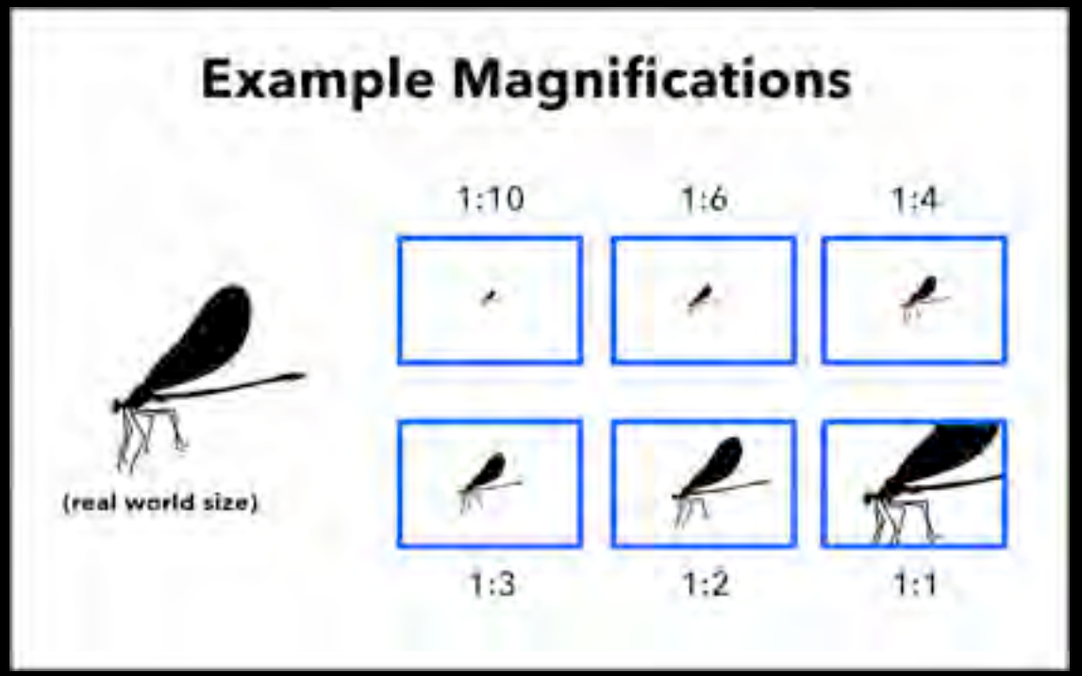
It also indicates how close you are in both feet and meters



lens set at 1:1

The AF-S DX Micro NIKKOR 85mm f/3.5G ED VR is focused for life-size reproduction.

"You'll see a 1 and a colon and then another number. At life-size reproduction of your subject, you'll see 1:1, and as you turn the focusing ring, the ratio will change. You'll see 1:2, which means half life-size; 1:4 and 1:6 and so on. And underneath the ratio there's the distance scale that shows you how close you are in feet and meters to the subject at that reproduction ratio."



CLOSEUP

smaller than 1:1 magnification

MACRO

1:1 magnification and bigger

MICRO

2:1, 5:1, etc.
microscope equipment is used because the level of magnification cannot be achieved otherwise

Estee White Photography: Macro, Micro, Close-Up

macro in action

Are you strictly looking for 1:1
OR
are you looking for a composition???

The Difference Between Macro, Micro, and Close-up Photography
https://buyrokinon.com/blogs/rokinon-blog/the-difference-between-macro-micro-and-close-up-photography

12” of focusing distance

NIKON full frame camera &
NIKON 105mm macro lens

SUBJECT

5” of working distance

Lens specifications will define the “minimum working distance” as the “distance between the front lens element to the subject” and “minimum focusing distance” as the “distance between the subject and the sensor.” - Two different measurements to be aware of.

focal plane mark

minimum focusing distance

magnification

I never set out to take strictly “macro” photos. I wanted to photograph flowers and I often wanted to do “close-up” “portraits” of flowers.

It was only later that I learned there was a distinct difference in the methods for doing this.

If you want to take “macro” photos - and this technique is very important in the insect world, and documenting certain objects - then following the rules is important.

“Strictly life-size” is the definition for those who approach photography from a technical point of view. It is also the definition for the science-minded photographer who is serious about documenting insects and bugs as well as plant life.

If you are mostly interested in capturing a small world or details without the need for strict measurements, then “getting close” is acceptable.

In these sunflower images, I set my lens 1:1 and moved the camera backwards and forwards to achieve focus. The ruler shows the size of the image on the sensor.

However, I would prefer to tell a different story about this sunflower, so I will compose my view in a different way - it will be close, but not macro.

Sunflower, 1:1, Nikon 105mm macro lens,
ISO 1250, f22, .6 sec

Nikon 750, full frame camera, sensor size
36 mm = 3.59 cm x 2.39 cm

1:1

1:2

2

3

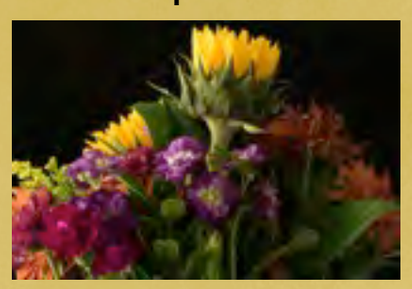
4

5

sunflower

magnification ratios

I placed my camera on a focusing rail and turned the lens barrel to each setting and then used the rail knob to move the camera back incrementally to focus at each of these settings.



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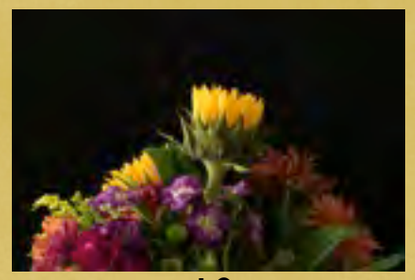


10

3

1: 1

1: 2

3

4

5

7

persimmon

10

3

Magnification ratios and focus distances are tied together. The closer your focus distance, the closer you are to the subject, and the larger the subject is reproduced on the sensor. As you move further away, your focus distance decreases and your subject becomes smaller.

Consequently, you begin to understand how far you need to be from the subject to get the composition you want.

Sunflower Bouquet, 5, Nikon 105mm macro lens, ISO 1250, f16, 1/2 sec

Lens Markings: 1:1, 1:2, 1:3, 1:4, 1:6, 1:8, 2, 2:5, 3, **4**, **5**, 7, 10

this was taken with the lens barrel at **4**

the sensor was 2’ from the subject

Once you get past 1:10, it is no longer even considered “close up”

1:1

1:2

1:3

1:4

1:6

1:8

2

1:8

The lens is set at 1:8 to get the whole flower in the frame (above).The working distance (from front lens element) is 9”. The width of the flower is 3” x1” - so if we follow the macro formula - only 1/2 of the width of this flower can be in the frame for macro.

Even at f22, only the petals OR the stem can be in focus.

1:1

1:2

1:3

1:4

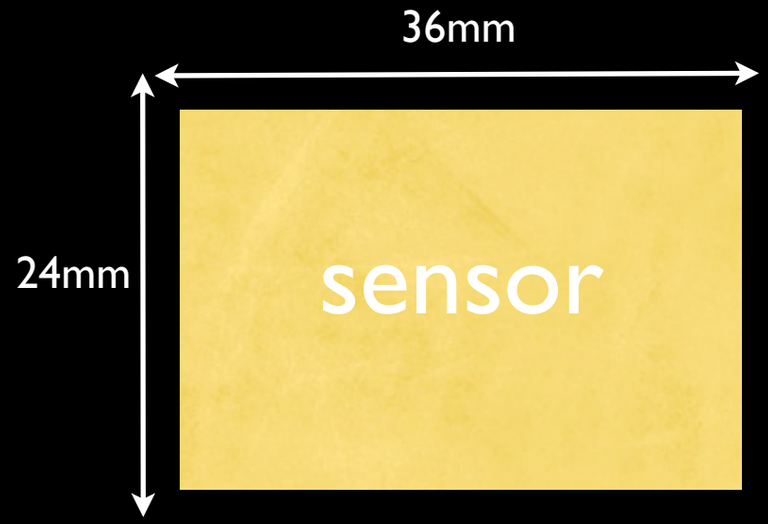
1:6

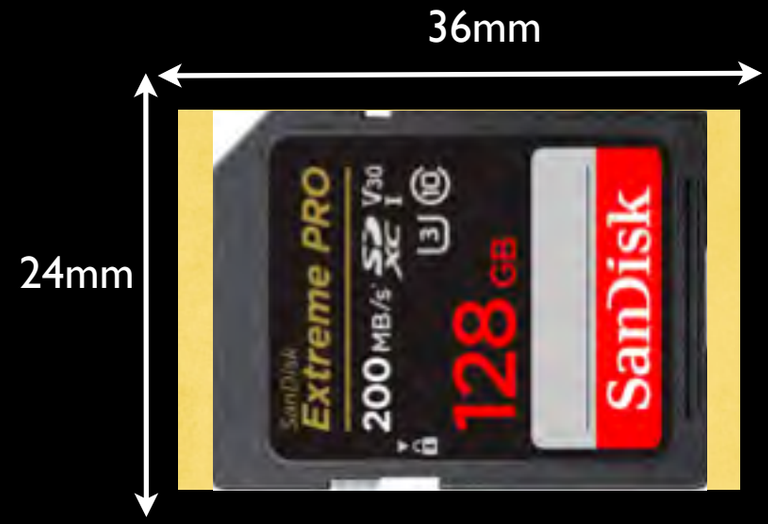
1:8

The necklace is 11” long and the bead is 1.5” wide.

how to measure an image

Although metadata does show a great deal of information about the camera, lens type, ISO, f-stop, etc., it does not show how close or far away the camera was from the subject. It is possible to tell that information by focusing on the image through the viewfinder or Live View and noting the markings in the lens window before taking a photo or by using Photoshop for existing images.





The actual size of a memory card is:
32mm x 24mm

This is a 1:1 image

is it macro or close-up?

Estee White Photography
https://www.youtube.com/c/EsteeWhitePhotography

What is the Difference Between Closeup, Macro & Micro? Explained Simply | Macro Photography
https://www.youtube.com/watch?v=9yJ1-mP3XVw

What is 1:1 Macro Magnification Ratio?
https://www.youtube.com/watch?v=Ca68qeEDJso&t=0s

Using the Photoshop formula, this head of garlic is 1:2 or the image on the sensor is half the size of the item.

measuring in camera means looking through the viewfinder or live view using a ruler to measure the object prior to taking the photo

How to Measure Macro Magnification in Camera

https://www.youtube.com/watch?v=6UtiMYZJK6Q

measuring with Photoshop means taking a previous image and measuring it with Photoshop controls

How to Measure Macro Magnification in Photoshop for Existing Photos

https://www.youtube.com/watch?v=9ErZdfRX-N8

Using the Photoshop formula, this head of garlic is 1:4 or the image on the sensor is a quarter the size of the item.

lens selection

Obviously, there are a wide range of lenses available for macro work. Each manufacturer provides choices for crop sensor, full frame, mirrorless, etc. cameras and adaptors and accessories can extend the possibilities.

A macro lens can focus 1:1 and usually has a wide-open 2.8 aperture, allowing for a brighter image. The downside is a very thin depth of field.

A macro lens also focuses to infinity and can be used for portraits and landscape. The aperture usually ranges from f2.8 to f22.

Originally, I had a Nikon 7100 crop sensor camera and used a Nikon 40mm macro lens.

Currently, I use a Nikon 750 full frame with a Nikon 105mm macro lens. The quality is better.

I also have a heavy Nikon 200mm manual focus macro which is excellent for creating space between an unfamiliar bug or insect or hard to reach location and the photographer.

Give a little distance.
Maybe the bug is poisonous
or you might disturb him!

100mm Macro Lens

60mm Macro Lens

Two macro lenses that provide 1:1 reproduction produce the same image here. The longer focal length lens offers a greater working distance between lens and subject.

Macro Lens Buying Guide

https://www.bhphotovideo.com/explora/photography/buying-guide/macro-lens-buying-guide

lens selection

Depending upon the camera you have, both manufacturers and experts can suggest the right macro for your needs.

It is often a good idea to rent a lens and try it out for a period of time before purchasing.

A dedicated macro lens is an investment, so a trial period can answer a lot of questions.

Dedicated macro lenses also double as excellent portrait lenses.

Suggested lenses:

- Sony, Fuji, Pentax, Olympus, Canon, Nikon all make dedicated macro lenses for their crop, full frame and mirrorless cameras

- Sigma makes 105mm f/2.8 DG DN Macro Art Lens; various mounts

- Tamron makes a AF 90mm f/2.8 Di SP AF/MF lens; various mounts

- Tokina makes an AT-X PRO 100mm macro, various mounts

Both a 50mm and a zoom lens can be used for “close up” work with good results. The zoom needs to be set at its longest focal length.

B&H Video Explora has an interesting blog post with 10 unique macro lenses:
https://www.bhphotovideo.com/explora/photography/buying-guide/10-unique-macro-lenses

specialty lenses

A popular speciality lens is the LENSBABY series. Most Lensbaby lenses have the capability to shoot close-up. They have two sets of macro accessories that give all of the Composer Pro lenses and optics up-close capabilities. The Macro Converters are essentially spacers that sit between the optic and Composer lens body.

The most dedicated macro model is the Lensbaby Velvet which comes in 85mm, 56mm and 28mm models, f1.6 - f16 .

This is a manual focus design with a working distance of 9.5" with a maximum reproduction ratio of 1:2 for the Velvet 85 and a working distance of 5" with a maximum reproduction ratio of 1:2 for the Velvet 56 to benefit working with close-up subjects.

Either can be used with extension tubes and can be reversed.

Lensbaby also make a range of optics that fit into a composer lens holder for “optic swap” : Sweet 35, Sweet 50, Sweet 80, Edge 50, Edge 80, Sol 45, Sol 22, Twist 60 and Creative Bokeh.

The Macro Converters are essentially spacers that sit between the optic and Composer lens body. They will work with the lenses that have a 37mm or 46mm thread. Our 8mm converter and a 16mm converters can be stacked to get even closer. They move the glass forward to give you extra reach and closer focusing capability.

The 46mm Macro Filter Kit includes 3 diopters that simply screw onto the front of your Lensbaby Optic. The Filter Kit can be used with any of the 46mm threaded optics and lenses The kit includes a +1, +2 and +4 diopter. which can be stacked in combination to get even closer.

specialty lenses

The Mitakon Zhongyi 20mm f/2 4.5x Super Macro more closely resembles a microscope objective rather than your typical photographic lens, and thus is intended for very close-up shooting. Available for SLRs and mirrorless cameras, this lens allows you to work between 4.5x and 4x with a minimum working distance of 0.8".

The Canon MP-E 65mm f/2.8 1-5x Macro Photo is a specialized lens that can magnify 5:1.

The most unusual macro lens is the Laowa 24mm f/14 2X Macro Probe which has an LED light on the end.

Whatever lens you choose, there are many factors that remain the same across the board.

These include the subject matter you intend to photograph, aperture range, need for weather-proofing, size/weight considerations, specialty features, auto-focus/manual (although you will probably not use AF much) or dedicated manual focus, and magnification range.

B&H Explora: Specialty Macro Lenses: https://www.bhphotovideo.com/explora/photography/buying-guide/turn-it-over-11-ultra-macro-lenses

vintage lenses

Yashica Auto Yashinon-DX 50mm F1.7

M-42 adaptor for older lenses

Carl Zeiss Jena Tessar 50mm f2.8 Zebra

I have a collection of old manual lenses from E-Bay which work interestingly with extension tubes and reversing rings. These need a M-42 adaptor in order to not damage the camera mirror.

Yashica Auto Yashinon-DX 50mm f/1.7

Pentacon 50mm f1.8

Carl Zeiss Jena Tessar 50mm f2.8, Zebra

Meyer-Optik Gorlitz Trioplan 100mm f2.8
vintage, adapted for Nikon
(famous for "bubble bokeh")

Meyer-Optik Gorlitz Trioplan 100 f2.8 II
new production based on original design

Pentacon 50mm f1.8

Myer-Optik Gorlitz Trioplan 100mm f2.8

Myer-Optik Gorlitz Trioplan 100mm f2.8 II

vintage lenses

Holga Lens

Diana Lens

Helios 44M-4 58mm f2

Helios 44M-2 58mm f2

Diana Lens

The Diana was originally a plastic camera and now a cheap plastic lens. It takes soft focus, impressionistic photographs somewhat reminiscent of the Pictorialist Period of artistic photography. The DSLR lens is a small and lightweight 60mm fixed-aperture lens with an f8 fixed aperture. It can be a lot of fun for goofing around with.

Holga Lens

The Holga was originally a camera and now a cheap plastic lens - it's all the things a good photographer avoids: light leaks, slight soft focus and retro vignetting. The DSLR lens is a small and lightweight 60mm fixed- aperture lens with an f8 fixed aperture. It can be a lot of fun for goofing around with - another cult lens! There used to be a "close-up lens adaptor set" for the Holga, but it is no longer available.

Helios 44M-4 58mm f2

Helios 44M-2 58mm f2

The Helios is an old Russian lens that creates a swirly bokeh.









I am not ready to buy a macro lens yet
or
accessories for extending macro reach

That may be a good idea while you are experimenting with macro compositions. Rental is an option.

These accessories can be mounted on most any lens for “close-up” compositions and can be mounted on dedicated macro lenses to extend their reach.

At the time I took many of the photos in this presentation, the Lensbaby, Lomography and Helios lens profiles were not available in Lightroom - hence, if I did not document my shots, I had no information.

However, it is important to note that Adobe is constantly updating almost all of the standard camera brand lenses as well as some specialty lenses.

There will be no information for extension tubes, teleconverters, bellows, lens reversal or freelensing.

Moment phone lenses are included, but ShiftCam lenses are not.

Remember using any of these extenders means less light reaching the sensor.

Macro Filters:

These inexpensive filters fit on the front filter of the lens and must be purchased to fit the lens thread dimension. If the lens is 52mm, the set must be purchased at 52mm to fit. They can be used individually or in combination to effectively get closer to the subject.

extension tubes

An extension tube set contains three tubes of different length - 12mm, 20mm, and 36mm - which can be used individually or in any combination to obtain the desired magnification. They fit on the camera mount. Actual magnification effect changes with each specific lens.

They are exceptionally useful for macro photography, enabling you to convert almost any lens into a macro lens at a fraction of the cost while maintaining its original optical quality. They can also be used with dedicated macro lenses.

There are no optics - they are hollow, but work with the lens features. They are mounted in between the camera body and lens to create more distance between the lens and film plane. There is no change in optical quality, but the longer lens results in loss of available light.

Inexpensive tubes have no electronics, so focus is manual. The more expensive tubes with electronics allow the lens to be used with all features.

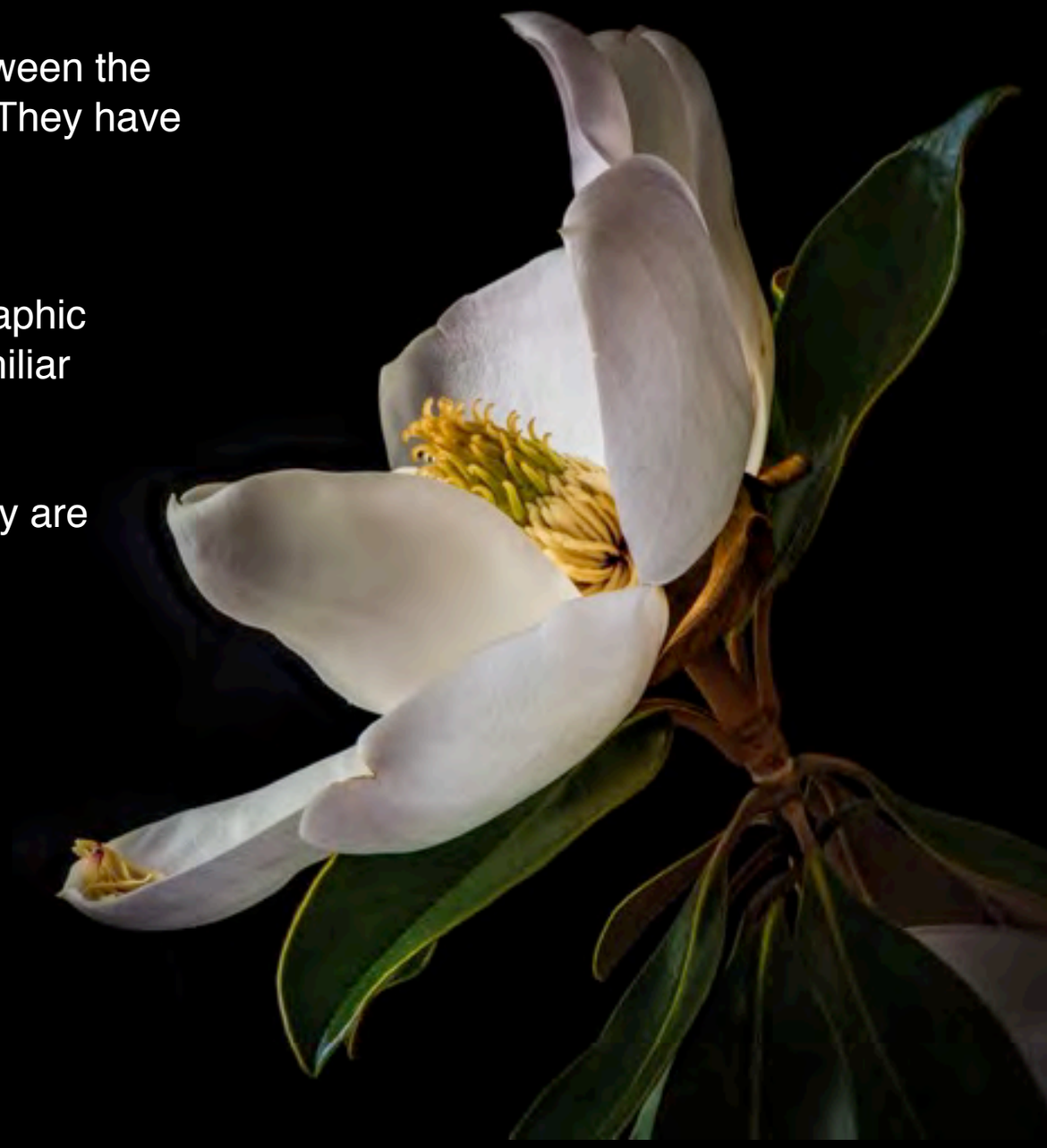
teleconverters

A more expensive option is a teleconverter. It fits on the camera mount and allows you to increase the apparent focal length of a lens, giving you a greater telephoto effect than a lens alone.

A teleconverter is basically a magnifying lens that is placed between the camera body and lens. They come in 2x, 1.4x and 1.7 options. They have electronics and work seamlessly with the lens features.

Teleconverters are favorite accessories of nature and wildlife photographers, because they allow them to extend the photographic reach beyond what might be safe when on safari or in an unfamiliar location.

Buy them for your specific manufacturer and check to see if they are compatible with your particular lens.



https://www.nikonusa.com/en/learn-and-explore/a/tips-and-techniques/using-teleconverters.html

magnifying glass/raynox adaptor

This is a more quirky solution -

It is possible to experiment with holding various magnifying glasses in front of a lens. Difficult to do handholding but possible on a tripod with rails.

There is also the Raynox adaptor - highly corrected, 3 and 4 element achromatic multicoated lenses that are very well known for their great image quality. These close-up lenses are designed to mount in front of a telephoto lens (or a zoom lens at the telephoto setting). A Raynox is a not a replacement for a true macro lens but, these lenses will not give you the same quality, but for the cost they perform very well and are ideal for someone that doesn't invest in a true macro lens.

http://extreme-macro.co.uk/raynox-adapter-techniques/

https://www.closeuphotography.com/raynox/2017/6/3/raynox-close-up-lenses

bellows

Estee White Photography: Macro, Micro, Close-Up

A bellows is a flexible extension mechanism between the camera and the lens, much like an accordion. Early photographers used them for focusing.

In today's camera setups, focusing is achieved by moving specific lens elements, and not by moving the entire lens.

A bellows can help with focusing closer, bringing the subjects to life-size magnification and beyond. It is commonly used for macro photography.

Bellows are bought in specific lengths and re-assembly is difficult. They must be used with a tripod, making outdoor or on location shots difficult (although early photographers wrestled with even more complicated equipment!)

Most models have no electronics and must be manipulated manually.

https://expertphotography.com/macro-bellows/

focusing rails

Focusing rails can be very useful. The preference is for a double rail on x and y axis instead of a single rail. They are inexpensive and a great aid for manual focus, particularly useful indoors.

Once the subject and camera are in place, small incremental adjustments can be used to achieve focus.

I often use an inexpensive manual rail when working inside on a tripod.

What are Focusing (Macro) Rails and what do they do ? | Focus Stacking & Macro Photography

reversing the lens

Reversed Lens:

Lomography is a new company dedicated to reproducing vintage lenses. I have a Lomography Daguerrotype Achromat Art Lens f2.9/64mm. It is a manual lens and works with a series of Aperture Plates ranging from f2.9 - f16.

Any lens can be reversed. Electronics will no longer be available and the lens is subject to dust and dirt, as the elements will be exposed.

However, it is a fun experiment. I tend to use it indoors only. Lomography sells a reversing adaptor (a thin metal plate that attaches to the camera and to the front of the lens) for this procedure. The reversing plate needs to be ordered for the size of the lens (the same way you order UV filters or a polarizing filter).

There is no way to focus except by moving the camera on a focusing rail or moving your body back and forth to achieve proper focus.

https://casualphotophile.com/2020/11/30/reverse-lens-macro-photography-guide/

https://photographylife.com/reverse-lens-technique-for-macro-photography

Lomography Art Lens

Lomography Aperture Plates

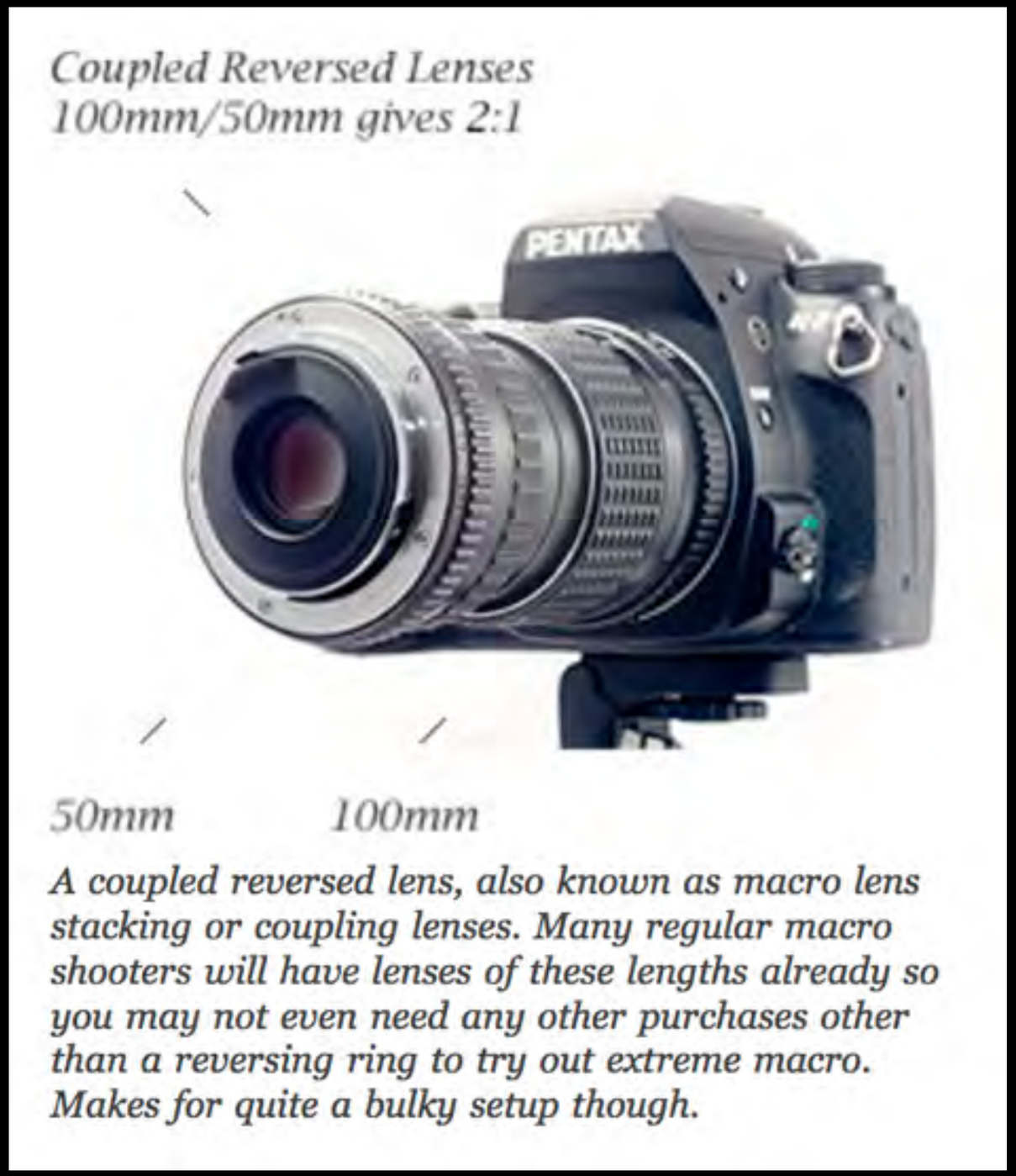
Lomography Reversing Ring

double lens reverse macro

This is a more extreme procedure -

Double lens reverse macro is a powerful tool that can help you get even closer while giving some degree of control back to the user. It allows you to use two lenses, one of which will be mounted correctly to the camera and the other mounted in reverse to the filter thread of the first one. A coupler is necessary in the middle.

Achieving focus may be difficult since the attached lens will have no electronic components.



https://digital-photography-school.com/reverse-lens-macro-close-up-photography-lesson-3/

https://www.instructables.com/Double-lens-reverse-macro-for-an-SLR/

freelensing (or poor man's tilt-shift)

This the "heart attack" procedure -

Freelensing means holding the lens as is, just detached OR holding it in reverse in front of the camera. It can be moved in various directions and angles.

The focus plane in this method is skewed and so it's a trial and error process where you get either good or bad pictures. This method does require a lot of practice to get some good results, it also lets you create some beautiful tilt-shift images.

Works best with a 50mm lens or higher. Use in manual mode and set camera exposure first. Set the lens ring to infinity.

Example freelensing technique with a 50mm lens. The lens is pulled (slightly) away from the camera body.

- Get to the location where you will be shooting.
- Set the aperture value. It will usually be a wider value.
- Set the iso to lower values like 100 to 400 to get neat noise free images.
- When the lens is attached, adjust the exposure for the above aperture value, iso and this will be your shutter speed.
- Make sure to have shutter speed slightly faster than you normally would because you will be fiddling around with the lens and camera on each hand that can increase the probability of camera shake more than when you shoot normally.
- Once the lens is removed you may have to slightly adjust exposure due to flares and light leaks.

Reverse-freelensing is also possible. Just reverse the lens before manipulating it in different directions.

The camera and the lens are susceptible to dirt and dust with this procedure.

https://www.makeuseof.com/free-lensing-tips-beginners/

https://petapixel.com/2013/02/04/freelensing-make-a-diy-poor-mans-tilt-shift-by-breaking-a-cheap-prime-lens/

https://www.lightstalking.com/freelensing/

https://www.jaymesdempsey.com/macro-photography-freelensing/

LENSBENDER

LENDSBENDER is a camera mount that allows you to freelens handsfree. It attaches to the camera creating a gap between the camera sensor and lens. It allows you - with one hand - to push and pull focus while ensuring your lens is secured. With the Lensbender you are able to create lens flares, hazy glows and tilt-shift imagery.

It is a series of rubber bands on a metal plate which attaches to the bottom of the camera with an attached screw and there is a shield to partially protect the sensor.

This technique is best done with a 50mm lens which is usually small or an older lens such as a Helios 42.

http://www.lensbender.net/shop

http://www.lensbender.net/about-1

https://www.youtube.com/watch?v=2LbmXXpAinM

LENSBALL, prism, crystals, copper pipe

The LENSBALL is another odd photo equipment distraction that could be used for close-up shots.

It causes distortions and appears in the photo, but could produce some interesting effects.

A PRISM is another distracting prop. Adobe has an article on “bending light” with a prism. It can bend, refract, or scatter light on a subject.

Hold a prism near the lens and move it around until the reflection, rainbow, or extra light manages to hide or highlight any element in the photo. It can work with close-up shots.

A copper pipe is yet another prop: the “ring of fire effect” is achieved by holding a copper tube up to your lens and allowing light to filter through it. This creates a circular blaze-like frame around your subject right in camera.

COPPER PIPE

Copper Pipe or Guitar Slide

Copper Pipe Backlit

Copper Pipe with Flowers

PRISM

Prism

Prism with Flower

LENSBALL

Holder on tripod

Handheld

phone photography

Phone photography has become extremely popular and often replaces the traditional camera in many instances. It is portable and easy to use. Camera quality and image size are improving with each release.

There are a variety online resources and tutorials - iPhone Photography School - is just one of many - which offer paid online classes, but the blogs and tutorials are free and offer excellent information for using the phone for taking images.

There are also a variety of apps available for shooting and editing.

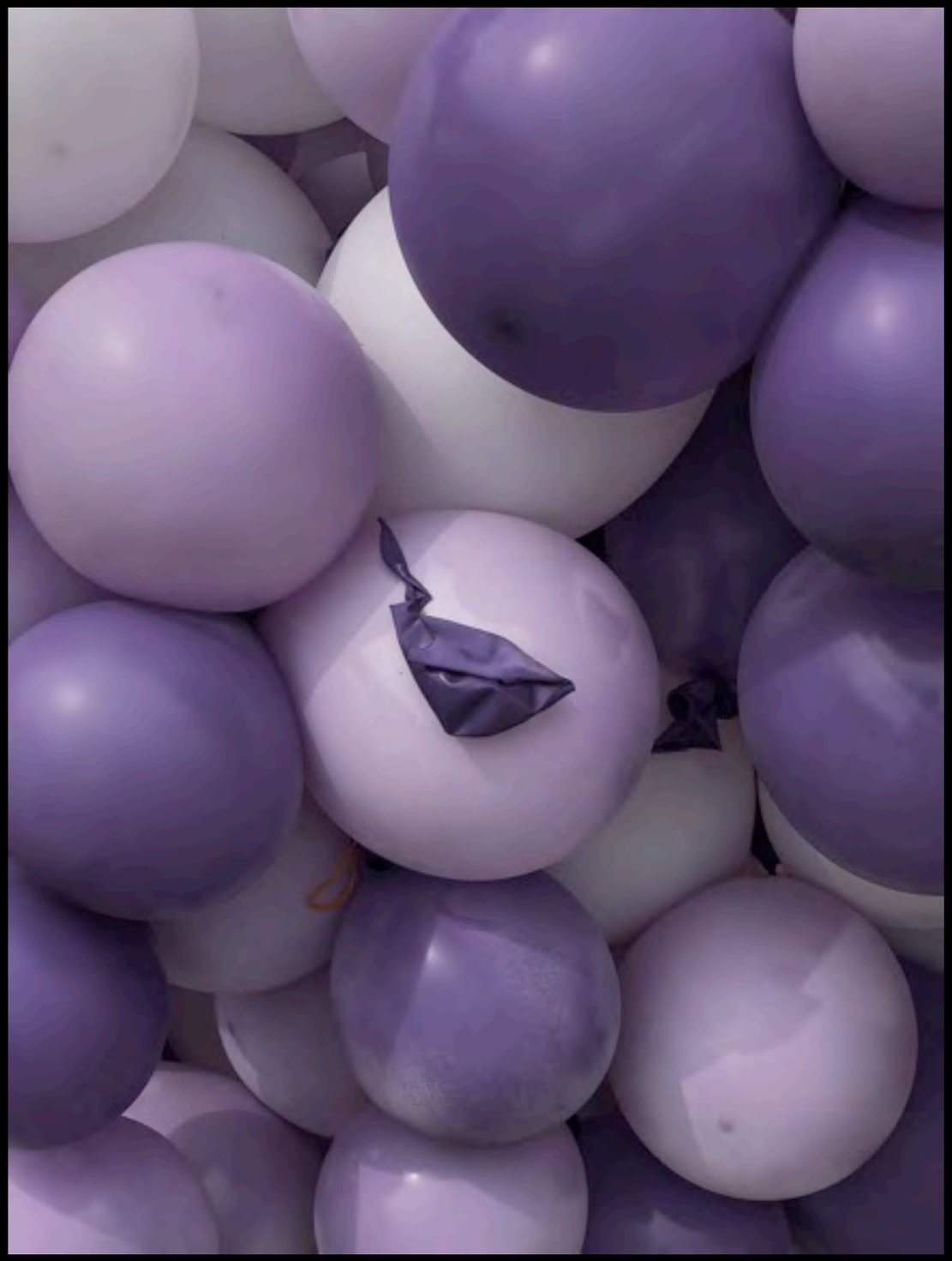
Also available are cases, holders, lenses and accessories with the usual hype advertising. Some are actually useful!

Shiftcam offers a variety of lenses and a unique holder, much like a traditional camera body. The iPhone 13Pro Max and new 14 cameras seem equivalent, unless a special wide angle effect is desired. I do use the macro lens.

Moment lenses are also excellent.

I find screwing the lens into the iPhone lens more convenient than the silly “holder” that fits over the camera and is rarely steady.

phone photography



Yu Chen

China
Honorable Mention – Still Life

IPPAwards (International Phone Photography Awards) is the most respected and longest running iPhone photography contest. This contest has been around since 2007.

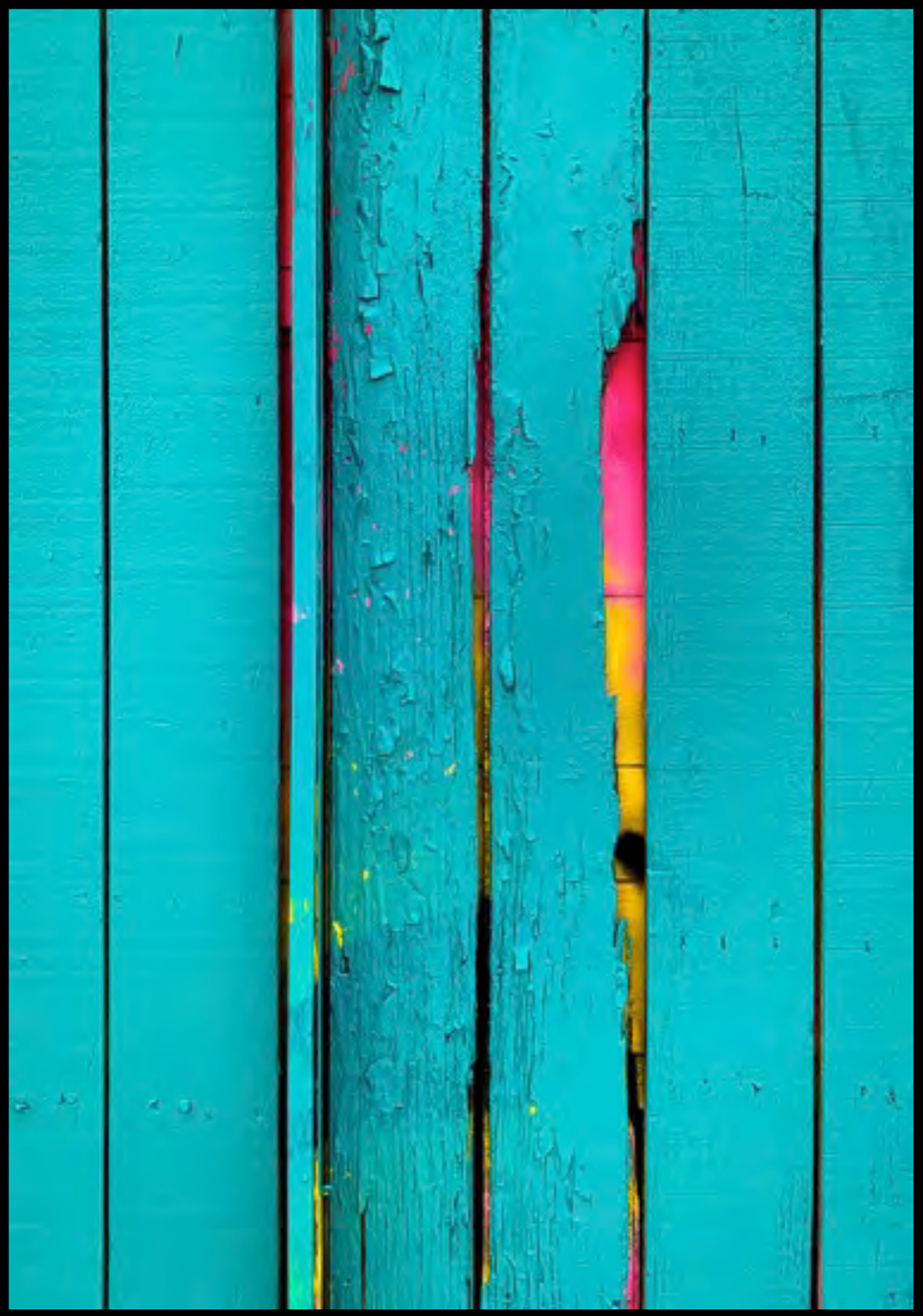
Winners from 2022, the sixteenth annual contest, can be found at:

https://www.ippawards.com/?v=7516fd43adaa

Entries for 2023 are being accepted until March 31, 2023:

https://www.ippawards.com/2023-entry-form/?v=7516fd43adaa

phone photography



William Ainger

Australia
3rd Place – Abstract

Untitled I Shot on iPhone XR

Robin Robertis

California , United States
2nd Place – Still Life

Late for Breakfast I Shot on iPhone 11 Pro Max

Kathleen Clemons
iphone photography

Kathleen Clemons is know for her flower photography and conducts workshops with Santa Fe, Maine Media and in Italy. She often edits with background textures.

https://www.kathleenclemonsphotography.com/iphone-flowers

helper stuff

helping hand
clothespins
museum putty or gel
ties, clamps, clothespins
wimberly plamp
tripod/monopod
platypod
rails
beanbag
diffusers, reflectors
posterboards
surfaces & backgrounds
spray bottle water/glycerine

Live View w articulating screen
right angle viewer
cable release/remote
mirror lock-up
assorted lights
small flashlight
ring flash
ice light
on camera/off camera flash

holders

Third Hand Tool

Beanbag

My preferred style for posing flowers as I photograph them is in a vase, lowered or raised as needed. Sometimes the vase figures in the composition; sometimes, not. However there are a few “helper” items that are very useful, especially if I am photographing at a particular angle.

ANYWHERE
A variety of holders, ties, clothespins, tape, museum putty. Most of these holders can be made of improvised household items.

INDOORS
Third Hand Tool, usually used in the soldering process, is very handy for holding a single blossom.

Museum Putty or **Gel**, useful for keeping objects in place; a neutral, opaque blended rubber OR a clear gel used by museum professionals and antique dealers. Its beige color makes it excellent for securing opaque (as opposed to clear) items such as porcelain, plates, statues, vases, pottery, figurines, antiques, and collectibles. Removable, reusable, and non-toxic.

Useful for holding objects, foods, etc. in place for photography.

OUTDOORS
A beanbag is useful for propping the camera near the subject.

Clothespins

Leanne Cleaveley, https://www.flickr.com/people/138090565@N05/

holders

OUTDOORS
Wimberly Plamp, **Plant Clamp**, are extremely useful for holding diffusers, reflectors, keeping plants steady in windy conditions.

Wimberly Plamp

ground clamp

basic clamp

https://www.better-digital-photo-tips.com/review-of-the-Wimberley-Plamp-II-macro-clamp.html

https://acephoto.net/lighting/grip/clamps/wimberley-the-plamp-ii/

http://extreme-macro.co.uk/extremist/wimberley-plamp-ii-review/

https://www.tripodhead.com/products/plamp-main.cfm

tripods

tiny tripods

phone tripod

regular tripod

flexible leg tripod

monopod with detachable stand

Platypod

OUTDOORS/INDOORS
A tripod is a very personal choice: sturdiness, weight, cost, size are all important considerations. The head can be a 3-Way/Pan and Tilt Head, a Ball Head, a Gimbal, a Geared Head; a center column or not; a lateral arm; a level; sectional legs; feet; carrying case, etc.

A tripod that is low or has legs that extend so that the viewing area is closer to plant/small critter life is a good choice. A unique angle may be necessary.

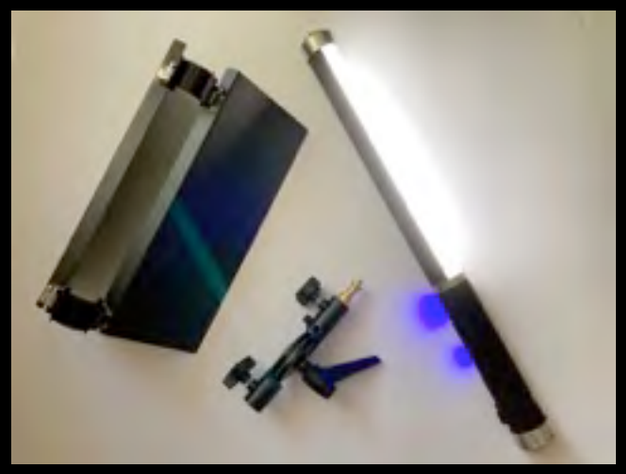
A monopod is also a good idea for places where a tripod may be too large.

A Platypod is a unique ground level holder which can be placed on uneven surfaces. One of the defining features of the Platypods is their versatility: they can be bolted to a wall to provide a rock-solid base for mounting. They can be used standalone simply as a flat platform. And they can be used with all sorts of different cameras. (Craig Rowen, Plano Photo Club member is a good resource.)

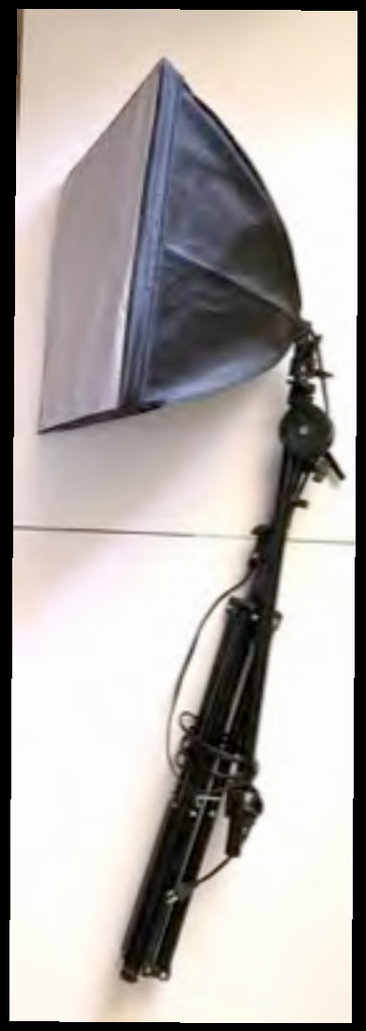
Think about what you want to do with macro or close-up photography and make a selection from there. Usually a tripod is multipurpose for a variety of photo subjects.

lights, remotes

tiny LED lights



Icelight, barn doors, stand holder



softbox

remote

timer remote

OUTDOORS/INDOORS
A gray card is useful inside, but auto white balance or daylight is usually best outside. If you shoot in RAW, changes can be made in editing.

A remote camera trigger is a good idea if the camera is on a tripod. Minimizes any movement. You can also set the camera's self timer.

There are hundreds of lighting choices. I have a softbox, big LED lights on stands, tiny LED lights that fit on stands and tiny tripods, a ring light for the lens, and light wand. LUME CUBES seem to be a popular choice. I have not mastered flash and so prefer window light inside or natural light outside. I usually experiment with whatever works in each situation.

ring light for lens

LED light with dimmer, color temperature

gray card

flash attachment

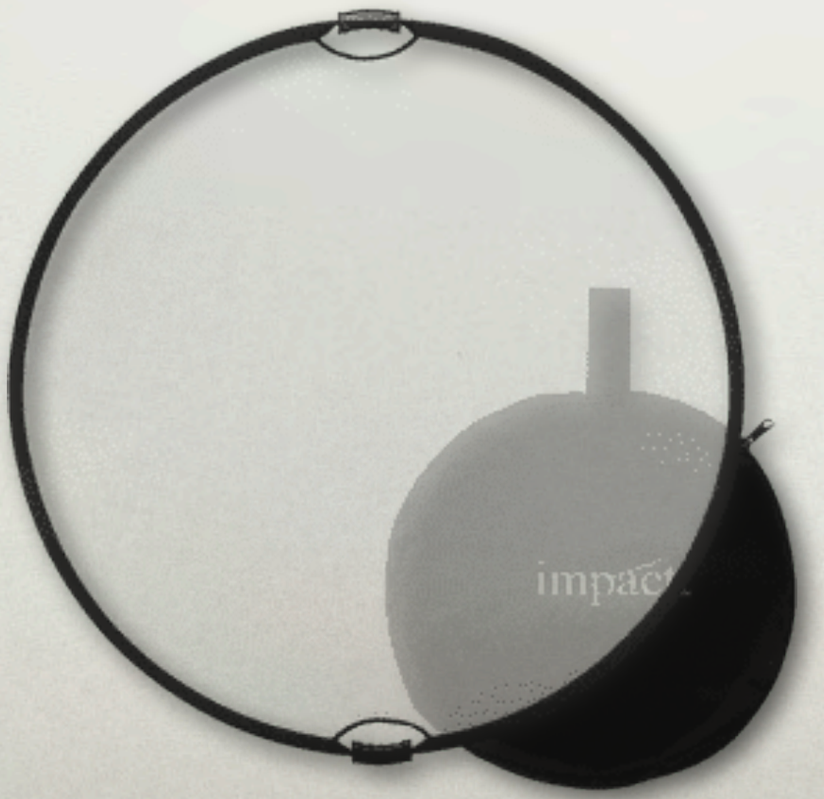
more stuff

A right angle viewer is especially useful for getting low to photograph flowers and insects if your camera does not have an articulating Live View screen.

Carrying a portable stool is also a good idea if you will be watching patiently for small wildlife to sit still. Both these models are lightweight and collapsible with one having a phone charger built in! (Possibly overkill!)

A mat or plastic bag is good for getting on the ground for shots.

diffusers and reflectors



Stands, clamps, diffusers, reflectors, etc. are all useful items. They can be purchased at any camera shop or ordered online.

I have shear curtains in a spare room that I use to control light. A shear shower curtain would also be good.

White and black posterboard will reflect light or absorb light, depending upon where you place either one.

backgrounds, foregrounds, surfaces, props

I have collected a variety of backgrounds/surfaces from antique shops; sellers of photo surfaces; chopping blocks; old metal salvage.

Not pictured here, but extremely useful, are “blocks” which include anything - boxes, risers, overturned bowls; etc. so that objects are are different heights.

These items are very useful for still life photography, but rarely show in the close-up image.

I drape black velvet fabric in the background for many of my flower photos - I started doing this when I learned focus-stacking and often still use a black background for dramatic effect.

Indoors and outdoors, a white background can be used.

Roeli Til

https://www.flickr.com/photos/126038549@N06/

A lightbox is also an effective background.

let’s make some images - camera prep

camera settings for macro/close-up

Depending on your camera and lenses, there are some general settings that are useful.

→ CAMERA
Shooting in RAW results in the most possible data.
CONTINUOUS OR BURST MODE allows many images to be taken; often one of these nails focus precisely.
MIRROR-LOCKUP helps reduce camera shake.
A LENS HOOD may be helpful in bright conditions or may keep the lens from getting close enough.

→ WHITE BALANCE:
You can take a reading outside from the grass, the back of your hand, or using a white card. AUTO or DAYLIGHT are also a good choices. Macro is such a tiny area that the surrounding environment is not used. WB can also be changed in post production.

→ METERING MODES:
You will need to experiment. With macro, you are focusing on a specific area of the subject, such as an insect eye or a flower stamen and SPOT metering may be the best choice.

Alternatively, CENTER-WEIGHTED takes into account the area surrounding the focal point, while making the focal point the most important area.

Understanding Metering Modes
https://photographylife.com/understanding-metering-modes

camera settings for macro/close-up

→ SETTINGS:
AUTO-FOCUS is not the best choice for macro because the lens will continually “search” and most likely never focus on the tiny subject matter.

→ MANUAL gives you total control over ISO, SHUTTER SPEED and F-STOP. With tiny subject matter, this may be too much of a variable.

APERTURE settings are a personal choice, dependent upon the subject matter and the story being told. Wide open (2.8, 4,) is good for low light and gives background blur. Closed down (5.6, 8, 11) shuts out light, but gives more detail.

ISO should be as low as possible - possibly 100 or 200 outside, but since you might be working stopped down - very close and shutting out available light - 800 - 1600 or more may be better. Newer cameras deal with noise at high ISO much better.

Often macro needs additional light sources such as a speedlight or panels and those light sources will need their own adjustments.

SHUTTER SPEED always needs to be faster than the lens size. That means at least 1/125 or more for a 105mm macro lens; 1/250 for a 200 mm macro lens, etc. Particularly when hand-holding outside, the shutter speed needs to be fast.

→ APERTURE PRIORITY (Nikon) EVALUATIVE (Canon) is a good choice for macro/close-up photography. This mode allows you to set the f-stop of choice and the shutter speed and ISO adjust accordingly.

However, there are times when they may not adjust correctly due to changing lighting conditions, particularly outside.

camera settings for macro/close-up

→ APERTURE PRIORITY with ADJUSTMENTS
Additional adjustments to this mode are suggested.
This is a good choice for handheld, outside with subjects such as insects, flying creatures, flowers, etc. It allows you to focus on the subject without other concerns.

→ Depending upon your camera, it is possible to set the ISO to AUTO and then specify a range - such as 100 minimum and 1600 maximum, for example.

→ It is also possible to set the SHUTTER SPEED to AUTO and specify the minimum range. This will be dependent upon the lens - minimum of 1/125 for a 105mm macro, 1/250 for a 70-200mm zoom lens, etc.

lens settings for macro/close-up

CAMERA/LENS SETTINGS are dependent upon the selected equipment, but there are some general similarities.

There are three switches on many lenses. M/A - M gives a choice for auto-focus or manual. M/A allows you to override auto-focus. M is for manual focus only.

Using the shutter release button may search for focus in M/A mode, but will not in M mode.

If using handheld, switch the VR (vibration reduction) button to “on” for better stabilization.

Some lenses have a “focus limiting” switch, which only applies to auto-focus - refer to your manual because different lens brands have different functions.

Many lenses, particularly dedicated macro lenses, have a glass window with three markings: feet/meters which show the focusing distance from the sensor.

The third marking shows the magnification ratio. If you want true 1:1, set the lens at that marking and move yourself/camera, rather than turning the focusing ring.

other considerations

use LCD screen, if possible - magnifying here allows for a better view of focus.

Start with an aperture of f4 or f5.6 and then move up or down to best frame the focal point.

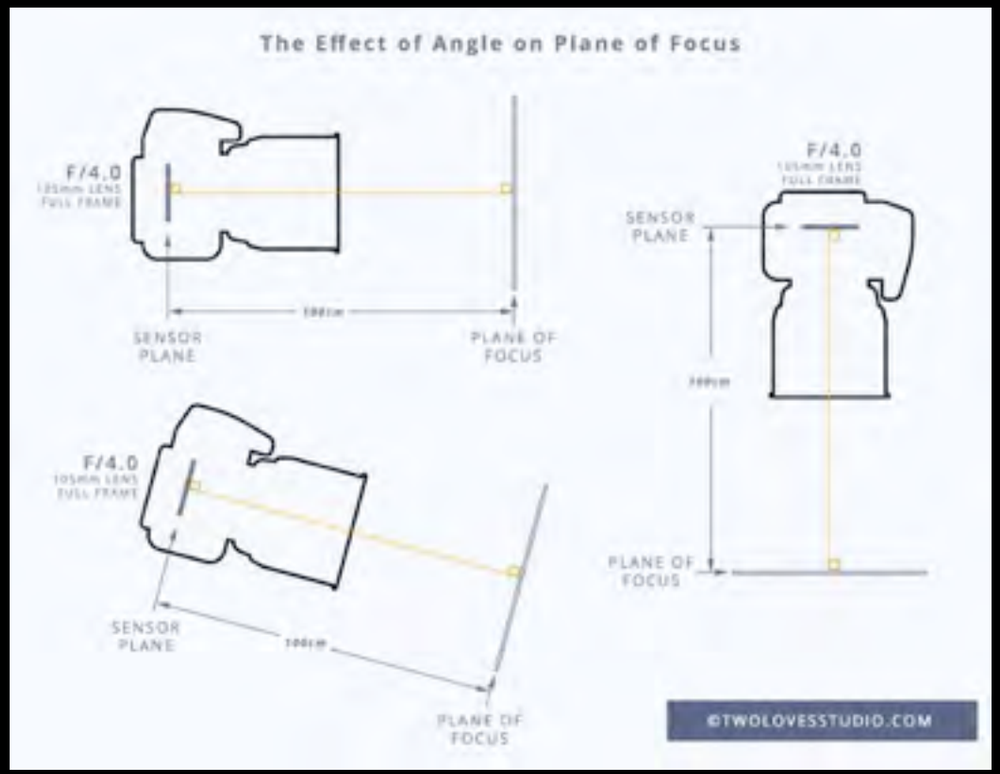
Use the trial and error method: take different f-stops and different angles; work the subject. Set the camera to burst mode to capture many photos to consider.

Where should the focus be? Focus intentionally - you are in charge of the story. Use selective focus: do you want to emphasize the eyes of the bug, the stamen of the flower? What is most important for this particular subject?

The plane of focus will always be parallel to the sensor. This will determine what is in focus and what is not.

As always, consider composition - the general rules apply, i.e., rule of thirds, leading lines, diagonals, spirals, and can be broken as desired!

Getting close means you might be blocking the available light. Consider a different angle or the use of supplemental lights, such as strobes, flashlight, LED panels, etc.



https://twolovesstudio.com/blog/macro-food-photography-plane-of-focus/

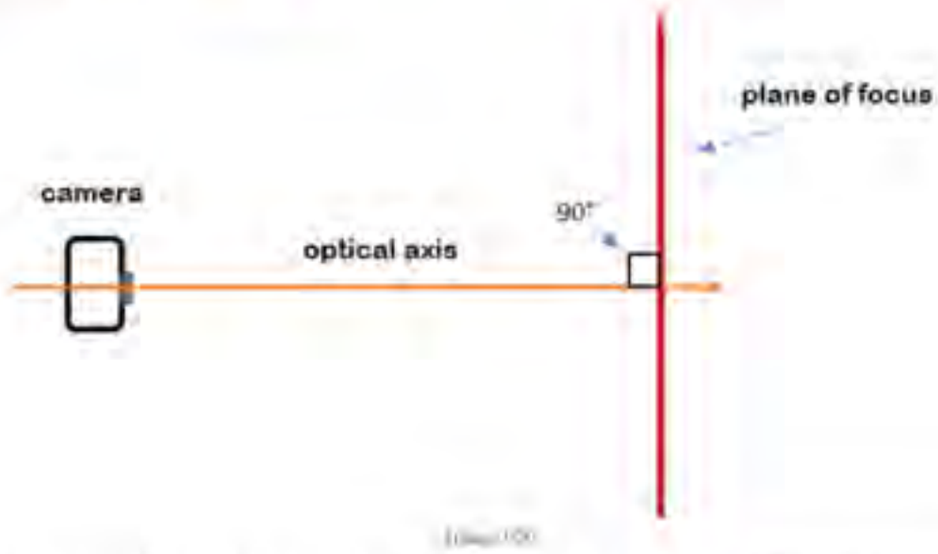
DISTANCE AND PLANE OF FOCUS

How does your distance from the subject affect your DOF? The closer you get to your subject, the narrower the DOF. Conversely, the farther you get away from your subject, the wider the DOF.

So, part of your decision-making will be around how *large* you want your subject to be in the photograph, and how *much* of it will be in sharp focus.

Another factor when shooting, especially when you have a narrow DOF, is your plane of focus.

To understand the plane of focus, you first must imagine a line passing straight through your camera. This imaginary line is called the optical axis. Your plane of focus is another imaginary line that intersects the first line at 90 degrees. If the camera is tilted, the plane of focus is tilted too.



If you are shooting your subject straight on, your focus point is true, and your flower is *completely flat*, then the whole flower will be in perfect focus.

But thankfully, flowers are not two-dimensional and there will often be times that shooting your subject on an angle will create a better image.

https://twolovesstudio.com/blog/macro-food-photography-plane-of-focus/

the bobble dance

MANUAL FOCUS TECHNIQUE: THE BOBBLE

Frame your subject as you would like it in the frame.

For 1:1, set the lens at 1:1

For close-up, set the lens roughly for the composition/distance preferred

Take your hand off the focus ring. Brace the camera against your eye, pull your elbows in and brace and gently bob forward and back as you release the shutter. Your movements should correlate to millimeters (or maybe centimeters)--tiny movements. Even using the LCD panel, brace yourself.

You may either shoot many frames with the camera set to BURST, or single frames by moving in/out, backwards/forwards or left/right for different angles.

This gentle bobble will nail focus while retaining the magnification ratio you desire.

Now that you have a U-Haul full of gear
and your camera is set
It's project time!

subject matter

food

spiders, insects, bugs, butterflies & webs

jewelry, artifacts, objects, pencils

kitchen items

abstract, textures

anything in nature

frozen flowers

flowers/flower portraits

micro landscapes/environmental close-ups (Eliot Porter)

nature patterns/rocks and minerals/textures (sand, rock)

mushroom and fungi

lichens and moss

shells/fossils

snowflakes, frozen bubbles, raindrops

pets

birds, wildlife

children

anything that inspires you

food

art history paintings

Still Life with Golden Bream, Francisco de Goya, 1808 - 1812

Still Life with Asparagus, Adriaen Coorte, 1697

food
pomegranates

Nancy Mack, 40mm, f3.5

I select food for shape and texture and often use minimal props and window light.

The 105mm macro is excellent, but I also use A Velvet 56mm and sometimes even use a 50mm.

Most of my shots are “close-up” rather than true macro.

Nancy Mack, 52mm, f16 (24-120mm)

food
peaches

Focal Possibilities, 2010, **Olivia Parker**

food
peaches

Nancy Mack, Velvet 56

Nancy Mack, Velvet 56

Nancy Mack, 105mm, f8

food

tomatoes

Nancy Mack, 105mm f4

Nancy Mack, 105mm f3.2

Nancy Mack, 105mm f8

Nancy Mack, Velvet 56

food

oranges

Nancy Mack, 105mm f3.0

food
macarons

Nancy Mack, 105mm f8

Nancy Mack, 105mm f3,5

Nancy Mack, 105mm f3,5

food
eggs

Still Life, Ansel Adams, 1932

Eggs in Bowl, Ansel Adams, 1932

Egg and Slicer, Edward Weston, 1930

trivia: the egg slicer was invented in about 1930.

Glasses and Eggs, Josef Sudek, 1951

Carafe and Egg, Josef Sudek, 1950 - 1956

Nancy Mack, Velvet 56

Nancy Mack, Velvet 56

food
artichokes

Artichoke Halved ~ 28V, 1930

Artichoke Halved, Edward Weston

Nancy Mack, Velvet 56

vegetables

Kale, Halved ~ 35V, 1930

Toadstool ~ 6 FU, 1931

Kale Halved, Edward Weston, 1930

Pepper, Edward Weston, 1930

Toadstool, Edward Weston

Striped Squash, Edward Weston, 1932

Cabbage Leaf, Edward Weston, 1931

Mushroom, Forest Floor, Ansel Adams

food
persimmons

assorted foods
berries & cherries

Nancy Mack, Velvet 56

Nancy Mack, Velvet 56

Nancy Mack, 105mm, f5.6

Unknown Photographer

radishes

Nancy Mack, Velvet 56

Radishes, Olivia Parker, 2010

food

pears

Pear on a Plate, Edward Steichen, 1920

Pears, Paul Strand, 1916

Night Pear, Olivia Parker, 2009

food
pears

Nancy Mack, 105mm, f16

Nancy Mack, 105mm, f11

Nancy Mack, 105mm, f3

Nancy Mack, 105mm, f3

flowers

insects, spiders & webs

Nancy Mack, 40mm, f4.5

Nancy Mack, 40mm, f4.5

Janice Goetz

bees & critters

Janice Goetz

Janice Goetz

Janice Goetz

Janice Goetz

I use my 200-600mm lens for these critters. They just won't be there if you don't use a long lens. Bee's might, because they are so busy collecting nectar and pollen. Butterflies and other critters probably won't stay put. A tripod also is a must for me when getting these shots. Even with a tripod, there is usually some wind. Even without wind, the critters cause movement in the plants.

Janice Goetz

Janice Goetz

And if you are really interested in bees, the Natural History Museum in London has just announced the winners of the Wildlife Photographer of the Year contest - the Grand Prize winner is American photographer Karine Aigner with The Big Buzz in the category of Behaviour: Invertebrates, an amazing Macro shot.

Janice Goetz

Janice Goetz

Janice Goetz

Janice Goetz

Janice Goetz

PHOTZY
Additional Insect Macro Photos

Cicada, **Larry Petterborg**

FLICKR https://www.flickr.com/photos/lpetterborg/with/52267735586/

from Flickr

Heard Nature Museum, **Larry Petterborg**

FLICKR https://www.flickr.com/photos/lpetterborg/with/52267735586/

from Flickr

Bee, **Larry Petterborg** FLICKR https://www.flickr.com/photos/lpetterborg/with/52267735586/

from Flickr

Niall Benvie - Photography

Founded in 2009, Meet Your Neighbours is a worldwide photographic initiative created by Niall Benvie and Clay Bolt. The project is dedicated to reconnecting people with the wildlife on their own doorsteps – and enriching their lives in the process.

Here the photographers are using flash and white cardboard to photograph subjects on a white background.

butterflies

Diagram of Doom - 2, Edward Steichen, 1922

Texas Discovery Garden, **Larry Petterborg**

FLICKR https://www.flickr.com/photos/lpetterborg/with/52267735586/

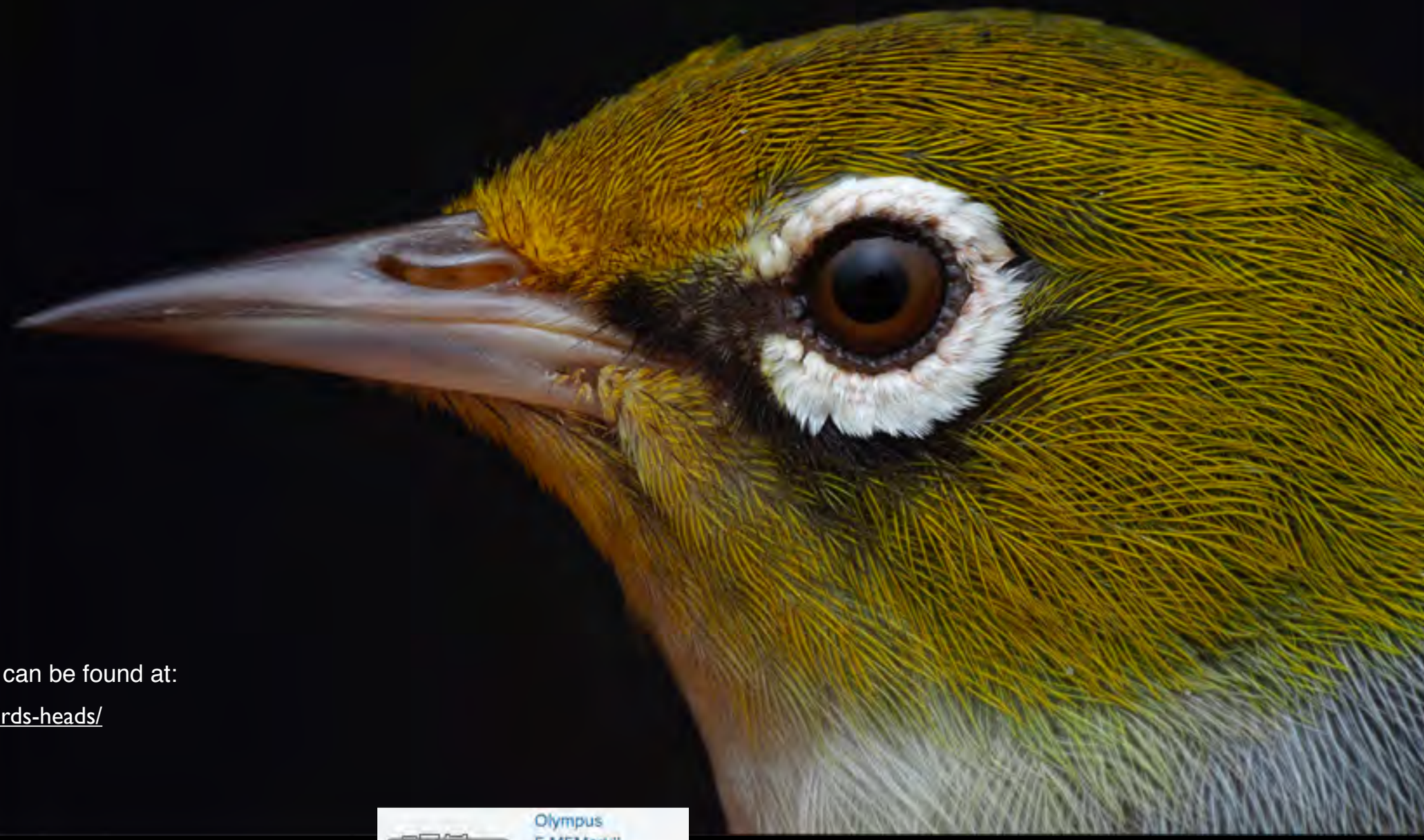
Texas Discovery Garden, **Larry Petterborg**

Janice Goetz

Janice Goetz

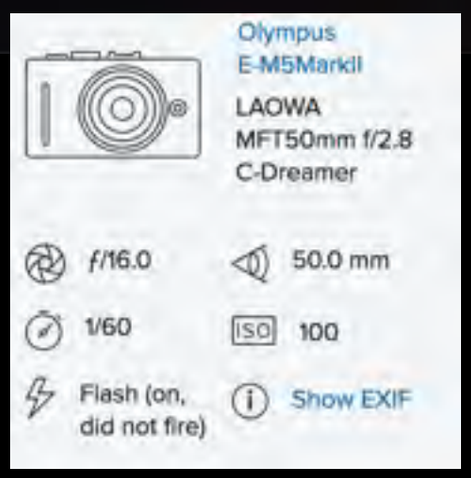
Janice Goetz

birds, wildlife



More examples of bird heads can be found at:

https://www.flickr.com/groups/birds-heads/



Bird, Tom Musson

https://www.flickr.com/photos/136215351@N02/

jewelry

The jewelry was done in a small light cube or tent with a 105mm macro lens set at f25.

This is an excellent way to photograph product items for display or sale.

jewelry

Nancy Mack, Velvet 56

shells

Shells, Edward Weston, 1927

Shells, Edward Weston, 1927

Shell in a Landscape, 2011, Olivia Parker

Nautilus Shell, Edward Weston

objects

objects

miniatures

Rosana, 105mm, f5.6 https://www.flickr.com/photos/rosanacafe/

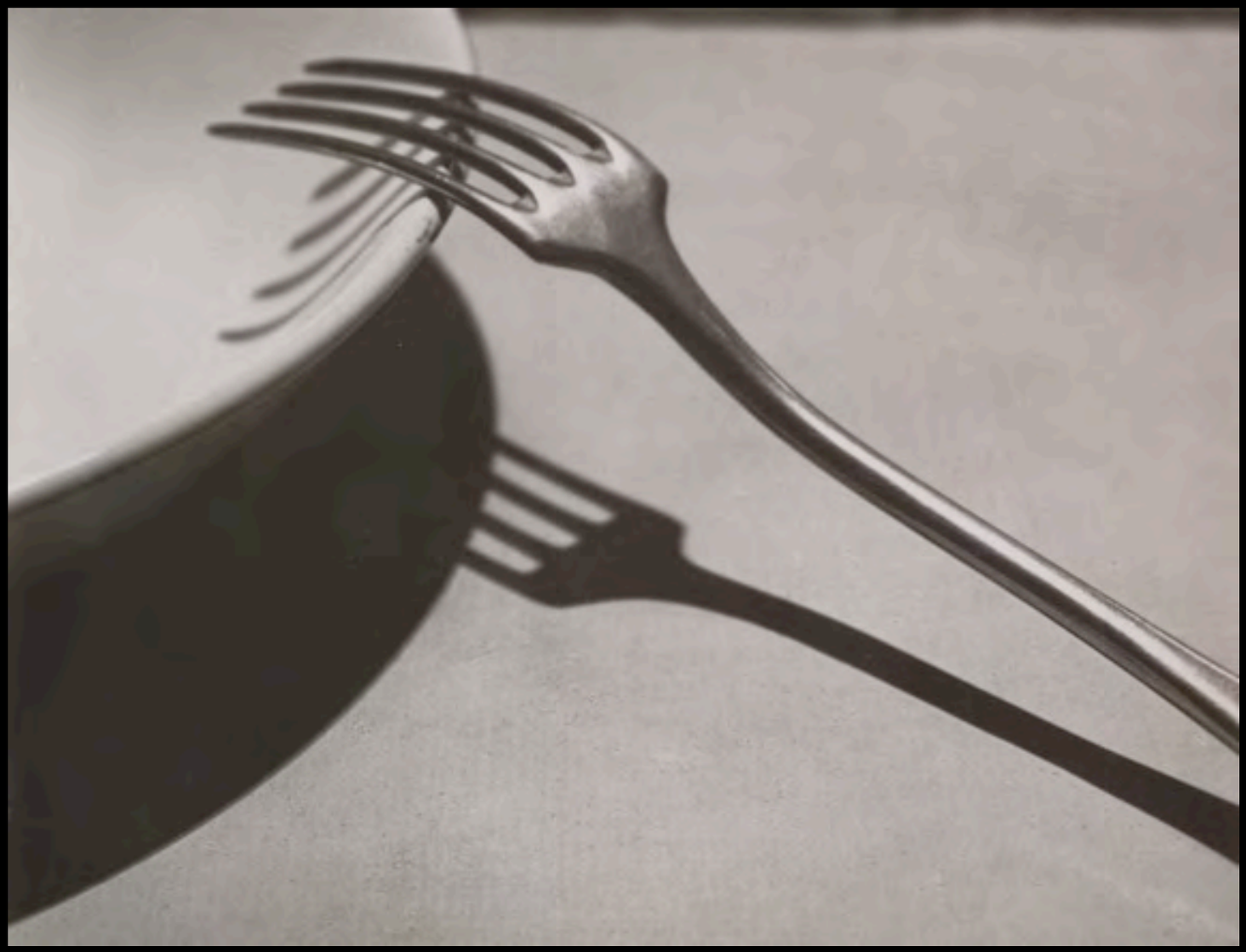
Flickr

Mike M, 35mm, f1.8
https://www.flickr.com/photos/182366226@N07/51379621891/in/dateposted/

Nancy Mack, 60mm, f5.6

kitchen

Mondrian's Pipe and Glasses, Andre Kertesz,



Fork, Andre Kertesz, 1928

Bowl with Sugar Cubes, André Kertész, 1928

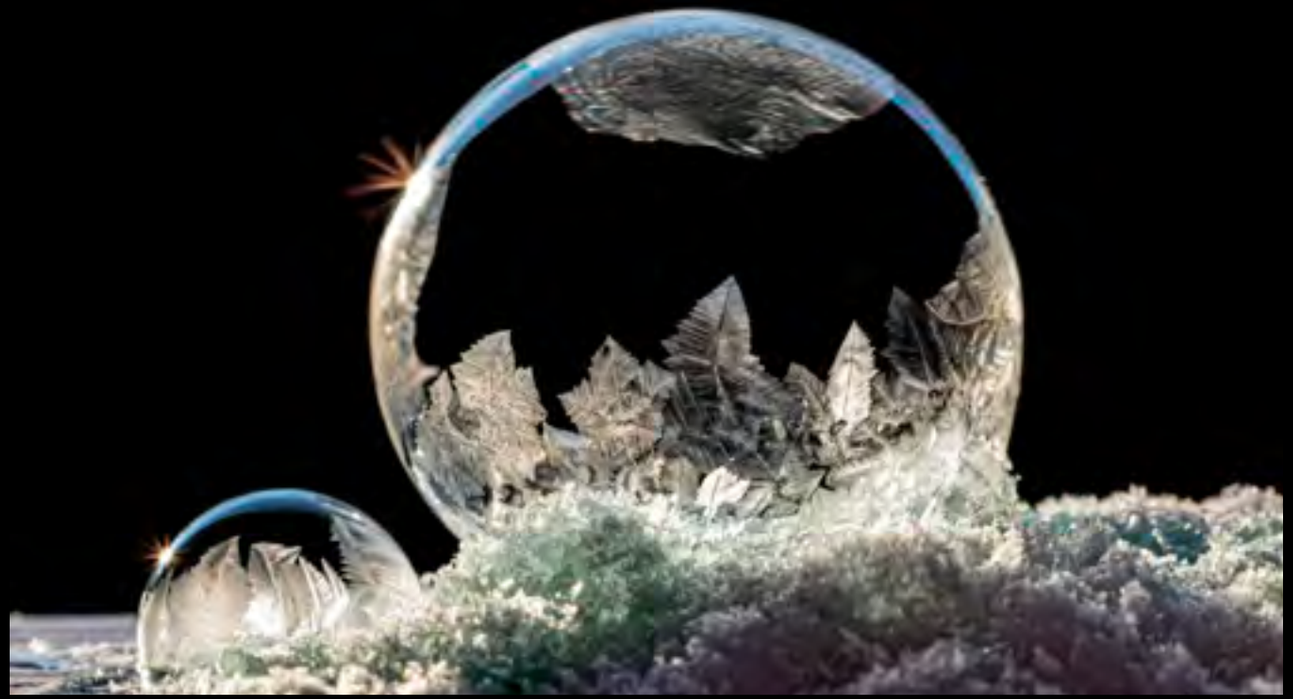
abstract, textures

Antique tractor, Myers Park, McKinney

Abstraction might include intentional camera movement, subject movement, intentionally out of focus shooting, or movement by wind, water, etc.

This could mean slow shutter speeds and fast moving or uncooperative subjects.

pets



frozen bubbles

snowflakes

raindrops keep falling...

Flowers, especially, are enhanced by rain or water droplets. Photographing in the rain is okay, with camera covers and raincoats, but photographing after a rain or a dewy, foggy morning is best.

Artificial raindrops are also very easy.

Glycerine can be mixed with water (50/50) to create water drops on flowers or food items in a still life.

The glycerine is thick and the drops will not fall off as quickly.

frozen flowers

This is a very easy process. Glass containers work best, but clear plastic is also fine.

If you fill the container with water, the flower floats. It is best to put in the flower and fill a tiny bit, freeze, repeat. This embeds the flower, but sometimes the layers do not freeze in a transparent way. Experiment!

Not all flowers look great. Experiment!

These were taken on a sunny day with an iPhone and ShiftCam close-up lenses.

iPhone photos, Nancy Mack

iPhone photos, Nancy Mack

iPhone photos, Nancy Mack

Kathleen Clemons has a series of Frozen Flowers

https://www.kathleenclemonsphotography.com/frozen-flowers

Anna Fritzel spoke to the Plano Photography Club about her Frozen Flowers

https://akfritzelphoto.com/work

shooting through

[Dirk Ercken Images]

Dirk Ercken Flower Art:

https://www.dirkerckenimages.com/promo-flowerart/

It is possible to wrap lace, netting, tule around the lens and shoot the subject partially through the fabric.

This method helps to reduce distracting backgrounds and gives a dreamy, soft look to the subject.

You can also shoot through foilage.

creating a series

A photography series can be an interesting project. The theme can be subjects of one color; the same kind of subject; same season or season progression; related items, etc.

My father-in-law's old violin.

series





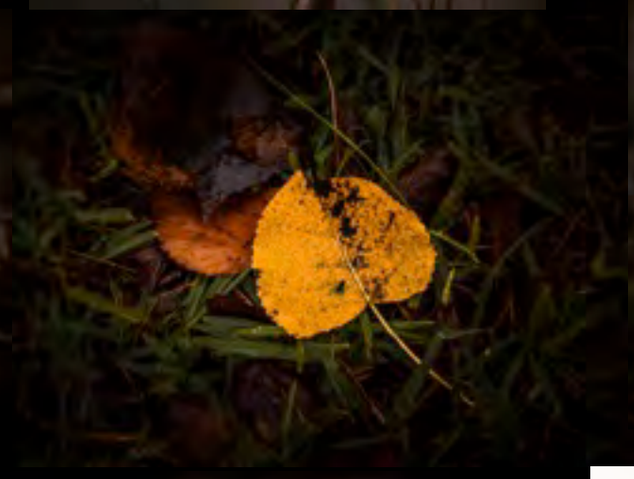


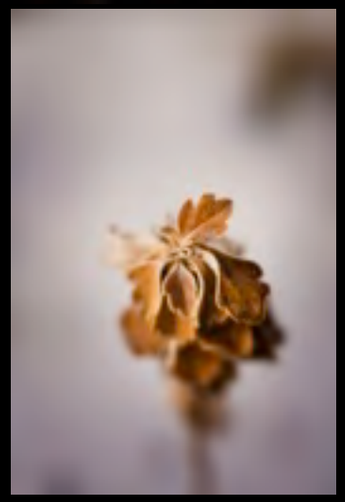





I have a collection of beautiful silk threads from my mother.

series
fall & winter





Leaf, Robert Mapplethorpe, 1986

Flower photographer, Anne Belmont, has a wonderful video on photographing winter in the garden on the Out of Chicago YouTube channel: https://www.outofchicago.com/photo-challenge-photographing-winter-in-the-garden-with-anne-belmont/

series
red

series
thistles

series
monochrome

capture images that tell a story

Don't get caught in the "first bee"
syndrome
work your subject

Example exercises:

Shoot same subject in the same spot with different lenses and ratios

Shoot same subject with different edits

Shoot same subject in different light

Shoot same subject with different focal points

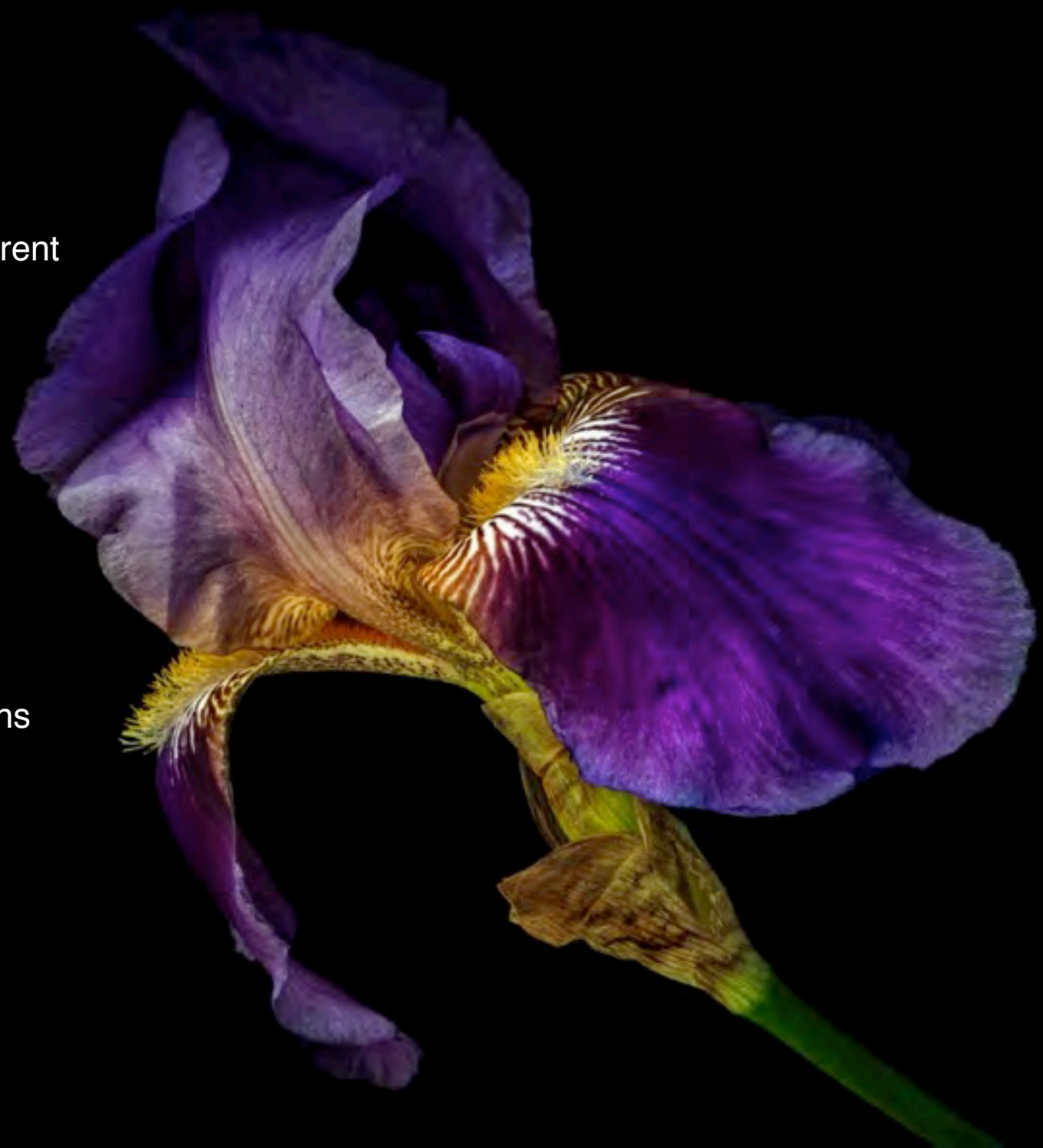
Shoot an abstract macro image

Shoot the same subject in different compositions

Shoot in different seasons

Move to a different angle

Create a series of the same subject



setting up a shot
OUTSIDE

select a subject
walk around the subject to check background
lighting (backlight, sidelight, front)
study the best composition angle

decide where to focus

set the lens
camera settings
set white balance
use tripod and remote or Live View
or handheld, use mirror lockup
wrap camera strap around your arm for steadiness
prop arms for steadiness or use stool
move in close, work the subject
you may need the lens hood

poppies
Heard Nature Center

Sometimes it is important to scout a location and just sit patiently to take in the possibilities. Use a cardboard viewfinder to isolate subject matter. Look in all directions. Isolate your subject. Move in close. What story do you want to tell?

Should you crouch low? stand overhead? head on? Wait for cloud cover which is always best, or find a ray of sunlight?

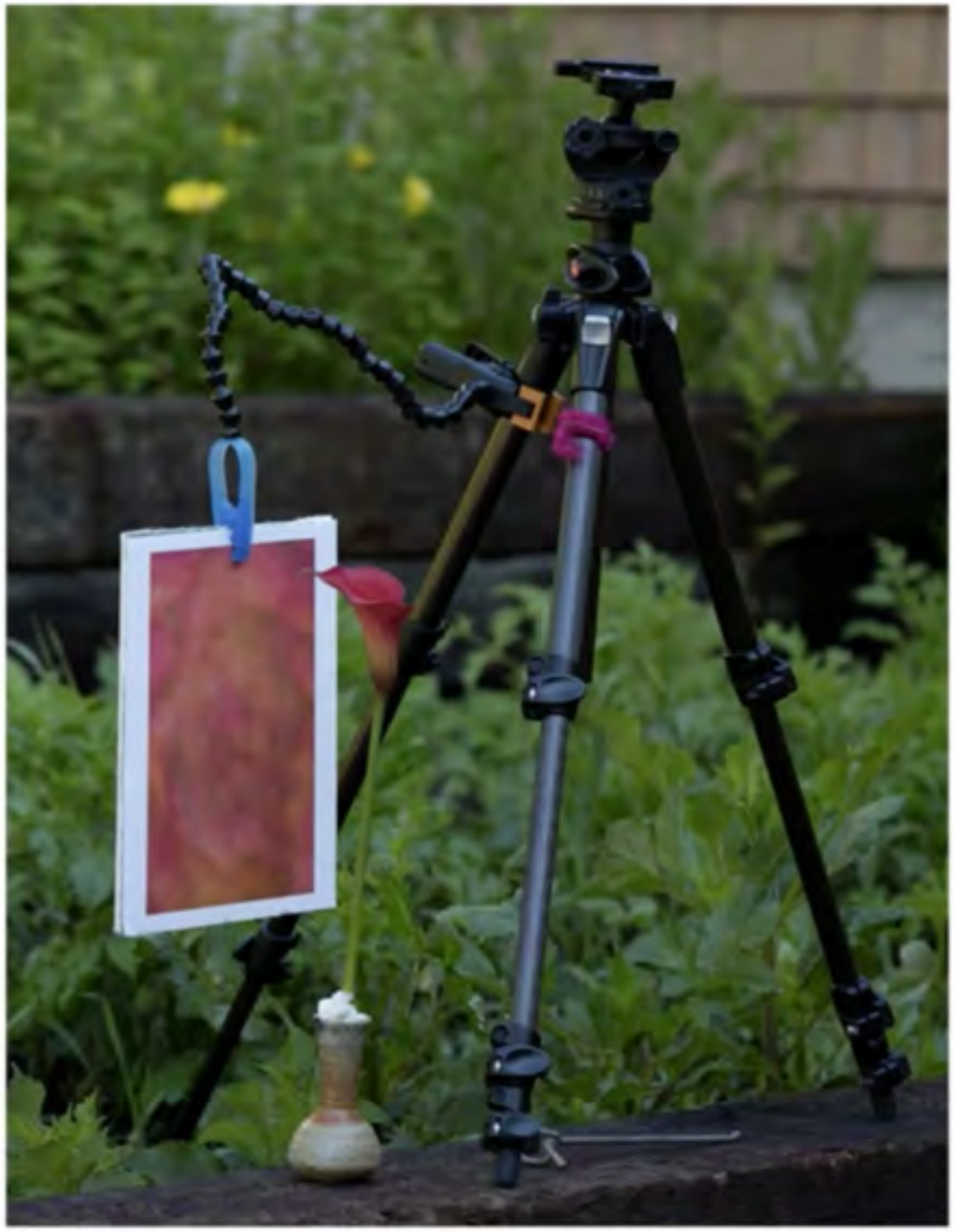
Are you allowed to bring equipment? Do you need to steady the subject with a clamp? Set up any diffuser or reflector?

A tiny slice of focus? A more narrow aperture?

Lily of the Nile
my garden

Lily of the Nile
my garden

All taken outdoors, early evening, light mostly behind; I steadied myself on a stool and took these at the flower's level.



Kathleen Clemons photographs textures and prints them as letter size, attaches them to a thin piece of styrofoam and suspends them behind the subject matter - this works well if the background is busy or distracting.

https://www.kathleenclemonsphotography.com/

setting up a shot
INSIDE

select a subject
arrange composition
set up background, foreground
lighting (window or flash, continuous)

study the subject
decide where to focus

set the lens
set white balance
camera settings
use tripod and remote,
Live View or handheld
work the subject

inside setup

Usually, I just use window light, but sometimes I experiment with the placement of of the LED panel. Mostly I use it directly to the left of the scene, but I have used it at a 45-degree angle, facing the scene, sometimes even with the scene and sometimes my height, aiming down. Occasionally I use facing LED panels at 45-degree angles. A basic lighting tutorial was presented to the Dallas Camera Club in 2020.

I use a white posterboard to reflect light back into the scene.

focus stacking

I actually discovered focus stacking from a cookbook. "The Art of Modernist Cuisine" is an amazing, very expensive series that my son-in-law owns. Most interesting to me is the accompanying volume: "The Photography of Modern Cuisine". They describe the processes used to capture food images using a variety of techniques. Focus stacking is used with microscopic equipment as well as macro lenses.

Around the same time I discovered Levon Biss, an English dad with a kid and some bugs in his backyard. This portrait photographer now creates billboard size prints documenting the bug collection at the Museum of Natural History, London.

Microsculpture by Levon Biss:

a documentary

weighs in at 13lbs

13.5

16.5

MICROSCULPTURE

THE HIDDEN BEAUTY OF SEEDS & FRUIT

focus stack examples

Andre De Kesel
https://www.flickr.com/photos/andredekesel/52396829459/in/feed-86564004-1664624139-1-72157721638893296

Spider in its web (Argiope sp.; ID credit: Stefan Verheyen). Found in Niaouli reserve forest (near Attogon, South Benin, West Africa, 9th September 2022).

Fieldstack (tripod & manual macro slide, 64 exp.). Images assembled in Zerene Stacker (Pmax & Dmap). Sony A7R3 (cropped mode) + Metabones adapter + Canon EF-S 60mm 1:2.8 USM; ISO-400, f/3.5, 1/160s,-1step, natural light.

Andre De Kesel
https://www.flickr.com/photos/andredekesel/

A vividly coloured scarab from Madagascar, Pygora sanguineomarginata (Coleoptera, Scarabaeidae, Cetoniinae). Collection specimen from East Madagascar (date unknown).

Studio work, dry specimen, 122 images (focus bracketing), assembled in Zerene Stacker (Dmap & Pmax). Canon EOS M6 mark II, EF 100mm macro 1:2.8L IS USM; ISO-100, f/3.5, 1/2 sec, -1step, diffused natural light.

focus stacking technique

Images can also be captured manually by turning the lens in tiny increments to obtain focus or mounted on a rail that can be moved in small increments. I find f5.6 or f8 works best for my images.

Newer cameras have a “focus shift” option which allows you to select the closest and furthest focal point and the camera automatically take the sequence. This is actually great for taking photos outside.

Both Helicon Focus and Zerene Stacker can perform the stacking process. I prefer Helicon since they offer a capture program as well. The images can be saved as .dng to retain the RAW data when going back to Lightroom.

Zerene Stacker has better editing capabilities while in the program, allowing for correcting any overlaps or blurs.

Both Helicon Focus and Zerene Stacker are compatible with the electronic Cognysis Rail System.

Photoshop also allows for taking a stack (layers) of images and “Auto Align Layers” and “Auto Blend Layer” commands results in the same final image. Often in Photoshop, the final image does not have straight sides and needs to be cropped.

A very basic tutorial on YouTube: https://www.youtube.com/watch?v=GIS3hEH1uMw

focus stacking

This is my indoor setup for focus-stacking with Helicon Remote on a laptop. The near and far focus points are plotted in software and taken automatically in order. The image sequence is then processed in Helicon Focus.

Helicon also makes a FB (Focus Bracketing) Tube which attaches to the camera, behind the lens and enables automated focus bracketing in single or continuous shooting modes. It is configured by a cell phone app. It is probably the precursor to Focus Shift or Focus Bracketing on high end or mirrorless cameras.

Two Cut Sunflowers, Vincent Van Gogh, 1887

Sunflower (Le Tournesol), Edward Steichen, 1920

sunflowers

I was looking at some images that I like - van Gogh painted hundreds of sunflowers and Steichen photographed sunflowers as well.

Grocery florists offer a variety and Trader Joe's have a great selection at very low prices.

I bought large sunflowers and arranged them in a vase on a table near a north sunny window to the left.

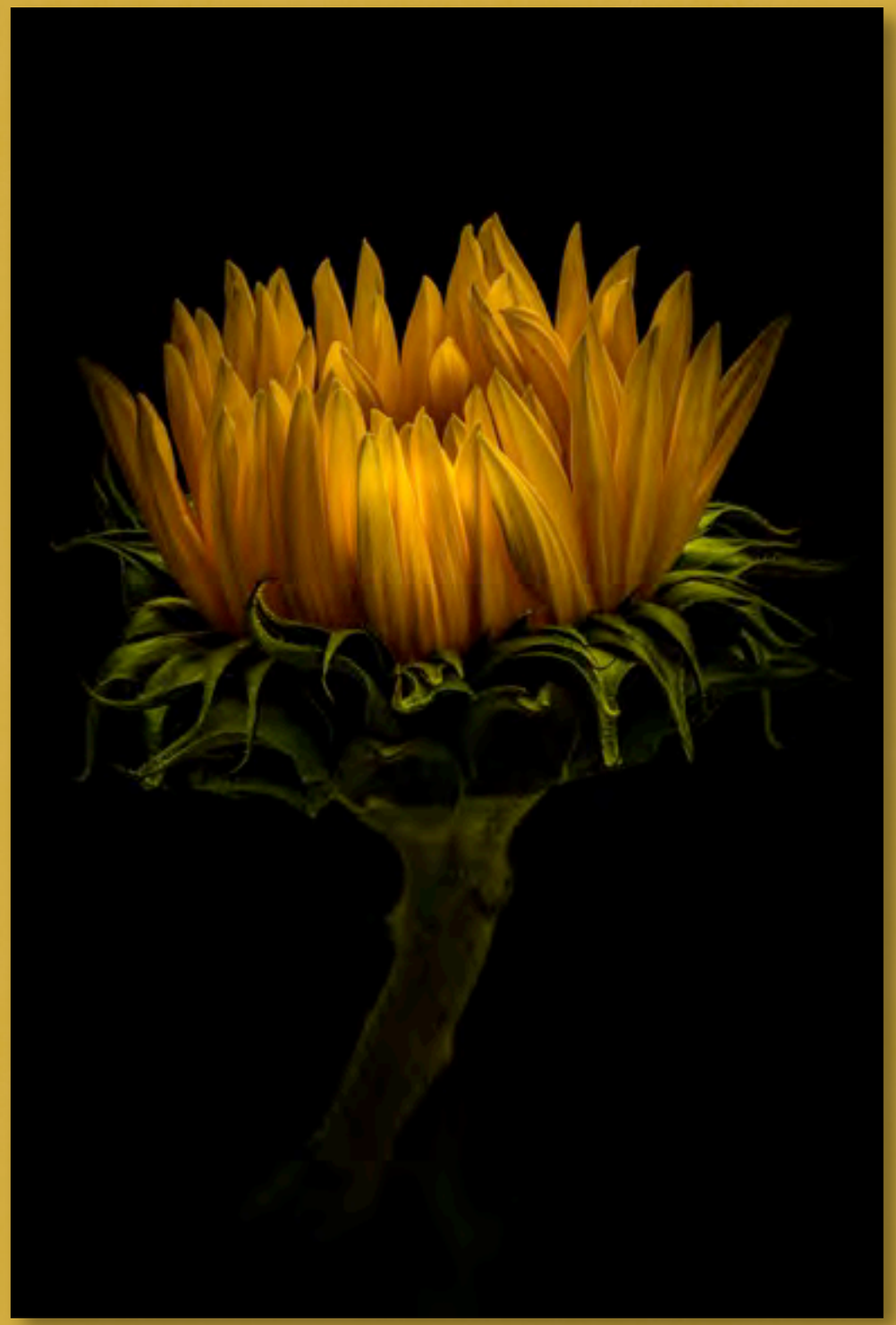
I used a black velvet background and reflected light with white posterboard to the right.

I did some up close macro shots and many close-up flower portraits.

I worked the scene - front, side, back stems, one flower alone, as group.

What is my story? I probably made100 different images to capture the essence of sunflower this summer. They are deliberately dark and mysterious - the opposite of bright and growing toward the sun.

focus stacking



Images were captured indoors in Helicon Remote
- starting at the closest focusing point and finishing at the furthest focusing point.

This resulted in 25 images (five seen above.)

These RAW images were taken into Lightroom and exported to Helicon Focus and processed. They were saved as .dng files and the final image edited in Lightroom. I took the image into Photoshop to clean up blemishes on the petals.

post processing

Andrew Lanxon is a British photographer with an extensive portfolio, but he also specializes in Macro Photography. His YouTube Channel has a series of videos about taking and editing macro shots. (You could skip this training session and go straight to Andrew...)

I will say that post processing is a matter of individual taste - edit as you usually do, with particular attention to the focal point of this tiny slice of subject matter. Put your viewer's attention on that spot. You have isolated it - now make it pop!

OUTSIDE - Images taken outside often have a bit of the surrounding environment that may need cropping, blurring, or darkening to show contrast with the subject matter.

BLACK BACKGROUND - Because I usually place my inside images in front of a black background, I make sure the black is totally black - I often use the black slider in LR or the Image-Levels in PS to darker the black area.

WHITE BACKGROUND - Shooting on white requires a much different process - usually strobes - Clay Bolt has good instructions on the B&H Explora Channel for doing this process:
https://www.bhphotovideo.com/explora/photography/features/meet-your-tiniest-neighbors-using-macro-gear-and-field-studio-setup

Andrew Lanxon has a video using flash outside in a forest setting:
https://www.youtube.com/watch?v=7qiAUTES7wk

The Adorama YouTube Channel has a video showing a more complicated set-up for shooting on white in the studio, but at time marker: 8:31 minutes, he edits in Lightroom to create a pure white background:
https://www.youtube.com/watch?v=4h17T2bsYF4

APPLYING TEXTURES TO A BACKGROUND -
Earlier this year, Keni Evans did a training night for Plano and Dallas Clubs shooting on gray and applying textures to the background. Go to time marker 32:01 minutes:

https://www.dropbox.com/s/wv20c28cmss18tw/How%20I%20Made%20It%20-%2020220922.mp4?dl=0

places to visit

The Tyler Botanical Garden at the Tyler Rose Garden

Heard Nature Museum and Wildlife Sanctuary

Japanese Gardens, Ft. Worth

Botanical Gardens, Ft Worth

Chandor Gardens, Weatherford

Clark Gardens, Weatherford

Children’s Adventure Garden

Texas Discovery Gardens

Dallas Arboretum

references

Flickr: https://www.flickr.com
(search for macro, close-up, etc.)

Kathleen Clemons - macro flower photography
https://www.kathleenclemonsphotography.com/

Anne Belmont - macro flower photography
https://www.annebelmontphotography.com/

Anne Belmont has a series of flower photography videos on the Out of Chicago YouTube Channel:
https://www.youtube.com/c/OutofChicago/videos

Out of Chicago Blog has some entries on flower photography: https://www.outofchicago.com/blog/

Dirk Erchen
Flower Photography Course
Mushroom Light Painting Course

International Garden Photographer of the Year

Focus Stacking - Macro

references

books

Harold Davis:
Creative Garden Photography: Making Great Photos of Flowers, Gardens, Landscapes, and the Beautiful World Around Us

Creative Close-Ups: Digital Photography Tips & Techniques

Photographing Flowers: Exploring Macro Worlds

Ross Hoddinott:
Digital Macro & Close-up Photography

Rod & Robin Deutschmann:
Flash Techniques for Macro and Close-Up Photography

Tracy Hallett
Close-up & Macro Photography

David Busch
Close-up and Macro Photography Compact Field Guide

Bryan Peterson
Understanding Close-up Photography

Rob Sheppard
Macro Photography: From Snapshots to Great Shots

Harold Feinstein
Various books of flower portraits

Robert Llewellyn
Flower Portfolios
Books about Flowers, Seeds, Trees

Andrew Zuckerman
Flower

Robert Mapplethorpe
Flowers

Niall Benvie
flowers
Niall Benvie Photography
Meet Your Neighbors

Joyce Tenneson
Intimacy: The Sensual Essence of Flowers
Flower Portraits: The Life Cycle of Beauty

Barbara Bordnick
Searchings: Secret Landscapes of Flowers
Vol. I, II, III

references

online

Seeing in Macro
http://seeinginmacro.com/

Ratio Calculations
http://seeinginmacro.com/macro-photography-magnification-ratio-calculation/

Macro photography: Understanding magnification
https://www.dpreview.com/articles/6519974919/macro-photography-understanding-magnification

1:1 Reproduction in Photography
https://www.youtube.com/watch?v=ri9Oj-rUhzw

What is lens magnification ration?
https://www.youtube.com/watch?v=higDkjZvJ5w

Understanding the Macro Ratio
https://www.youtube.com/watch?v=oCuGt-wsGnk

1:1 magnification, what is it?
https://www.dpreview.com/forums/post/33434774

Everything You Need to Know About Macro Photography
https://photographylife.com/macro-photography-tutorial

references

online

What Is A Macro Lens: The Definitive Guide To Macro Lenses

https://filmlifestyle.com/what-is-a-macro-lens/

What Is Magnification in Photography?

https://photographylife.com/what-is-magnification

How To Make Amazing Close-Up Flower Photos
https://www.creative-photographer.com/close-up-flower-photos/

Macro Lens Buying Guide
https://www.bhphotovideo.com/explora/photography/buying-guide/macro-lens-buying-guide

Macro, Micro, Close-Up
https://esteewhite.com/difference-between-closeup-macro-micro-photography/

Mastering Focus-Stacking
https://photographylife.com/focus-stacking-macro-photography

final thoughts

Ranuculus #3
3rd Place, Color Prints, Advanced
David Mann
August 2022
Dallas Camera Club

Ranuculus #3
2nd Place, Color Projected
David Mann
September 2022
Gulf States Camera Club Council

“Ask yourself: “Does this subject move me to feel, think and dream?” – Ansel Adams