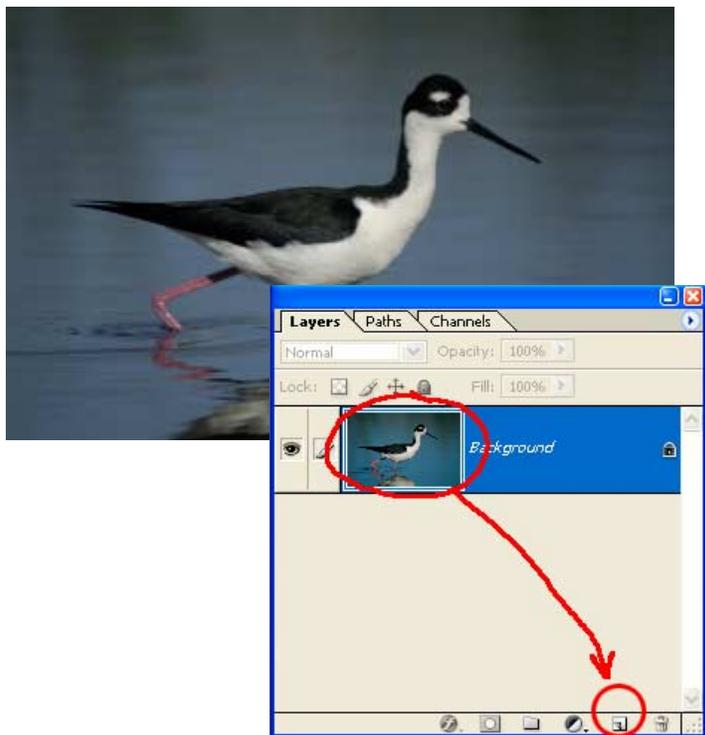


# Extending the Dynamic Range

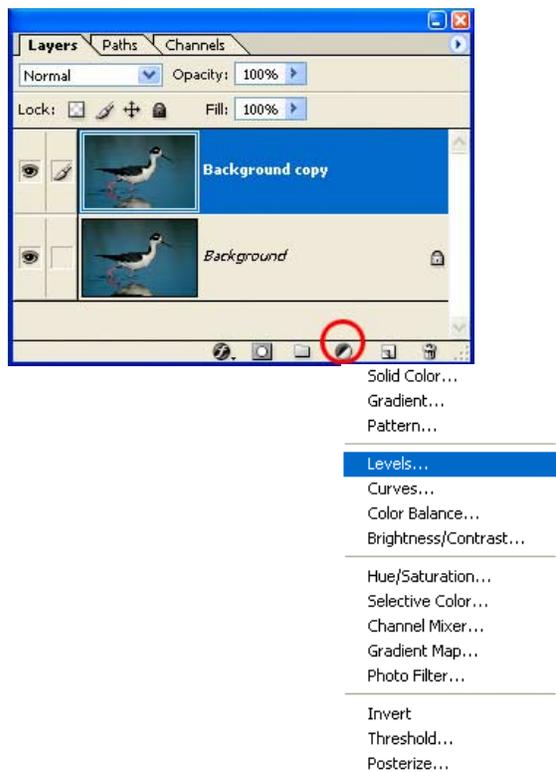


In many instances, it's necessary to under-exposed an image in order to protect the information on the high-lights. This obviously makes the shadows darker than they really are, while keeping the highlights from being blown out. This tutorial will teach a quick way to solve the problem. Note how I have under-exposed the bird below to protect the white areas.



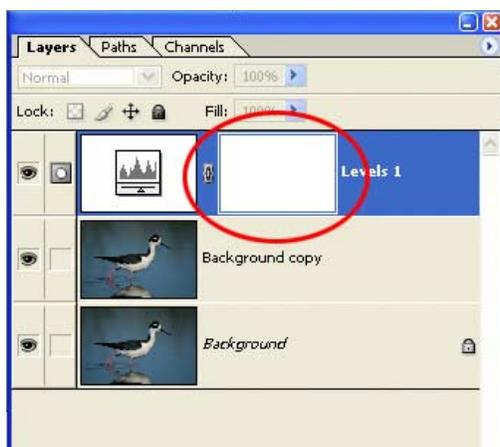
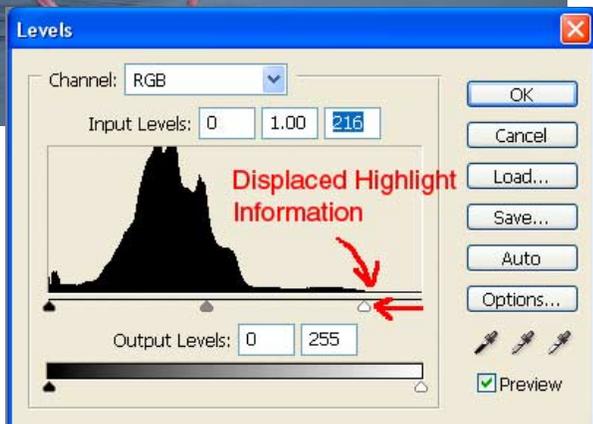
## Step 1:

Open the file in Photoshop and proceed to make a duplicate layer of the background image. For this, you must click and drag the background layer and release right over the New Layer icon at the bottom of the layer palette. Two reasons to make a duplicate layer when working in Photoshop: safety and convenience. If at any point you make a change that actually damages the image, you can always go back to your original layer. If after applying several changes to a duplicate layer, you want to see how the original looked like, all you have to do is turn off the layers or layer adjustments to reveal the background layer.

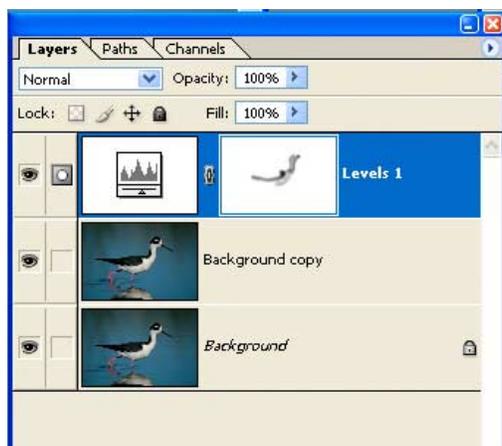


## Step 2:

Now that you have a duplicate layer, you can start making changes without running the risk of damaging your original. Let's start by adjusting the exposure by using a Levels Adjustment Layer. To add an adjustment layer, you need to click the adjustment layer icon at the bottom of the Layer Palette and select Levels from the pop-up menu. This will automatically bring the Levels input box on the screen. The advantage of using an adjustment layer instead of using the Levels directly on the target layer, is that changes made on an adjustment layer are not applied directly to the layer itself, they're merely a set of instructions. When applying Levels directly to the layer, you would be changing the pixel information on that particular layer. With adjustment layers, you can always disable them and even use a Layer Mask without affecting the original information of the target layer.



Adjustment Layer Mask



### Step 3:

Now we can proceed to correct the exposure by using the Levels in the Adjustment Layer. Begin by dragging the highlight slider until it reaches the first significant information area of the histogram. This is the area representing the displaced highlights. This will distribute the image information over the whole range of tonal values. Check the image as you do this step and notice how the bright areas come to life. Now some of your highlights might look a little “hot” or overexposed. We’ll take care of that in the next step.

### Step 4:

Note that to the right of the Level Adjustment Layer there’s a white box. This is a Layer Mask that can be used to selectively mask or knock-out the effect of the Adjustment Layer, revealing the unmodified layer below. This mask works just like the Quick Mask Mode, but in this case it only applies to the Adjustment Layer. By clicking on the Layer Mask, it will become active. Now you can use the brush tool and with the black as the foreground color, you can start painting over the highlight area that looked a little too “hot”. By doing this, you’re blocking the effect of the Level Adjustment Layer over the highlights, revealing the under-exposed areas of the image layer below.

### Step 5:

Painting with black over the highlight areas while on the Layer Mask will reveal the layer below. Using white instead will revert the effect, revealing the changes made by the Level Adjustment Layer. You can adjust the opacity of the brush to adjust the intensity of the highlights.

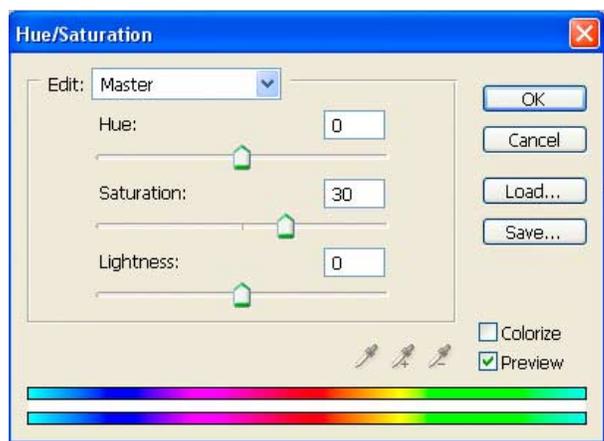
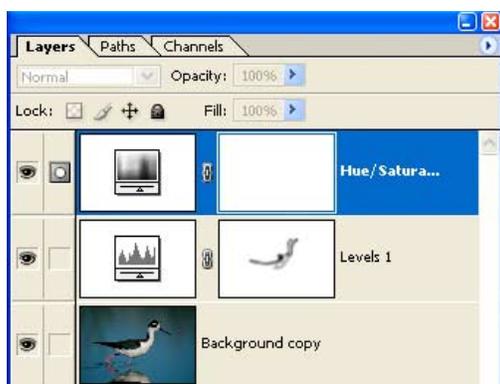


## Step 6:

Now your image should have a better dynamic range, with both ends of the range (highlights & shadows) in good shape. Take a look at the image on the left. Since we started with an underexposed image, we might need to touch up the colors to make them pop. We'll do that in the same fashion we used the Level Adjustment Layer, but instead we'll use the Hue/Saturation Adjustment Layer.

## Step 7:

Let's play with color this time. By adding a Hue/Saturation Adjustment Layer, we can saturate some colors to make this image really jump off the frame. Create a Hue/Saturation Adjustment Layer following the same procedure used for the Level Adjustment Layer in Step 2, but select Hue/Saturation instead. In the Hue/Saturation window, select Master under the Edit drop menu and add +30 on the Saturation slider. If you want to intensify the blue colors on the water, select the blue channel under the Edit drop menu and add a saturation to taste.



Retouched



Original

