



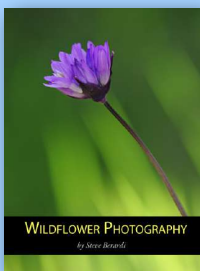
13 TIPS FOR WILDFLOWER PHOTOGRAPHY

by Steve Berardi

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For a complete guide to wildflower photography...



For a complete guide to photographing wildflowers, check out my ebook, *Wildflower Photography*. In the book, you'll learn all about setting up your shot, taking the shot, and then how to post-process your images in Photoshop. The book also includes twelve example photos, with complete stories about how those images were made.

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1

How To Get Perfect Light

Wildflowers display some of the most brilliant colors found in nature. And, for good reason—they're fiercely competing with each other to attract their pollinating friends: the insects and a few species of birds.

However, their brilliant colors often make them difficult to photograph. Have you ever come home with a full memory card only to find out that all those beautiful flower photos you took have blown out highlights, washed out colors, and harsh shadows?

Well, there's a secret to avoiding all these problems: **photograph wildflowers on an overcast day.**

The clouds act as a natural diffuser of the Sun's light, so when the sky is overcast, you'll get the most balanced natural light possible.

On the other hand, when the sky is clear, the bright sun will cast harsh shadows on flowers which creates a problem for exposure (and usually results in blown out highlights, like in the photo on the right). Since the colors of wildflowers are practically all highlights, this is a huge problem!

So, ideally, you'll want to shoot your wildflower photos on an overcast day. But, don't worry if you can't wait for the perfect light, you still have a few options (see the next tip).



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2

How To Control The Light

What if you can't wait for an overcast sky? Well, the next best thing you can hope for is a partly cloudy day. Then, wait until the sun goes behind a cloud before you shoot your photos. This won't provide as good a diffusion as a completely overcast sky, but it will still get you great results.

For example, the wildflowers of the Mojave Desert bloom for only a few weeks, and this desert rarely has an overcast day. So, in order to take the photo at the right, of a Desert Dandelion, I just waited until a few clouds blocked the Sun.



You also have another option to compensate for poor natural lighting: use an artificial light diffuser. You can build your own in two easy steps. All you need is scissors, tape, a wire clothes hanger, and a shower curtain (make sure you get a semi-clear and non-tinted one). And, here's how to build it:

1. Bend the wire hanger into a square or circular shape. You can do this just by pulling on the bottom of the hanger and bending it until you get a nice square shape.
2. Place the shower curtain over your bent hanger, and cutout a piece that is a little bigger than the wire frame. Then, just tape this onto the frame, and you're done!
3. You should have something that looks like the photo below.



How to use your new diffuser

Using your new diffuser is easy—just hold it between the sunlight and the wildflower you're photographing. Make sure you're holding it in such a way to diffuse ALL light that's coming into the frame (not just the light that's shining on the flower).

3

How To Get Sharper Images

Since the viewer tends to look at the sharpest part of the image first, it's important to try and make your flowers as sharp as possible. So, here are a few tips:



- (1) **Always use a tripod.** I know—tripods are heavy, they take a long time to setup, and can cost a lot of money, but it's nearly impossible to get sharp photographs without one. Nothing keeps your camera more still.
- (2) **Enable mirror lockup.** Normally, the mirror in your SLR will flip up immediately before the shutter opens, and this flip can make the camera vibrate a little. Enabling mirror-lockup (disabled by default on most cameras) will add a significant pause between the time the mirror goes up and the shutter opens, letting any vibration die down before the photo is actually taken. Look in your camera's manual to find out how to enable this feature.
- (3) **Use a remote shutter-release or timer.** The less you touch your camera, the less it will shake. When you press the shutter button on your camera to take a photo, there's a good chance you'll shake the camera a little. To prevent this, use a remote control to release the shutter, or you can just use the timer on your camera (so any vibration you caused by pressing the button will die down before the shutter is actually released).
- (4) **Shoot lots and lots of photographs.** Because wildflowers are so gentle, the slightest breeze can send the flower bouncing through the air. Taking lots of photos will help you capture the flower in between these movements.
- (5) **Use the sweet spot of your lens.** Most lenses are sharpest in their "mid ranges." For example, if your 70-200mm zoom lens has a speed of f/4, then you'll probably get the sharpest results from using f/6.3 and zoomed at 135 mm. Very rarely are lenses sharp on their "fringes." Also, fixed focal length lenses are generally sharper than zoom lenses.

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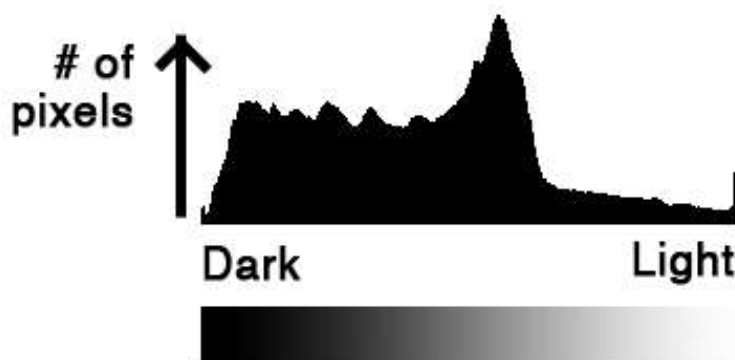
4

How To Get A Perfect Exposure

Getting a good exposure is extremely important in wildflower photography, because if you try to correct the exposure too much in post processing, then you'll lose a lot of detail in the flower's petals. Luckily, with digital photography, we have tools like the histogram to help us find that perfect exposure.

The histogram is an essential tool for determining digital exposure. If the word "histogram" brings back bad memories of boring lectures in math class, don't worry: the histogram is pretty simple. It basically just shows the distribution of light and dark pixels in your image.

Here's an example, with each axis labeled:

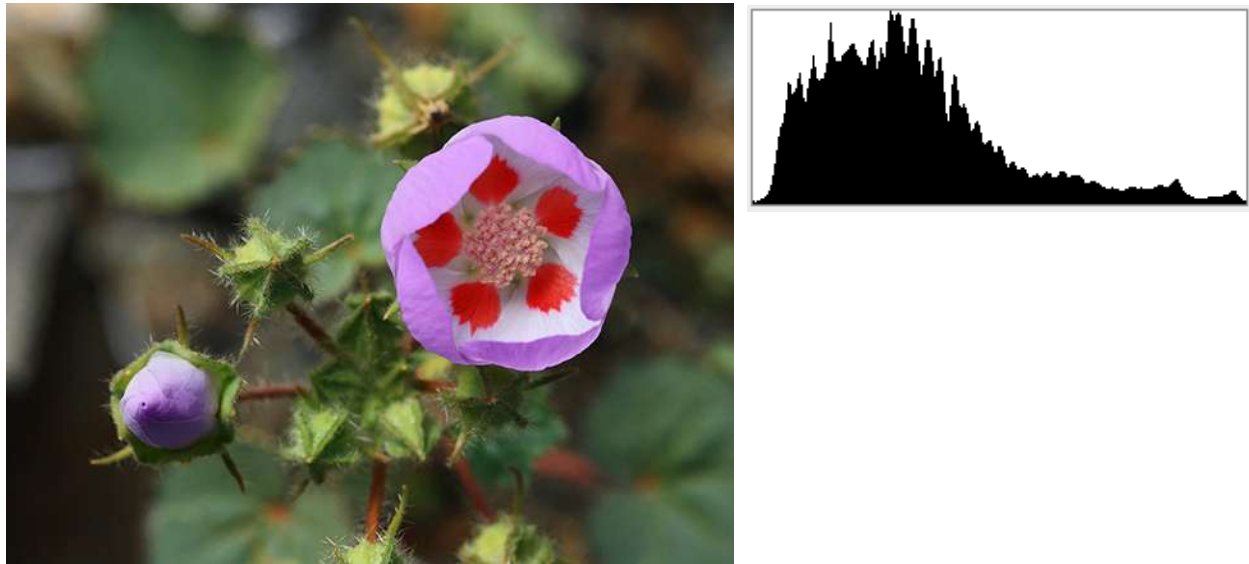


The left side of the graph shows how many dark pixels you have in your image, while the right side of the graph shows how many light pixels you have in your image. So, in this example, the image mostly has dark to midtone pixels.

At first you may think that every image should have a balanced (i.e. bell curve) histogram, but this doesn't always happen. It really depends on your image. For example, the histogram of a snow-covered landscape will mostly consist of bright pixels, so it'll carry most of its weight on the right side of the histogram. But, a photograph of a black cat will mostly consist of dark pixels.

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So, let's look at a real example. Here's a photo of a Desert Five-Spot and its corresponding histogram:



At first you might be confused: this is a flower, and it's bright, so shouldn't all the pixels be on the bright (right) side? Well, although this is a photo of a wildflower, the flower actually takes up a very small part of the frame. Most of the background is actually quite dark, which takes up the majority of the frame.

This is just the regular histogram though. There's actually another version, that'll tell you a lot more about the exposure of your photos: the RGB histogram.

If you understand the regular histogram, then the RGB histogram is simple: it shows you the histogram of each individual color channel (red, green, and blue).

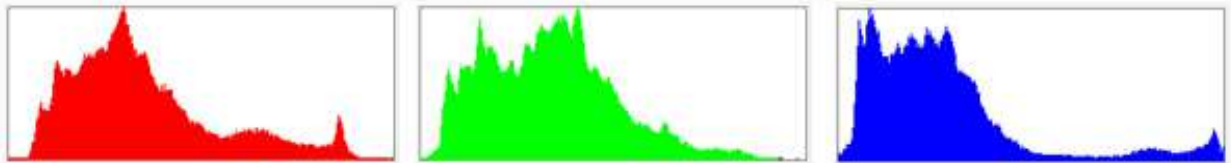
The bad thing about the regular histogram is that it lumps all these color channels together, making it hard for you to see if you're underexposing or overexposing a specific color channel. And, on some cameras, the regular histogram only shows you the green channel, leaving you completely blind to the red and blue channels (which happen to be some pretty common colors amongst wildflowers!).

So, the RGB histogram is similar to the regular histogram, but now you have a separate histogram for each color channel.

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The goal with the RGB histogram is simple: you don't want to underexpose or overexpose any of the color channels, so look at each channel's histogram to ensure the graph isn't bunching up to one side and overflowing off the graph. If you're overexposing your image, then the histogram will show a line on the far right that extends all the way to the top of the histogram.

As an example, below is the RGB histogram for the same photo I showed earlier of the Desert Five-Spot:



Notice how the green channel doesn't spread all the way to the right? At first, you might think this means the image is underexposed, but remember: this is only the histogram of the green channel.

With the RGB histogram, your goal is not necessarily to get a balanced histogram in each channel, but instead to ensure you're not losing details in any one of the color channels by underexposing or overexposing.

Your goal is to keep increasing exposure (using longer shutter speeds), until the histogram is as far to the right as possible in at least one of the color channels.

So, although the green channel doesn't have many highlights in this image, notice how the blue channel does: its histogram is spread out and nearly touches the right side. The important highlights in this image are in the blue channel, so that's what I exposed for.

Many times you will have just one of the color channels spreading all the way to the right, while the others will be to the left or in the middle. The channel you should focus on is the one that's farthest to the right. In this case, it was the blue channel.

For a step-by-step tutorial on how to use the histogram, check out my complete guide to wildflower photography at:

<http://photonaturalist.net/new-ebook-on-wildflower-photography/>

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5

How To Get A Perfect Background

A good background is essential for wildflower photos, because it helps draw attention to your main subject: the flower. Here's what a good background usually consists of:

1. Strong contrast with the flower
2. Smooth seamless color
3. Completely out of focus

The first two properties are easy to accomplish: just look around until you find a flower with a background that's made of just one smooth color that contrasts well with the flower.

Then, to get those awesome blurry and out of focus backgrounds:

1. Use a lens with a long focal length
2. Maximize the distance between the flower and the background
3. Use a wide aperture (between f/5.6 and f/8.0)

For #1, you'll need a telephoto zoom lens (a range of 100-300mm works well). The longer the focal length you use, the more blur/bokeh you'll get. The long lens basically lets you isolate the flower against a very specific part of the background.

For #2, you may have to do a bit of searching for the perfect flower. Not only do you want to find a flower with perfect petals and coloring, but the flower also needs to have a smooth and seamless background that's far away (at least a few feet). This is much more important than #1, so don't ignore this!

Lastly, make sure you use a wide aperture. Something like f/5.6 or f/8.0, depending on how much depth there is to the flower and the focal length of your lens (for longer focal lengths, use a smaller aperture, such as f/8.0).



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6

How To Focus Closer

Every lens has a minimum focusing distance: the closest point where the lens can get a sharp focus. Generally, the longer the focal length of the lens, the greater the minimum focusing distance.

This becomes a problem with photographing wildflowers, since you'll often use a telephoto lens to get that great background. And, since most flowers are pretty small, you'll have to get your camera pretty close to fill the frame.



So, to get your lens to focus closer, use an extension tube.

An extension tube (pictured above) is a pretty basic piece of equipment: it's just a hollow tube that extends the distance between the lens and the camera's sensor. The more you increase this distance, the closer the lens can focus.

Extension tubes come in a variety of different sizes, from 12mm to 50mm, but the 25mm tube is usually the most useful. For example, if you put the 25mm extension tube on a Canon 70-200 F/4L lens, you can change the minimum focusing distance from 4.9 ft to about 4 ft! This 1 ft difference may not sound like much, but test it out in the field, and you'll surely be glad you have that extension tube.

You can also use an extension tube as a cheap way to turn your 50mm lens into a macro lens. If you add a 25mm tube to that lens, you'll end up with 1/2X magnification (where a true macro lens would be 1.0X). As a rule, magnification equals the total extension divided by the focal length of the lens.

7

How To Make Identification Easier

One of the most rewarding parts of nature photography is learning how to identify your subjects. When we place a name on something, it somehow makes us feel more connected to it.

When you first meet someone, the first thing you tell them is your name. And, so naturally, when we photograph something we haven't seen before, we immediately want to know what it is.



But, it's not always easy to identify wildflowers.

Sure, you may already know some of the more common species in your area, but what if you're hiking down a trail and see this amazing flower for the first time?

Well, there's one thing you can do that'll make it A LOT easier to identify that flower later:

Take photos from lots of different angles

Sometimes all that separates one species of flower from another is the shape of their leaves, or the presence (or absence) of little hairs on the leaves. And, these key features that help identify your subject are not always visible in the most artistic pose of your subject.

So, when you stumble upon a new flower, take that artistic shot first, but then get some photos from different angles to help you identify the flower later.

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8

How To Battle the Wind

Wildflowers are gentle—*very gentle*. The slightest breeze can send them bouncing through the air. But, to get sharp photos, you need a still subject. So, how do you work with the wind to get that flower to stand still for just a second?

Well, you're going to need some patience. Although there may be a strong breeze in the air, chances are that it will stop at variable times for just a few seconds. Be prepared when this happens.



Aside from waiting for that calm moment, here are a few other things you can try:

- 1) **Use a fast shutter speed.** To get a faster shutter, you can try using a higher ISO (200 or 400), or using a wider aperture. It may be tempting to try and underexpose your shot to get an even faster shutter, but never underexpose when shooting wildflowers. It's impossible to recover those brilliant colors in post processing. Perfect exposure is absolutely necessary.
- 2) **Use something to block the wind.** Another way to help battle the wind is to have a friend hold up your homemade light diffuser or anything else that can help block the wind (like a jacket or shower curtain).
- 3) **Take lots and lots of photos.** Since the wind is so variable and your flowers may only be still for a split second, it's nearly impossible to anticipate these moments of perfect stillness. So, take lots and lots of photos to ensure you capture the flower at a moment between the breezes.

9

How To Create Intimate Images

Which of the two photos on the right do you like better?

They were both taken of the same flower, with the same camera settings. The only difference between the two shots is the position of the camera.

I'll take a wild guess that you like the first one more.



And, I think this photo is better because it has more of an intimate and friendly feeling to it. Now, part of the reason the first photo has this intimate feeling is because the flower is more isolated from its background.

But, what's more important here is the perspective: the first photo was taken from a position looking directly at the flower (which stood just a few inches high). I was lying down on the ground with the camera on the same level as the flower, almost as if I was seeing eye-to-eye with the flower (if the flower had eyes, hehe).

The second photo was taken from a more elevated position: I was kneeling and looking down on the flower with my camera. When we look down on things, we tend to have a slight feeling of superiority or conquer, and this diminishes that friendly feeling.

The position of your camera in relation to your subject (whether it's above, below, or on the same level), will determine the feeling you portray in your photo.

So, to create that intimate and friendly feeling in your nature portraits, you have to photograph your subject on their level. You have to see them eye-to-eye. Sometimes this might mean lying down on a bed of sharp rocks and being sore for a couple days, but the rewards are well worth it!

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10

How To Leave No Trace

Okay, so this one isn't really a tip for getting better wildflower photos, but any time I talk about wildflower photography, I feel it's important to remind everyone to "leave no trace" when you're out on a trail.

Leaving no trace means you leave the wilderness just as you found it (or maybe a little better by picking up any trash you find). It means the only thing you take away is photographs, and the only thing you leave behind is footprints.

Here are a few tips for leaving no trace:

- (1) **Be careful where you step.** Many plants require a specific soil structure to grow, so stepping on that soil can disturb the land and prevent further plant growth. Stay on the established trails as much as possible, and if you do venture off trail, then stay on stable surfaces like gravel.
- (2) **Pack out all trash.** Whatever you bring in, you should also bring out. This includes things like toilet paper and anything else that's "bio- degradable."
- (3) **Clean your shoes and backpack before and after a hike.** More and more invasive species are entering our wilderness, so to prevent them from spreading even more, make sure you clean your shoes and backpack before and after a hike. Their seeds can get stuck in the smallest crevices, so look carefully.
- (4) **Only clear dead vegetation and learn how to recognize "dead" stuff.** When you're composing a photograph, you're bound to find distracting objects in your scene and then be tempted to remove them. But, only remove the stuff that you're certain is dead. And, learn to recognize what's dead because in fragile places like the desert a lot of healthy living plants look dead.

As photographers, sometimes it's easy for us to get absorbed in the image-making process and forget about the environment around us, but leaving no trace will ensure that the next visitor enjoys the same wildness you did, and that those flowers will return next year.

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11

How To Sharpen Your Images

There are numerous ways to sharpen your images in Photoshop, but one of the most effective methods is High-Pass sharpening. It's great because it doesn't add much noise to your photos, and it's a pretty quick process:

- (1) You'll need to have a flat image for this, so if you have multiple layers, merge them together by selecting "Flatten Image" from the "Layer" menu.
- (2) Create a duplicate layer by selecting "Duplicate Layer" from the "Layer" menu.
- (3) Go to the "Filter" menu, and then under the "Other" menu, select "High Pass..."
- (4) The goal here is to select a pixel radius large enough so it outlines the edges of your photograph and shows a little bit of color (make sure the "preview" box is checked). Usually values between 4 and 10 work very well. Here are a few examples of radius values that are too small, too big, and perfect:



- (5) Click "OK" to apply the filter
- (6) In the "Layers" window, click on the blending mode listbox, and select "Overlay"
- (7) Your photo should now look like it's too sharp. But, don't worry, the next step is to fix that! Right next to the blending mode listbox, there's an "Opacity" slider. Click on that and lower the opacity until your photo looks sharp, but not too sharp. I usually set it between 30-45%.

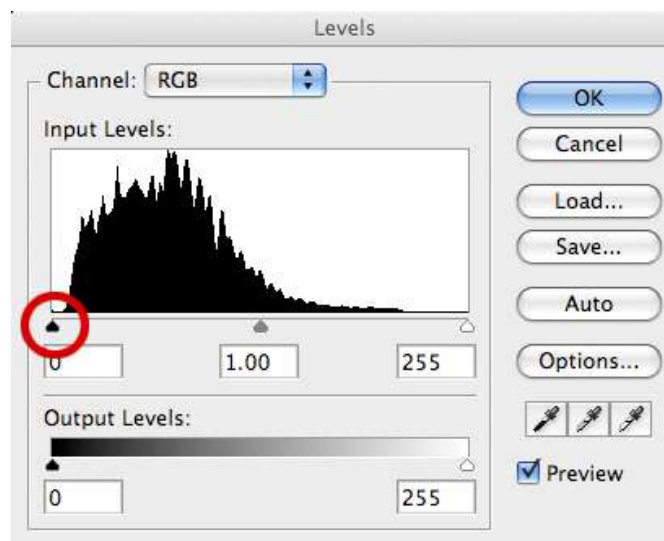
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12

How To Darken a Background

To make a wildflower really stand out in your photos, you'll want a dark background, so the bright colors of the wildflower really jump out at the viewer. This is really easy to do in Photoshop, and here's how:

- (1) Use the "Elliptical Marquee" tool to circle your subject. If your flower isn't circular, then you'll need to use the lasso tool to outline it.
- (2) Invert your selection by selecting "Inverse" from the "Select" menu.
- (3) Add a new "Levels" Adjustment Layer by going to the "Layer" menu, then selecting "New Adjustment Layer" and finally "Levels"
- (4) Make your selection darker by dragging the leftmost triangle towards the right (see red circle in screenshot below). The more you drag this triangle to the right, the darker your background will get. Stop when you're satisfied, and click "OK"



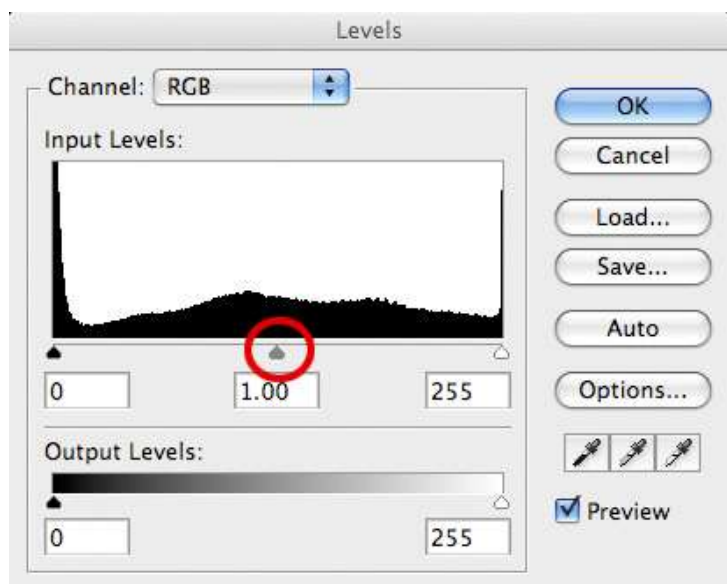
- (5) You should now have a dark background, but there's probably a sharp outline between your subject and the background now. To get rid of this, go to the "Filter" menu and select "Gaussian Blur" under the "Blur" submenu. Start at 100 pixels and keep increasing the value until that sharp edge is gone and the dark background merges smoothly with your wildflower.

13 How To Fix Underexposed Areas

Sometimes the perfect exposure for the petals of a flower isn't always the perfect exposure for other parts of the flower. So, in these cases you have to make a small increase or decrease in the exposure. Here's how:

- (1) Use the "Elliptical Marquee" tool to circle your underexposed area (which usually occurs in the center of flowers). If your area isn't circular, then you'll need to use the lasso tool to draw an outline around it.
- (2) Add a new Levels Adjustment Layer by going to the Layer menu, then selecting New Adjustment Layer and finally "Levels"

- (3) Make your selection lighter by dragging the center triangle towards the left (see red circle in the screenshot to the right). The more you drag this triangle to the left, the lighter your selection will get. Stop when you're satisfied, and click "OK" (alternatively, you may have to drag the rightmost triangle to the left instead of the center one, so try both!)



- (4) Your underexposed area should now be properly exposed, but there's probably a sharp outline between this area and the rest of your flower. To get rid of this, go to the Filter menu and select Gaussian Blur under the Blur submenu. Start at 0 pixels and keep increasing the value until that sharp edge is gone and the area merges smoothly with the rest of your wildflower.

When using this method to make small adjustments to your wildflowers, it's important to do just that: make *small* adjustments. If you try to move those level sliders too far (i.e. more than 10 points), you'll start blowing highlights and losing detail. Remember: it's critical that you get a good RAW exposure.

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The 1-minute summary of this book

1. To get the best light, shoot on an overcast day
2. If you can't wait for an overcast day, wait for clouds or use a diffuser
3. For sharper images, use a tripod, mirror lockup, and a remote shutter
4. Use a shutter speed that gets your histogram as far to the right as possible
5. Use a long lens and maximize the distance between the flower and background
6. Use extension tubes to get your lens to focus closer
7. Take photos from lots of different angles to help you identify the flower
8. Use a fast shutter speed, high ISO, and take lots of shots to battle the wind
9. Get down low to photograph the flower at its own level
10. Take only photos, and leave only footprints
11. Use high pass sharpening to make your images sharper
12. Emphasize the flower by darkening the background
13. Fix underexposed areas with a Levels adjustment layer

Where To Learn More

To learn more about photographing wildflowers, check out these helpful articles:

Sometimes Close-ups Are Better From Far Away

<http://www.digital-photography-school.com/sometimes-close-ups-are-better-from-far-away>

How to Use Your Tripod

<http://www.digital-photography-school.com/how-to-use-your-tripod-its-not-as-simple-as-you-think>

Why the Sharpest Photo Isn't Always the Best Photo

<http://photonaturalist.net/why-the-sharpest-photo-isn%E2%80%99t-always-the-best-photo/>

How to Photograph Wildflowers With Flash

<http://photonaturalist.net/how-to-photograph-wildflowers-with-flash/>

9 Tips For Photographing Wildflowers With a Point and Shoot Camera

<http://photonaturalist.net/9-tips-for-photographing-wildflowers-with-a-point-and-shoot-camera/>

Evolution of a Nature Photograph

<http://photonaturalist.net/evolution-of-a-nature-photograph/>

Close-Up Photography With a Wide-Angle Lens

<http://www.outdoorphotographer.com/how-to/shooting/close-up-wide-angle.html>

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- ▶ **How to create good compositions**
- ▶ **How to choose the right aperture**
- ▶ **How to find the perfect exposure**
- ▶ **How to maximize sharpness**
- ▶ **How to apply color theory**
- ▶ **How to get more depth of field with focus stacking**
- ▶ **How to post-process your images with Photoshop**

Also, learn by example with twelve example photos. Each example includes the camera settings that were used to create the image, as well as the complete story of how the image was made.

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About the Author



Steve Berardi is a naturalist, photographer, software engineer, and founder of PhotoNaturalist—a blog about nature photography with over 5,000 subscribed readers. You can usually find him hiking in the beautiful mountains and deserts of southern California. His photos have been used by *Nature Photographer Magazine*, the Sierra Club, and the National Wildlife Federation. He's also written numerous articles for *PhotoYou Magazine* and the Digital Photography School, the largest photography blog on the internet.

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