

In Camera Focus Stacking (Mushrooms)

by
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How to Set up

- Set *Focus Bracketing* in your camera
- Choose your *Number of shots*
- Adjust the *Focus increment*
- Turn on *Exposure smoothing* (Canon) if ambient light fluctuates
- Turn on *Depth composite* (Canon) if you want the camera to merge the images into a finished JPEG internally
- If you want full raw editing control, disable in-camera composition (if your camera supports this) and stack the separate raw files later using desktop software

Recommended Camera Settings for Mushrooms

- ***Number of Shots:*** Set between 20 to 40 shots. A mushroom has significant depth from the front edge of its cap to the back gills
- ***Focus Increment:*** Set to 2 or 3. This ensures small, overlapping steps with no "gaps" of unsharpness, especially if you are shooting close up at 1× to 2× magnification
- ***Shutter Speed:*** Make sure your shutter speed does not drop below 1/60s if there is a breeze, or the mushroom might blur from wind movement during the stack

ISO

- ***Push the ISO:*** Do not be afraid to push the it to ISO 800 or 1600 to maintain a safe shutter speed. Since you are stacking multiple images, noise can sometimes look less prominent, or you can easily clean it up later in post-processing
- ***Auto ISO:*** Dark woods can trick the camera into spiking the ISO to noisy extremes. Set an Auto ISO Maximum Limit of 3200 or 6400. You can also adjust your Auto ISO minimum shutter speed limit so the camera automatically keeps your shots fast enough to beat the wind

Field Workflow

- ***Get Low and Stable:*** Place your camera on a low tripod or a beanbag on the forest floor. Mushrooms look best shot from their eye level rather than looking down from above
- ***Clean the Frame Area:*** Gently remove distracting twigs, bright dead leaves, or dirt specks from the mushroom cap before shooting

Field Workflow

- ***Focus on the Closest Point:*** Manually pre-focus or autofocus on the nearest part of your subject before pressing the shutter; the camera steps focus deeper into the scene from that starting point
- ***Manual Focus:*** Turn on Focus Peaking in your viewfinder. Use the lens focus ring to place the sharpest red/yellow peaking lines on the absolute closest edge of the mushroom cap or stalk facing the lens
- ***Autofocus:*** Spot AF is highly recommended

Field Workflow

- ***Trigger Gently:*** Use a 2-second timer or a remote shutter app to avoid introducing camera shake when you initiate the sequence
- ***Use a Reflector:*** Carry a small, cheap 5-in-1 collapsible reflector. Use the silver or white side to bounce ambient overhead sky light directly into the dark gills underneath the mushroom cap

Background Focus

If your background isn't blurry enough, it means the focus stack is pulling too much of the scene into sharp focus, or your physical setup isn't maximizing background separation

- Reduce your Number of shots to 8 to 12 frames, Change your aperture to f/6.3, Change your Focus Increment to 2
- Move your camera as close as possible to the mushroom until you hit the lens's minimum focus limit
- Look for a mushroom that has at least 3 to 5 feet of open space behind it

Picture Styles (Canon Terminology)

- ***Landscape***: Highly Recommended. This boosts greens, blues, and earthy browns. It makes forest moss pop vividly and increases default sharpness, which is perfect for capturing the fine details of gills and caps
- ***Faithful or Neutral***: Use these if the mushroom has very delicate, subtle pastel colors. These profiles prevent the camera from over-saturating the tones, keeping the colors exactly as your eyes see them
- ***Fine Detail***: This keeps colors natural but aggressively sharpens micro-textures. It is fantastic if you want to emphasize the gritty textures of dirt, bark, or fine hairs on a mushroom stem

Fine-Tuning Your Picture Style

- ***Sharpness - Strength***: Push this up by +1 or +2 from the default. A little extra in-camera sharpening makes the stacked JPEG look incredibly crisp
- ***Contrast***: Lower this by -1. Forest floors often have harsh bright highlights (sunlight breaking through leaves) and deep dark shadows. Lowering the contrast helps the camera preserve details in both the brightest parts of the cap and the dark shadows underneath
- ***Saturation***: If the forest looks dull or gray, bump this up by +1 to make the mushroom's natural tones stand out against the background

Pictures! The Results....

First Picture of Series



Focus Stacked Out of Camera



Final Edit

















































Questions?