

Dramatic B&W Digital Landscapes **by Randy C. Finch**

Upon returning from a two-week trip to Las Vegas, northern Arizona, and southern Utah, I had thousands of digital photographs to wade through. Being a longtime fan of dramatic B&W landscape photos such as those produced by the master photographer Ansel Adams, I decided that some of my pictures were calling out to me, "Make me black and white and make me dramatic!" I don't know about you, but when digital photographs speak to me, I tend to listen. So, I set out to obey my digital calling.

Figure 1 is a panoramic image I created from two separate photographs by merging them together with Autostitch software. (If you have not tried it, Autostitch is a wonderful stitching program by Matthew Brown. Just throw some stitchable images at it and it will merge them. A time-limited non-crippled demo of the software can be downloaded at <http://www.cs.ubc.ca/~mbrown/autostitch/autostitch.html>.) The photos were taken near the north end of Capitol Reef National Park in Utah. As you can see, the merged image is nice, but can use some additional flair.



Figure 1. Capitol Reef Image (two photos stitched together with Autostitch)

Changing Channels

I had read in several places that the best way to convert a digital color image to B&W is to use the Channel Mixer in Photoshop (I used CS2) since it provides so much flexibility in how the various colors are converted to grays in the image. So, I loaded the original image into Photoshop, copied the Background layer to a new layer (in case I needed to make non-adjustment-layer adjustments), and added a Channel Mixer adjustment layer. You might be thinking that I should have first added a Levels and/or Curves adjustment layer. Adding these layers first is fine for enhancing color images. However, the Channel Mixer layer will play havoc

with the B&W image's histogram, so it is best to add the Levels and/or Curves adjustment layers after seeing the effect of the Channel Mixer layer on the histogram.

When the Channel Mixer window appeared (Figure 2), I first checked the Monochrome check box at the bottom of the window. At this point the only Output Channel in the drop-down box at the top of the window was Gray. I was now free to move the Source Channel sliders around any way I liked. To make this landscape dramatic, I wanted the rock to be high contrast with bright sunlit faces and deep dark crevices. I also wanted the blue sky to be a very dark gray that contrasted well with the clouds. Therefore, I lowered the percentage on the Blue channel and upped it on the Red and Green channels. It is recommended that the sum of the three Source Channel percentages be +100%. With this in mind, I discovered that a good starting point was to set the Blue channel to -150% and the Red and Green channels to +125%. I then started playing around with the sliders until the grays making up the image were balanced the way I wanted them. This occurred with a Red value of +158%, a Green value of +114%, and a Blue value of -162%. These values added up to +110%, not the recommended +100%. The additional +10% resulted in a somewhat washed out image and a histogram that was skewed to the right (Figure 3). Rather than adjust each of the individual sliders downward to compensate, I simply lowered the Constant slider which changed all colors equally. I found that I needed to lower this value to -16% rather than -10% to get the deep shadows I was looking for. With this final adjustment to the Channel Mixer, I now had a well-balanced histogram that ran across the entire range of gray tones (Figure 4).



Figure 2. Channel Mixer in Photoshop CS2

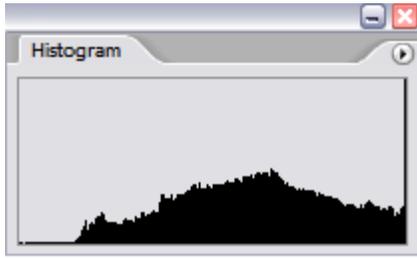


Figure 3. Histogram and Image After Initial Channel Mixer Adjustment

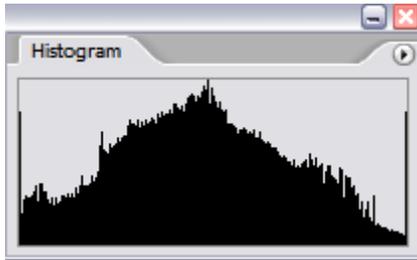


Figure 4. Histogram and Image After Final Channel Mixer Adjustment

Contrast This

Even though the B&W channel-mixed image now looked quite good, I felt a bit more drama was needed in the way of added contrast using a Curves adjustment layer above the Channel Mixer layer. I made this adjustment by creating a slight contrast enhancing S-curve (Figure 5). This gave me my final image as seen in Figure 6. Quite B&W and quite dramatic, don't you think?

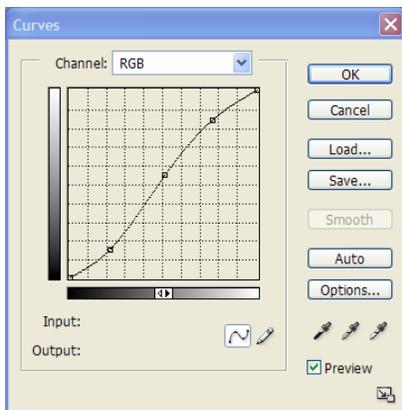


Figure 5. Curves Adjustment in Photoshop CS2



Figure 6. "Final" B&W Image

The Devil in the Details

What I thought was my final image turned out, upon closer examination, not to be my final image. While checking over my entire image at 100% magnification to see if there were any imperfections needing correction, I discovered a big one. The lighter areas of the sky and the darker areas of the clouds had a blocky pattern of light and dark boxes about 16x16 pixels in size (Figure 7). This was puzzling at first, but I began to speculate that this was a result of the JPEG compression applied by my camera, a Pentax Optio 550. This camera can save TIFF images and three different quality levels of JPEGs (high, medium, low). In tests I conducted soon after purchasing this camera, I decided that the images saved at the high quality JPEG setting were at most only slightly better than those saved at the medium quality JPEG setting, but were twice the size (3 MB vs. 1.5 MB). The TIFF files were huge at 15 MB. I have since shot most pictures at the medium quality JPEG setting to conserve memory card space. However, it now appeared that some compression that was not noticeable in color was quite noticeable after converting to B&W using the Channel Mixer. This makes sense when you think about it. For a blue sky that has little red and green in it, it is logical to compress the red and green channels more in the blue areas since these channels are not that visible in those areas. But when a lot of the blue is removed in the Channel Mixer layer, the red and green channels are going to be more visible in the blue areas and thus the compression artifacts will become much more visible.



Figure 7. Clouds and Sky at 300% Magnification

The Proof in the Pudding

To test my theory, I took some test photos from my backyard that contained a lot of blue sky. I shot the same image three times: one using medium quality JPEG compression, another using high quality JPEG compression, and the third one using the uncompressed TIFF format. I then loaded each of these in turn into Photoshop and applied a Channel Mixer adjustment layer similar to the one used above. Just as I suspected, the blocky compression artifact was prominent in the medium quality JPEG image, less so in the high quality JPEG image, and barely noticeable in the TIFF image (Figure 8). So, the lesson here, boys and girls, is to shoot at the highest possible quality setting your camera can handle if you intend to convert your digital images to dramatic B&W images.

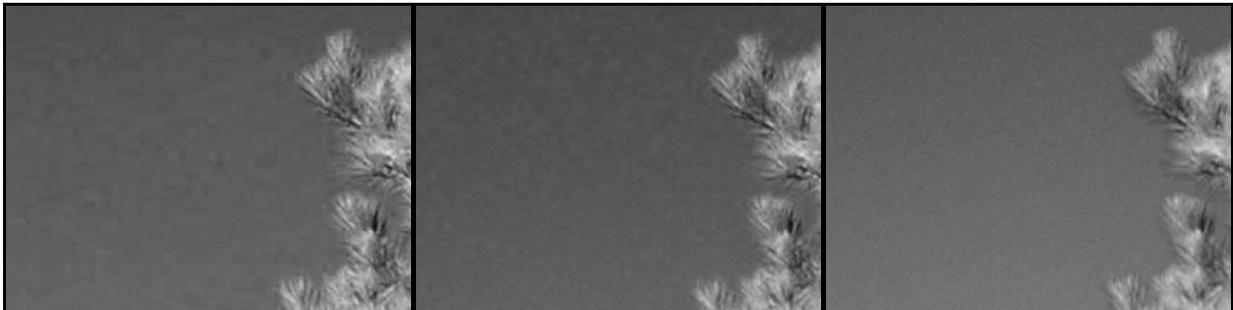


Figure 8. Images From Pentax Optio 550 Saved as: Medium Quality JPEG, High Quality JPEG, and TIFF

The Fix in the Meantime

Shooting with a high quality setting is fine for the future, but what about existing images? I still wanted to convert my color Capitol Reef image to a dramatic B&W image and be able to print it at a reasonable size without a blotchy sky. What to do? One common way to correct blotchiness in an image is to apply a Gaussian blur; however, I did not want to apply a blur to the entire image since the landscape portion of the image looked fine. Therefore, I needed to apply a blur to just the sky. Since the only detail in this portion of the image was clouds, applying a blur should be fine since clouds are typically not sharp to begin with.

Now I needed a selection of just the sky and clouds. There are many ways to create selections with Photoshop, but I determined that one easy method for my Capitol Reef image was to use the Magic Wand Tool. After selecting this tool, I made sure the Anti-alias and Contiguous options were checked and left the Tolerance at its default level of 32. I found that it was best to select the copy of the original color Background layer in the Layers Palette and uncheck the Sample All Layers option (Figure 9). This was because it was easier for Photoshop's Magic Wand Tool to make a distinction between the sky and the landscape on the original color image than on the B&W image. With all these settings in place, I simply clicked within the cloud to the left, which selected just a portion of the cloud. I then continued to click on different parts of the sky and clouds that remained unselected while holding down the Shift key, which allowed each selection to be added to any previous selections.



Figure 9. Magic Wand Options

Once the entire area of sky and clouds was selected, and I had checked carefully to make sure none of the landscape was included, I saved my selection by choosing the menu item **Select > Save Selection**. I saved the selection as a new channel with the name of **Sky** (Figure 10). It's always a good idea to save any selections you spend time creating so you won't have to recreate them should something go awry. Next, I chose the menu item **Layer > New > Layer via Copy**. This menu option creates a new layer above the currently selected layer that contains only the portion of the currently selected layer enclosed by the "marching ants", in this case the sky and clouds. With this new layer selected, I chose the menu item **Filter > Blur > Gaussian Blur** and moved the Radius slider to the right until the blotchiness in the sky just became unnoticeable (Figure 11). I then had the real final version of my image (Figure 12).



Figure 10. Save Selection Dialog



Figure 11. Gaussian Blur Window and the Resulting Sky and Clouds



Figure 12. Final Image After All Corrections

Conclusions

So, there you have it; the complete procedure for creating dramatic B&W landscapes using Photoshop even if you have a lower quality image that results in a blotchy sky when converted to B&W. Other graphic software packages with features similar to Photoshop can also be used. I personally duplicated the procedures described in this article using Paint Shop Pro X and was able to get essentially identical results to those of Photoshop CS2. Ciao.