



Close-up and Personal: The Joys of Macro Photography

By Todd Nettelhorst

NOTES

What is Macro's derivation?

- from the Greek, *Makros* (Macro): very large in scale; long. It does make sense...macro images are large and typically shot at longer exposures.

What is Macro vs. Close-up Photography?

- *Macro* is normally defined as image magnification that is life size or greater on the sensor or film plane or 1:1, 2:1, etc.
- *Close-up* photography involves close focusing and less than life size images.

For our purposes...to be more inclusive combining both into one "big" MACRO category...

- combining Macro & Close-up Photography is the trend in the market place, and as far as I'm concerned, it does not make a difference whether they're separated.
- "macro" settings on some zoom lenses and P&S cameras are not necessarily 1:1 or greater. They just focus closer and magnify the subject.
- the joy comes when you begin to see that there's a whole other world inside ordinary subjects

Equipment & Materials (cameras, lenses and supporting cast)

- to be most successful composing your images, know your equipment first
- very difficult to feel your way into composition when you're thinking about buttons and settings on the camera
- first, we'll see how to create images, then talk equipment that helps us make those images

Tips and Tricks for Macro Photography

Letting go of self is an essential precondition to real seeing. — Freeman Patterson

Four Tips (of my Ten Tips for Improving Your Photography) to Use with Every Shot (SLBE)

- Subject
- Light
- Backgrounds
- Edges

(1) The Subject

- *what is your subject and where do you place it in the picture space?* try off center; moving into the frame; give breathing room; and avoid crowding near edges
- squinting helps feel for proper subject placement

(2) Working the Light

- *what will enhance your subject the best?*
- one of the "Joys" is the ability to control light, e.g., exposure compensation (EV)
 - white balance - may set cloudy for more warmth; can make post-processing adjustments with raw converter, if not satisfied
 - diffused and reflected light
 - diffused light (cloudy days, through a diffuser, indirect, large source with small subject): is a softer light, colors tend to be more saturated, less apparent texture, and minimal to no shading
 - reflected light: illuminates subject, as seen; consider feathering (peripheral light)
- artificial, e.g., flashlight, flash, studio lights
 - flashlights illuminate shaded areas
 - flash, covers universally, not selectively, so only use as fill, flash compensation at -1 to -1 2/3

- use two lights, one for subject & other for background
- can bounce light off reflector

- direction
 - direct light often harsh and flattens
 - side light shows more texture
 - rear light outlines subject and may shine through subject

(3) Check Your Backgrounds

- *does the background add to or take away from the image?*
- avoid clutter and backgrounds that compete with subject
- look for contrast with subject
- select simple ones

(4) Run the Edges

- *anything too close to the edge or just cutoff?*
- check the edges

Determining Focus and Controlling Depth of Field

- use manual focus and turn off VR/IS when on tripod (ck camera/lens on manual)
- depth of field preview button
 - viewfinder - aperture is wide open when composing
 - DoF button stops down when pressed
 - poor (wo)man's DoF preview button: looking through the viewfinder, start to remove lens by turning a $\frac{1}{4}$ turn, lens stops down
- what's in focus (depth of field - DoF) -- normal vs. macro
 - normal: 1/3 in front of subject and 2/3 behind
 - macro: 1/2 in front and 1/2 behind]
- run the focus from near to far to see what's there
- consider selective focus
- BEWARE of your background's impact

Macro Effects

- focusing through for ethereal effects
- larger than life size images - use extension tubes and close-up diopter on macro lens
- abstracts (identity is not evident) and patterns (repeating elements)
- bringing the outdoors inside, create a mini-studio
 - setup at kitchen table or island, in family/living room, etc.
 - use a backdrop to remove kitchen distractions, e.g., a black or white cloth
- creative ideas for special effects, e.g., glass; Lensbaby, selective focus

Creative Macro Concepts

- line
 - simplicity
 - fill the frame
 - placement
 - pictures within pictures
 - directionality
- (not necessarily independent concepts)

*It is not because things are difficult that we do not dare;
it is because we do not dare that things are difficult. — Seneca*

Equipment & Materials (cameras, lenses and supporting cast)

- as I mentioned, to be most successful composing your images, know your equipment first
- very difficult to feel your way into composition when you're thinking about buttons and settings on the camera
- let's talk equipment that helps us make those wonderful macro images

What's he carrying?

- sun hat, vest, camera & tripod, and knee "savers"

Camera, lenses and their accessories

- film, DSLR, mirrorless or newer smartphones with a macro and/or close-up lens
- typical macro lenses: 35, 50, 60, 85, 90, 100, 105, 180 or 200mm
- the longer the lens, the greater the working or focusing distance
- when buying lenses check reviews, e.g., check on sharpness, etc.

Extension tubes

- poor (wo)man's macro lens - using extension tubes with a telephoto lens (ProMaster & Kenko extension tubes work fine)

Resource - <https://shuttermuse.com/ultimate-guide-to-extension-tubes/>

- place between the camera body and lens to gain closer focus and apparent magnification;
- hollow tubes with no glass
- range of sizes: 12, 20, 25, and 36mm
- used separately or stacked
- may use with macro lens, too!

Tripod

- critical for quality macro shooting
- some basic considerations for a tripod:
 - independent legs, not attached to center column!!
 - strongly recommend no center post or minimal post, need to get very low for macro shooting. (Center column makes a mono pod with 3 legs.)
 - maximum height without the center post within 5-6" of your eye level.
 - sturdy enough to hold the weight of your equipment now and in the future, say holding up to 15- 20 or 20-25 lbs.; Remember you will be growing into this and be prepared as the wish list gets bigger!!
 - recommend a ballhead to attach camera to tripod; easier and more stable than pistol grip (PG's begin to slip over time) or pan handles; able to handle more than your gear's weight is important.
- if happen to have bought one that needs replacement, can serve other purposes: hold off-camera flash, clamps for glass, boom for reflector or diffuser, Plamp, umbrella, etc.

What's in the vest?

- extension tubes, flashcards, loupe (Hoodman) to see LCD, remote, blower & cloth
- remote and mirror lockup
 - avoid camera shake caused by pressing shutter
 - remember to cover viewfinder; if not covered may affect exposure in automatic or semi-automatic modes (Auto, A (Av), S (Tv), P)
 - get simple remote for \$20 and under (additional functions on more expensive models)
 - mirror lockup or self-timer help avoid camera shake for DSLR
- right angle viewfinder or articulating LCD and LCD loupe
 - right angle viewfinder (Hoodman): useful when camera too low to comfortably see through its viewfinder (saves the back)
 - LCD Loupe (Hoodman): glare-free LCD screen viewing
- Close-up lenses
 - may be called: close-up filters, lenses or diopters (diopter = optical power measurement, e.g., +1, +2, etc.)

- magnification with no light loss; renders about 1/3 life size; same working distance regardless of focal length of lens, about 7"
- like adding reading glasses for far-sighted person, it magnifies
- mount on a lens' filter threads, may use step ring for smaller lenses
- single element vs. double element
 - single element, inexpensive and typically show chromatic aberrations
 - double element, may not be completely free of aberrations, but the two elements can be made to cancel each other
- single element, e.g., Tiffen +1, +2, +4 (may be stacked)
- double element: ProMaster (+3 or +5) or Canon 500D Close-up Filter (52, 58, 72, & 77mm - use step rings) or Marumi DHG Achromatic Macro (77mm - use step rings) used with any telephoto or macro lenses (e.g., 70 - 300mm); Nikon #3T (52 mm), #4T (52 mm) & #5T (62 mm) and Hoya +10
- filter wallet, extra lens cap
- polarizing filter
 - removing unwanted reflections on leaves, water, metal, etc.
- flowerpod (see Resources)
 - holds plant material steady or out of the way
 - holds flashlights
- macro warming flashlight & LED120 Plus Rechargeable Light (see Resources)
- Plamp (see Resources) and clothes pins
 - Wimberley Plamp holds objects, one end clamps to tripod and the other to the object to be held, e.g., reflector, sunshield, remote, plant material (stabilizes or moves out of the way)
 - clothes pins hold materials together or out of the way.
- poison ivy relief, insect repellent, sunscreen, AfterBite®, hand sanitizer
- smartphone or digital P&S
 - macro setting (tulip icon)
 - allows close focusing
 - may document shoot location

What's in the bags?

- windscreen
 - helps protect against wind disturbing macro subjects
 - made from acrylic (Plexiglas®) and packing tape
- diffusion discs, reflectors & LiteDisc® Holder (see Resources)
 - reflectors: advantage, may add light in darkened areas of image as you are looking at the subject - Gold, soft gold, silver
 - diffusion disk: advantage, creates diffused light in harsh light conditions
 - LiteDisc® holder: adds an extra hand to hold reflector or diffusion disk without assistant
- glass with clamps (see Resources)
 - colorless art glass held by clip and studio/super clamps attached to tripod
- flashlights (not pictured here)
 - illuminate subject to enhance images
 - hit shadow areas, use side & rear lighting & may warm the light with filter gels
- spray bottle (not pictured) - artificial "spritzer"

RESOURCES

BOOKS

- *Understanding Close-up Photography: Creative Close Encounters with or without a Macro Lens* by Bryan Peterson
- *How to Photograph Close-ups in Nature* by Nancy Rotenberg & Michael Lustbader
- *Photography and the Creative Life* by Nancy Rotenberg
- *Photography and the Art of Seeing* by Freeman Patterson
- *The Art of the Photograph: Essential Habits for Stronger Compositions* by Art Wolfe & Rob Sheppard

TRIPODS - consult with Hunts Photo, Gary Farber at Hunts Photo, gfarber@huntsphoto.com or (781) 462-2332

- *Serious Support* by Thom Hogan [<https://www.bythom.com/reviews--books/tripods-today.html>].
He's written some excellent books on Nikon cameras, but also has general info that is quite helpful for all shooters. He's a Nikon shooter, so if you're a Canon shooter, the Nikon cameras and lenses should be translated into Canon and/or your specific manufacturer. He has some very useful info here!
- Macro Tripod - VEO 3T+ 264CB (15% OFF - TODDNET15) [<https://www.vanguardworld.com/products/veo-3t-264cb-carbon-fiber-travel-tripod>]
- Really Right Stuff (RRS) Versa Mk2 [<https://reallyrightstuff.com/tvc/>]
- Gitzo's GT3543LS
[https://www.huntsphotoandvideo.com/detail_page.cfm?productid=GT3543LSUS&mfq=Gitzo&show=yes]

BALLHEADS

- Flexshooter Pro w/ lever release [<https://www.flexshooter.co.uk/>]
- RRS BH-40 w/ lever release [<https://reallyrightstuff.com/bh-40-ball-head/>]

CLAMPS (for glass)

- Super Clamp 035L with Std Stud: <https://a.co/d/9KE4aoJ>
- Manfrotto 175 Spring Clamp: <https://a.co/d/2TU2KRy>

HOODMAN LOUPE: <http://hoodmanusa.com/>

Purchase through Gary Farber at Hunts Photo, (781) 462-2332

REFLECTORS, DIFFUSION DISKS AND HOLDER

- 5-in-1 Diffusion / Reflector: [Purchase from Hunts Photo - Gary Farber]
- 12" ProMaster ReflectaDisc: [Purchase from Hunts Photo - Gary Farber]
- LiteDisc® Holder: <https://photoflex.com/products/litedisc-holder-compact>

MACRO FLOWER HOLDER, PLAMP

- Wimberley Plamp II -- [Purchase from Hunts Photo - Gary Farber]
- Flowerpod - Les Saucier

WARMING FLASHLIGHT BEAM & LED LIGHT

- LumeCube RGB Panel Pro & Panel Go: [Purchase from Hunts Photo - Gary Farber]
- LumeCube 2.0 Pro Kit: <https://lumecube.com/products/lume-cube-2-0-professional-lighting-kit-2-lights-all-diffusers-and-modifiers>

LENSBABY

- For information and ordering: <http://www.lensbaby.com/>
- <http://kathleenclemonsphotography.com/> [Excellent photographer using Lensbaby]

INFORMATION... If you order from Hunts Photo out of MA or ME, call and let them know that you're a student Nettelhorst Photography. Ask for Gary Farber - gfarber@huntsphoto.com or (781) 462-2332