

As a nature photographer, I am always struggling with depth of field. I am either trying to get an extreme depth of field, having everything sharp from the foreground to the background, or trying for a narrow depth of field, isolating a subject from its background. This article covers using digital techniques to increase depth of field, and in the next issue of Currents I'll cover decreasing depth of field.

When in the field, I think digitally, whether shooting with film or my digital camera. I shoot multiple frames of a subject, concentrating on focus in different areas or exposures of certain parts, knowing that the sum of all the parts will result in a visually more creative image than can be captured in just one frame. With practice and a little forethought, you too will see that the steps you take in the field can help you create better images in your digital darkroom.

When shooting with a 400mm or longer lens, getting everything in focus from the foreground to the background is almost impossible. This is especially true with fairly high shutter speeds, which require larger apertures to maintain proper exposure but result in shallower depth of field. I find it particularly disturbing when the subject is in focus but the foreground is a blur, especially if the foreground consists of tall grasses, sticks or branches. To deal with this problem, I take two to three frames of each composition: one frame with the foreground sharp, a second frame with the subject sharp and sometimes a third frame with the background sharp. I later combine these images to give me one telephoto shot with everything in focus.

Tip: This technique can also be used in macro photography, when it is impossible to get the whole subject sharp in one exposure

There are two methods for achieving this technique in Photoshop. Photoshop CS3 or higher can do it automatically, and the manual method is necessary for older Photoshop versions.

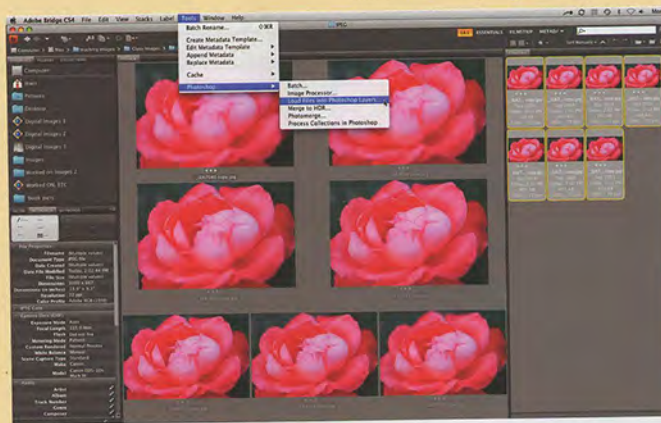
Automatic Method

STEP ONE: Select the images you want to combine. If you use the Photoshop/Bridge combination, select

the images in Bridge and then go to Tools > Photoshop > Load Files into Photoshop Layers. If you use Lightroom, then select the images and go to Photo > Edit In > Open as Layers in Photoshop. Both of these options produce similar results: they combine all of your images into one file with separate layers in Photoshop.

STEP TWO: Select all the layers: click on the top layer, hold the Shift key, then click on the bottom layer. This will highlight all the layers.

STEP THREE: Go to Edit > Auto-Align Layers (use the Automatic option) to have Photoshop align the layers.



Using the automatic method in CS4





Tip: If, when taking your images, your camera was locked down tight on a tripod and you are sure your layers are aligned, you can skip step three.

STEP FOUR: Go to Edit > Auto-Blend Layers and a dialog box will appear. Choose the Stack Images option and check the Seamless Tones and Colors checkbox. All that's left to do is to wait as Photoshop combines the layers, chooses the areas with the most contrast (sharpness equals contrast) and combines your layers to make one sharp image.

The Manual Method

STEP ONE. Open all the images you are going to use. (Our example uses four.)

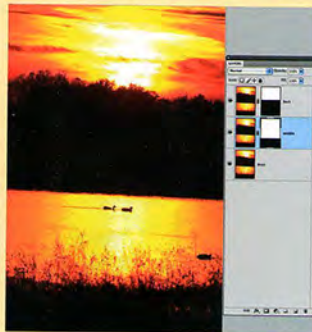
STEP TWO. Copy and paste the images on top of each other.

STEP THREE. Turn off the opacity of the top layer (unclick the "eye") so that you only see the middle layer and the bottom layer. While having the middle layer as the active layer, create a layer mask. You can either use the menus (Layer > Layer Mask > Reveal All) or click on the layer mask icon located on the bottom of the layers palette. I created a Reveal All mask, which is actually a white mask that shows the entire image.

STEP FOUR. Draw on your mask with the Gradient Tool.

Tip: The keyboard shortcut is the G key.

Combining layers manually



Since Black hides and White shows, you want the mask to be black on the bottom to hide those pixels and reveal the pixels of the sharp layer below, and white on top to reveal all the sharp pixels that make up the middle ground area of the photograph. Draw a hard edge gradient by keeping the area you drag with the gradient tool short. Hold the Shift key

while drawing with the gradient to keep your line straight.

STEP FIVE. Repeat the process on the top layer (the one with the background in focus) by turning on the "eye." Make this the active layer by selecting it. Create a layer mask and then draw a short line with the Gradient tool, starting where the sharp part of the image is located. This will hide the blurry part of the top layer and only show the sharp part. You will also be able to see the sharp areas of the lower layers, thus giving you an image that is in focus from foreground to background!

By planning ahead, thinking and shooting digitally, you can overcome the problems associated with the limited monocular vision of your lenses and make images that reflect how your eyes see them. Lack of depth of field will no longer hamper your vision. ☺

Lewis Kemper specializes in nature and wildlife photography. He is a member of Canon's Explorers of Light, a group of some of the country's most influential photographers. Lewis's computer-enhanced images have been used in advertisements, magazines, books, cards, bookmarks and calendars throughout the world. He teaches digital imaging seminars for Palm Beach Photographic Centre, Santa Fe Workshops and the Light Photographic Workshops. Lewis sells his Photoshop training DVDs at www.LewisKemper.com.



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