In the following tutorial, you'll many of the color correction and masking skills that you've learned so far, and apply them to the color correction of an image. This tutorial assumes that you've already worked your way up to the Color and Tone section of Chapter 14 of Complete Digital Photography, 4th edition.

Figure 1 shows a photo of a bald eagle. Although an okay image, the picture has some color troubles. First, the "bald" white color of the eagle's head has gone blue. In fact, most of the white tones in the image have gone blue. The file's EXIF information reveals that the image was shot with a Daylight white balance setting. Given that the scene was plainly shadowed, it's obvious that we're facing a bad white balance. Unfortunately, the daylight setting has emphasized the blue of the shadows.

In addition to the color troubles, the bright colors in the background slightly overpower the black and white of the eagle, so we'll want to tone down the background colors. And finally, the image is a bit underexposed and so it will need some black and white point adjustments.

Step 1: Open the Image

Open the image eagle.tif, located on the Complete Digital Photography CD-ROM, in the tutorials>chapter 14>Eagle Color Correction folder.

Step 2: Remove the Blue Cast

Let's begin by removing the blue cast caused by the bad white balance. We want to begin here so as to have the color as accurate as possible before we begin adjusting white and black points, or before trying to assess the foreground/background troubles.

It's pretty easy to see that this image is too blue. There are a number of ways to handle this problem. We could use a Curves or Levels adjustment targeted at the Blue channel, but we're going to use Photoshop's Hue/Saturation tool, simply because it's very easy to use for a situation like this, where the offending color is so easily identified.

From Photoshop's Layers palette, create a new Hue/Saturation adjustment layer

To remove a color using Hue/Saturation, we first need to target the color. From the Edit pop-up menu at the top of the Hue/Saturation dialog box, select Blues. The color ramp at the bottom of the dialog box will show you the range of colors that Hue/Saturation will target. As you can see, the default target is a little

Figure 1. *Because of a white balance problem, this bald eagle really looks a little more blue than bald. In this tutorial we'll restore the white of his features, and make some other adjustments to make him stand out from the background.*

darker than the blues that we're facing. We need a lighter blue.

Move your mouse over the eagle – your pointer should change to an eyedropper – and click somewhere on the white of the eagle's head, in an area that is too blue. (Figure 2)

The color selector should slide further down the left of the color ramp. The left-most read-out should read approximately 178°/208°. You have now targeted the proper range of blues in the image.

To remove those blues, simply drag the Saturation slider to the left. A desaturation of about –81 should be all you need. You want to be careful about going too far, as you might posterize some of the blueish tones a little too much.

As you desaturate the blues, the eagle's head will probably darken in tone slightly. Remember, your operation has simply changed the color of those pixels from a heavily blue-hued color to a lightly blue-hued color. In this case the new light blue color is a little darker than the dark blue color that was there before. To lighten the eagle's head back up a bit, drag the Lightness slider to the right to about +16. Click OK.

That pretty much takes care of the blue. Our bald eagle now looks, well, bald. (Figure 3)

Step 3: Desaturate the Background

The background is still a little too colorful for the black and white eagle in the foreground. Let's use another Hue/Saturation layer to desaturate the background.

With your last Hue/Saturation layer selected, create another Hue/Saturation adjustment layer. New layers are created above the currently selected layer and we
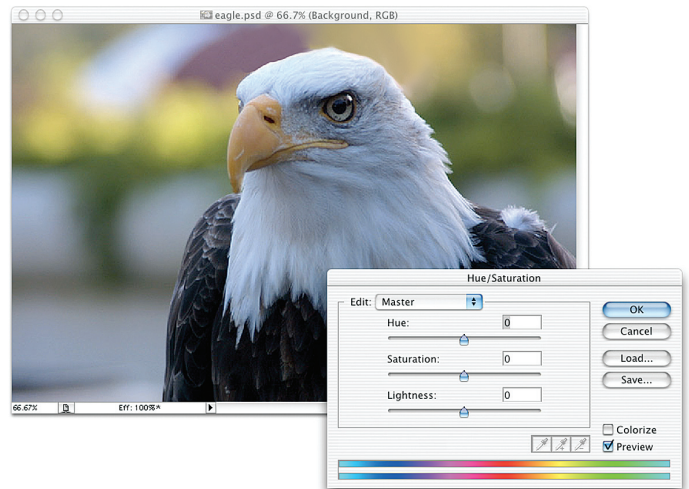

Figure 2. *Selecting a color range in the Hue/Saturation dialog box.*

Figure 3. *After our blue correction adjustment, our eagle is closer to being the right color. His white feathers now appear white instead of light blue.*

want the layers in this image to stack up on top of each other. In other words, we don't want to insert a layer between the background and our first adjustment layer. This time, leave the Edit pop-up menu set to Master to desaturate everything, not just a particular color range. Drag the Saturation slider down to about –61 to suck the color out of the background.

Unfortunately, this will also suck the color out of the eagle, rendering the whole image a little flat. To protect the eagle from the effects of this adjustment layer, you need to mask him. Choose Layer>Add Layer Mask>Reveal All and the mask will be selected for painting.

Click on a big paintbrush, select Black as your foreground color, and begin painting over the eagle. Each brush stroke will appear to brush in more saturated color. This is because each brush stroke is actually *masking out* the adjustment layer's desaturation effect. As you paint, you should also see a thumbnail of your mask appear in the layer mask thumbnail of the Layers palette (Figure 4).

After masking, your eagle should be back to his normal level of saturation. This looks better, but now the background looks washed out and the entire image is a little flat. Let's darken the background to lend more weight to the foreground and to boost its colors back up a bit.

Step 4: Adjust the Levels of the Background

Create a Levels adjustment layer (make sure it's the top-most layer) and drag the middle input slider to set the gamma to about 5. (Figure 5)

Unfortunately, because the Levels adjustment is affecting the whole layer, it's difficult to see what is a proper adjustment. Add a layer mask to your Levels adjustment layer and paint out the eagle, just as you did in Step 3.

With the eagle masked, double-click on the Levels adjustment layer in the Layers palette to re-open the Levels dialog box. Now you can readjust the levels without affecting the eagle. Try a gamma adjustment of around .7. Click OK when you're finished.
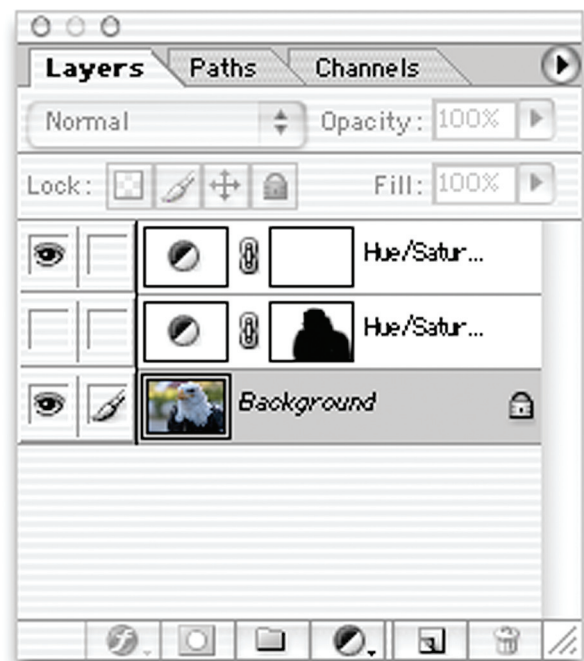

Figure 4. *Photoshop's Layers palette after painting a mask.*

Step 5: Adjust the White Point and Black Point

Now that you've got the color and contrast right, you can look towards brightening the whole image. Add another Levels adjustment layer – this time with no mask – and adjust the levels to your taste. We used a black point (the left-most input slider) of 9, gamma (the middler slider) of 1.14, and white point (the right-most slider) of 229. Click OK when you're finished.

As you can see, performing even simple color corrections on an image can often take several color correction functions filtered through a variety of masks. It's also important to think about the stacking order of your adjustment layers. For example, if you move the first Levels layer you created *below* either of the Hue/Saturation layers, your image will get darker as it will be operating on colors before they've been desaturated.

With this exposure to Hue/Saturation, as well as the additional practice with Layer Masks, you might now want to try watching the Color Correction movie located in the Tutorials>Chapter 13 folder of the companion CD-ROM. Or, you can also simply continue on through Chapter 14.

Figure 5. *Eagle image with Levels adjustments before any Levels masking information is applied. Without a mask, the Levels adjustment is affecting the entire image.*

Figure 6. *The final eagle image after color correction.*