CHAPTER 6

Color Adjustments

This chapter looks at several methods of adjusting and correcting color, and several Curves presets for creative effects.

- *The RGB Color Model and Color Channels*: This part briefly looks at the RGB color model (which Pixlr Editor uses) and color channels.
- *Using the Color Balance Adjustment Dialog Box*: In this part, we'll look at correcting a color imbalance using this dialog box.
- *Using the Levels Adjustment Dialog Box*: In this part, we'll look at restoring faded colors by using Levels on each color channel.
- *Using the Curves Adjustment*: In this part, we'll look at making a color correction using Curves.
- *Using the Curves Presets*: This part looks at the Curves presets, used for making quick tonal changes, and color adjustments for artistic effect.

The RGB Color Model and Color Channels

Before moving on to the tutorial (in which some of the adjustments will be a bit more involved), let's learn a little bit about the *RGB color model* and *color channels.* Pixlr Editor uses the RGB color model, which mixes red, green, and blue light in various amounts to create a broad array of colors that are displayed on your monitor. When red, green, and blue light is combined at 100%, the result is white (Figure 6-1). Conversely, when there is zero percentage of each, black is the result.

P. Whitt, *Beginning Pixlr Editor*, DOI 10.1007/978-1-4842-2698-8_6

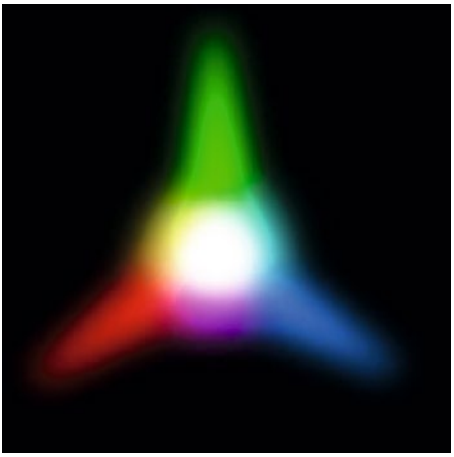

Figure 6-1. *Red, green, and blue light combined at 100% results in white*

An image displayed on your monitor in the RGB color model is comprised of three channels; one red, one green, and one blue. Put in its simplest terms, channels are essentially storage containers for the lightness value information of each color (Figure 6-2). The examples shown have been converted to grayscale for easier viewing.

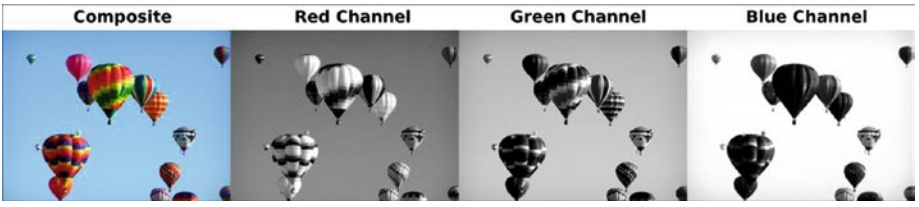

Figure 6-2. *Color channels store lightness value information of each color*

It's making adjustments in one or more color channels that alters the image's look. This is usually done indirectly by using the various adjustment functions Pixlr Editor has to offer. However, the Levels and Curves adjustments provide more direct control over each channel (we'll see an example of using Levels for this purpose in Tutorial 11 coming up a little later).

Using the Color Balance Adjustment Dialog Box

An image with a *color cast* (excessive tint of an undesired color) can often be easily corrected with this adjustment. It works by increasing more of the (unwanted) color's opposite, thus balancing it out. Figure 6-3 shows the Color Balance dialog box, and the corresponding colors and their opposites, which is controlled by using the sliders.

Figure 6-3. *The Color Balance dialog box corrects a color cast by increasing more of the unwanted color's opposite*

TUTORIAL 10: COLOR CORRECTION USING COLOR BALANCE

Removing a Color Cast

In this tutorial, we'll use the Color Balance dialog box to correct an image with a blue color cast that resulted from poor processing by the film lab.

1. Open the image titled `Ch06_Mr.Cash.jpg` found in the `Ch06 Practice Images` folder.
2. Duplicate the background layer (Layer ➤ Duplicate Layer).
3. Rename the duplicate layer `Color Fix` using the layer thumbnail's textbox.
4. Open the Color Balance dialog box (Adjustment ➤ Color Balance).
5. Move the Blue offset slider to the left until the numerical reading is -30 (Figure 6-4). This increases the yellow, offsetting the excess blue tint.

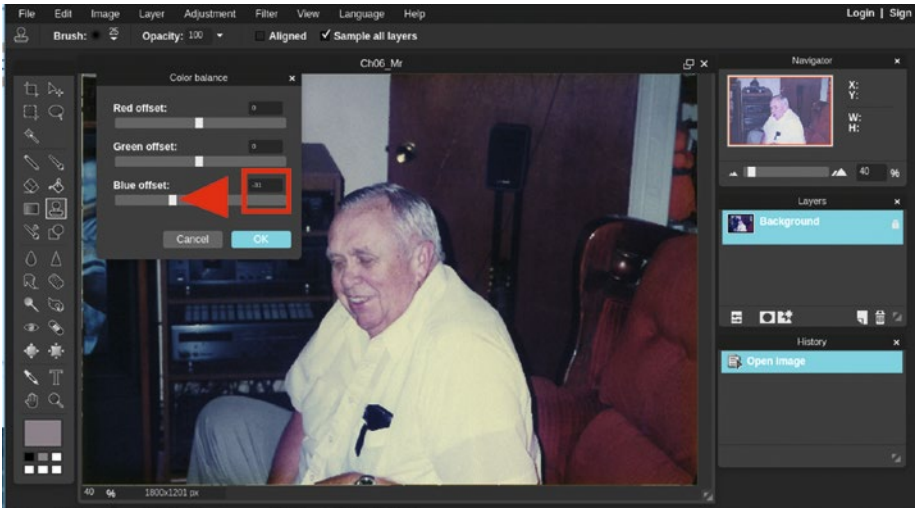

Figure 6-4. *Moving the Blue offset slider to the left increases the yellow*

Now, the blue tint is removed and the colors are more balanced (Figure 6-5). When you're finished, either close the image without saving or save it as a PXD file for future reference. *If you are a student, your teacher may instruct you to save the image with a certain name and in a certain location (such as a flash drive).*

Figure 6-5. *Before and after comparison*

Using the Levels Adjustment Dialog box

A common problem that affects older color photographs is the reduction of vibrance due to the dyes fading and shifting over time. Provided the dyes haven't faded too much, the Levels dialog box can be very useful for correcting this problem.

TUTORIAL 11: COLOR RESTORATION USING LEVELS

Restoring Faded Colors Image Using Levels on Each Color Channel

This tutorial involves adjustments made to each color channel to achieve the final result.

1. Open the image titled `Ch06_Girl Gone Fishing.jpg` found in the `Ch06 Practice Images` folder.
2. Duplicate the background layer (Layer ➤ Duplicate Layer).
3. Rename the duplicate layer `Color Fix` using the layer thumbnail's textbox.
4. Open the Levels dialog box (Adjustment ➤ Levels).
5. Click the triangle to the right of the Channel option dialog box. Scroll down to highlight the red channel (Figure 6-6). *Do not click OK just yet.*

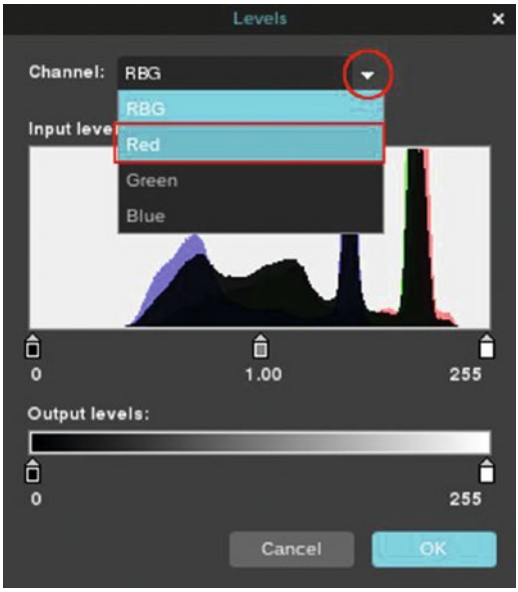

Figure 6-6. *Highlight the Red channel option*

6. Move the black point slider toward the center, stopping where the histogram data begins. Repeat this step with the white point slider (Figure 6-7). *Do not click OK just yet.*

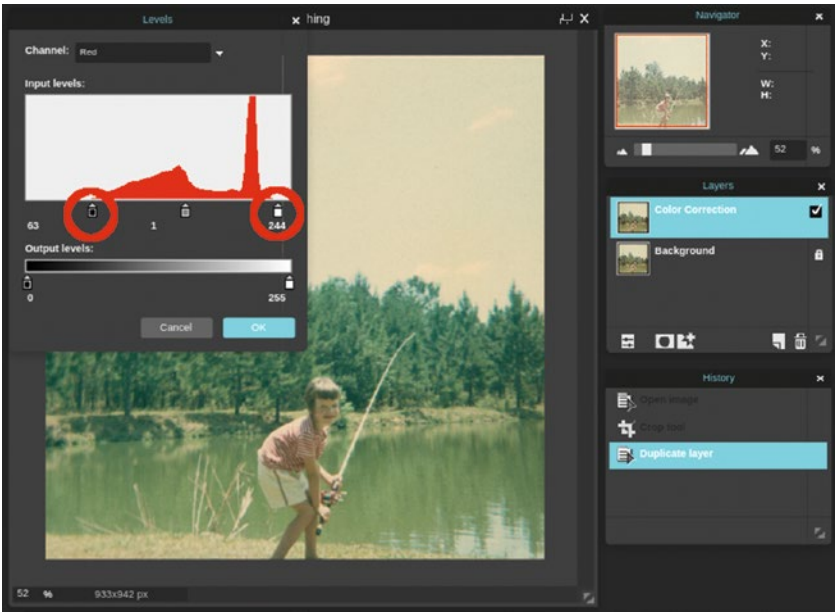

Figure 6-7. *Adjusting the black and white point sliders in the red channel*

7. Click the triangle again to open the Channel option dialog box—scroll down to highlight the green channel (Figure 6-8). *Do not click OK just yet.*

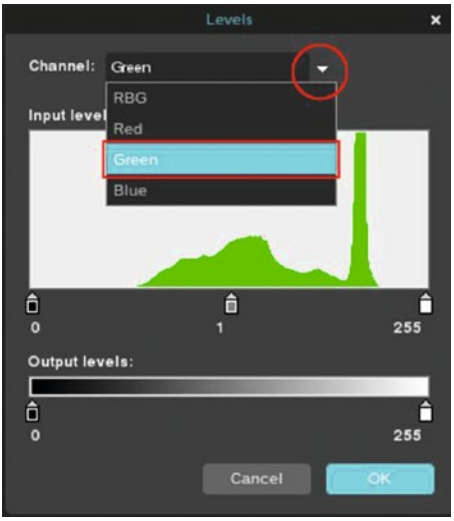

Figure 6-8. *Highlighting the Green channel*

8. Move the black point slider toward the center, stopping where the histogram data begins. Repeat this step with the white point slider (Figure 6-9). *Do not click OK just yet.*

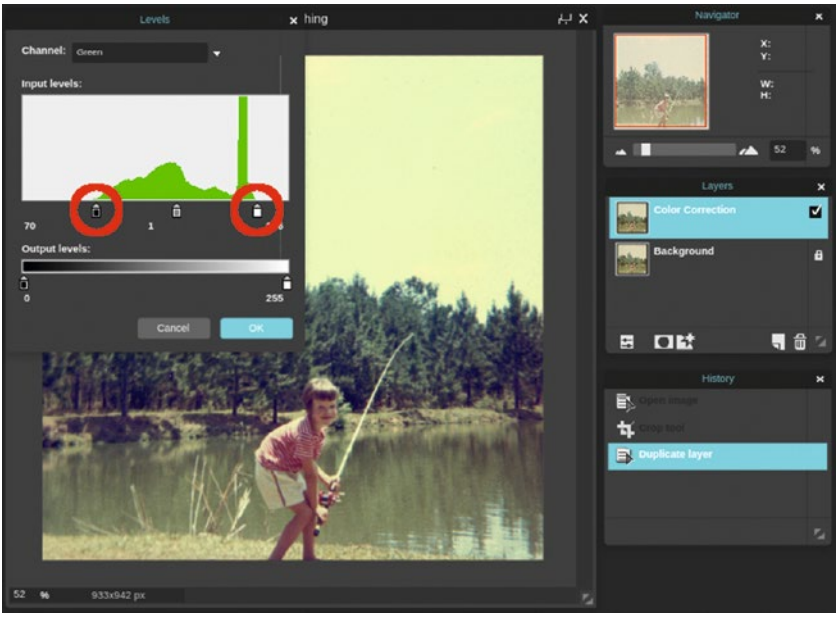

Figure 6-9. *Adjusting the black and white point sliders in the green channel*

9. Click the triangle again to open the Channel option dialog box—scroll down to highlight the blue channel (Figure 6-10). *Do not click OK just yet.*

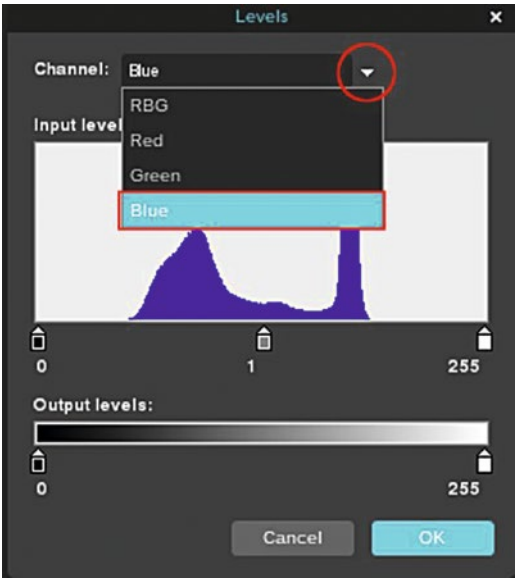

Figure 6-10. *Highlighting the Blue channel*

10. Move the black point slider toward the center, stopping where the histogram data begins. Repeat this step with the white point slider (Figure 6-11). *Click the OK button when you're done.*

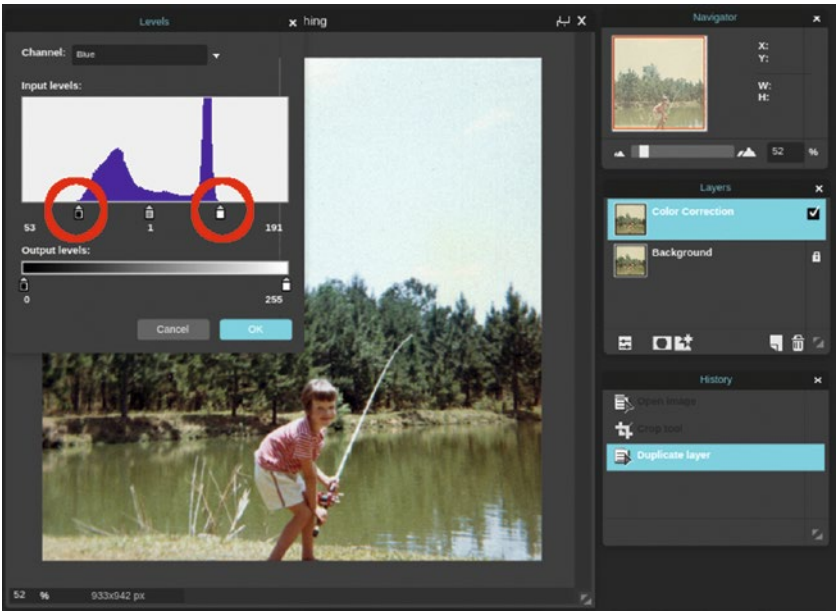

Figure 6-11. *Adjusting the black and white point sliders in the blue channel*

Now that the tonality of each color channel has been adjusted, the colors of the image are more vibrant, and the contrast is improved (Figure 6-12). When you're finished, either close the image without saving or save it as a PXD file for future reference. *If you are a student, your teacher may instruct you to save the image with a certain name and in a certain location (such as a flash drive).*

Figure 6-12. *Before and after comparison*

Using the Curves Adjustment Dialog Box

In the previous chapter, the Curves dialog box was used for making tonal corrections. In the upcoming tutorial, it will be used to make a tonal and color correction.

TUTORIAL 12: SETTING THE GRAY POINT USING CURVES

Removing a Color Cast Using Curves—Finishing with the Sponge Tool and Unsharp Mask

In this tutorial, the image has a predominate magenta color cast, with a bit of excess blue in the penguins. We'll correct this by setting the gray point using the middle eyedropper option in the Curves dialog box.

Then, we'll apply the finishing touches using the Sponge tool and Unsharp mask.

1. Open the image titled `Ch06_Penguins.jpg` found in the `Ch06 Practice Images` folder.
2. Duplicate the background layer (Layer ➤ Duplicate Layer).
3. Rename the duplicate layer `Color Fix` using the layer thumbnail's textbox.
4. Open the Curves dialog box (Adjustment ➤ Curves). Check the Histogram option box.
5. Click the middle (gray point) eyedropper icon.
6. Click in the target area indicated a few times (Figure 6-13). The goal is to achieve a result close to the one shown in the middle panel, so this may take repeated attempts. *Rather than close the Curves dialog box (only to relaunch it), reset it to Default in the Presets options to start over.* Click OK when you're done.

Figure 6-13. *Set the gray point by using the middle eyedropper option and sampling the area indicated in the left panel*

■ **Note** Ideally, the green channel's adjustment curve should bow upward slightly (increasing green to offset the magenta), and the blue adjustment curve should bow downward slightly (increasing yellow to offset the blue). Your results may vary slightly, but if the image is close to the one shown, it should suffice.

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7. The penguin on the right still has a tinge of blue. Click the Sponge tool icon or press the letter P on your keyboard.
8. From the Brush options dialog box, select the soft, 200 pixel diameter brush.
9. Select the Desaturate option and set the strength to 9-10.
10. Brush along the wing, as shown in Figure 6-14, to reduce the blue tinge.

Figure 6-14. *Use the Sponge tool to reduce the blue tinge*

11. Because the picture was taken through a glass window, the clarity may have been slightly diminished. Open the Unsharp Mask filter (Filter ➤ Unsharp Mask).

12. Set the Amount to 110 and the Radius to 3 (leave the Threshold on the default setting of 15). This will sharpen the image just slightly (Figure 6-15).

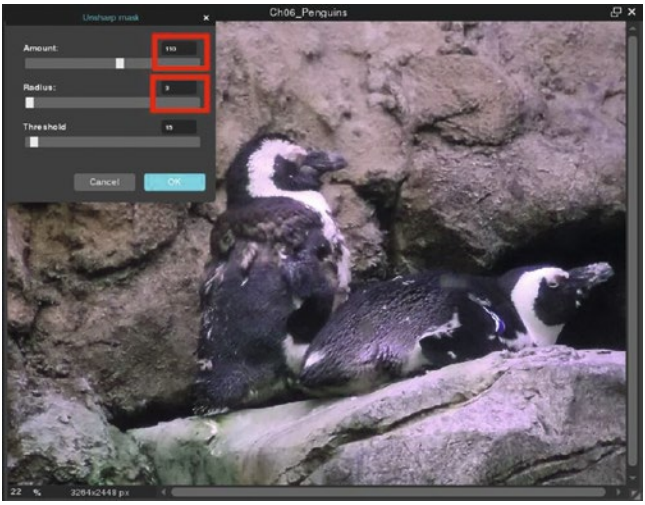

Figure 6-15. *The Unsharp Mask filter sharpens the image slightly*

13. Click OK when you're finished.

The image now looks more color-balanced and crisper (Figure 6-16).

Figure 6-16. *Before and after comparison*

When you're finished, either close the image without saving or save it as a PXD file for future reference. *If you are a student, your teacher may instruct you to save the image with a certain name and in a certain location (such as a flash drive).*

■ **Note** The eyedropper options in Curves are used to expand the tonal range in your image by setting the black, gray, or white points. It takes some experimentation, but in my experience setting the gray point works well most color correction situations.

The Curves Presets

There are a number of presets available to you in the Curves adjustment dialog box. Some make tonal changes, while others primarily affect color.

- *Default*—Used to apply manual changes (Figure 6-17).

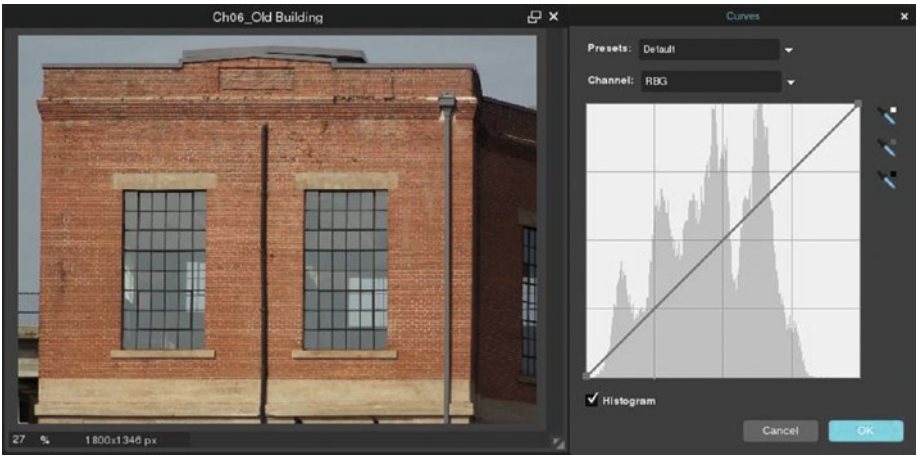

Figure 6-17. *The Default preset*

- *Invert*—Reverses the colors and lightness values (Figure 6-18).

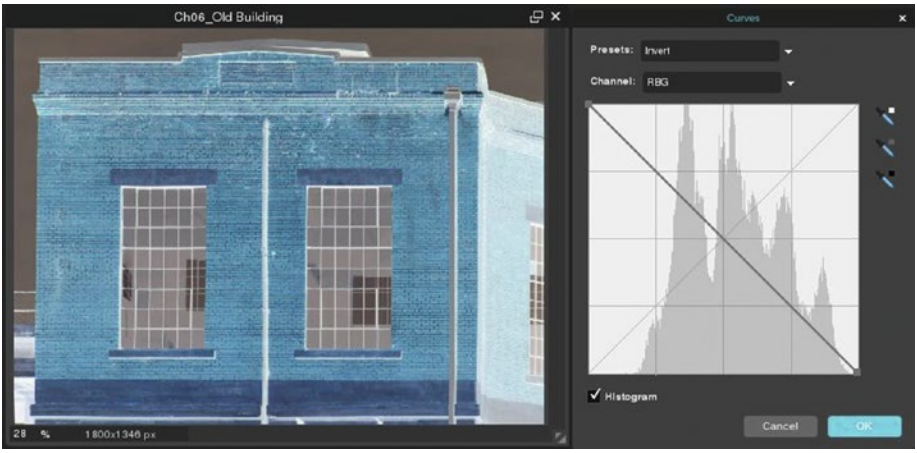

Figure 6-18. *The Invert preset*

- *Colder*—Slightly increases blue and green, giving the image a cool tone (Figure 6-19).

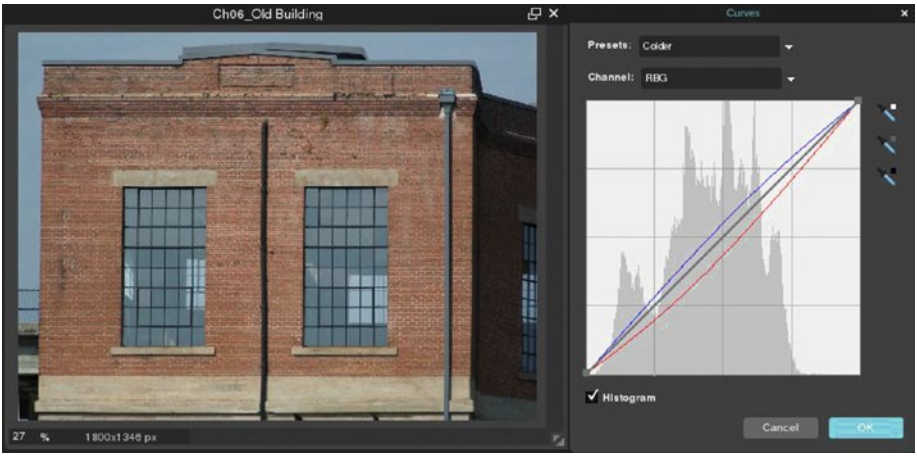

Figure 6-19. *The Colder preset*

- *Warmer*—Slightly increases red and yellow, giving the image a warm tone (Figure 6-20).

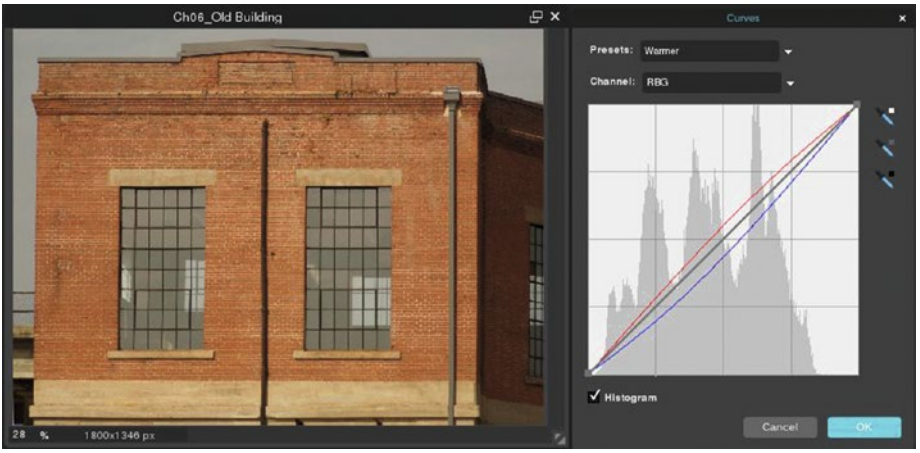

Figure 6-20. *The Warmer preset*

- *Increase Contrast*—Automatically creates an S curve, boosting the contrast (Figure 6-21).

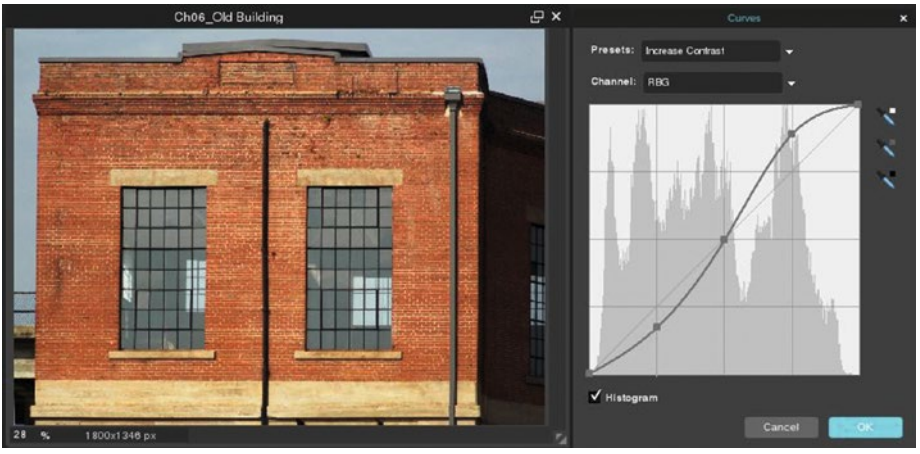

Figure 6-21. *The Increase Contrast preset*

- *Decrease Contrast*—Automatically creates a "reverse S curve," creating a flatter tone (Figure 6-22).

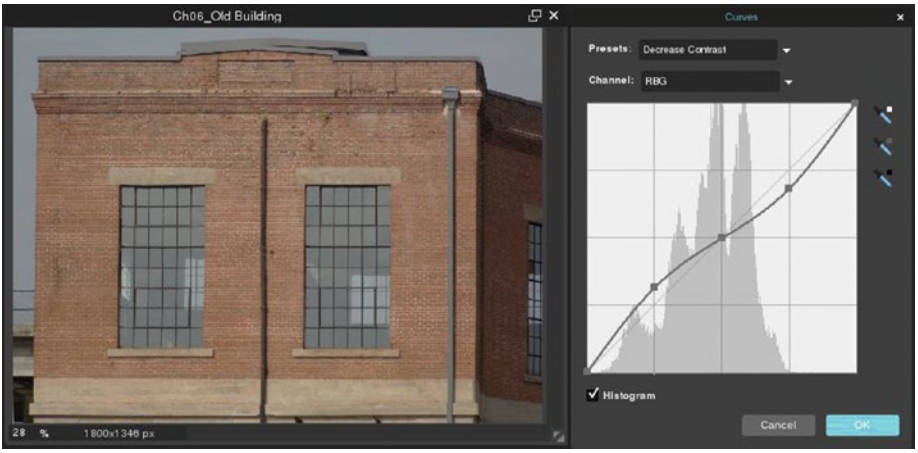

Figure 6-22. *The Decrease Contrast preset*

- *Darken Shadows*—Automatically darkens the dark to black range of pixels (Figure 6-23).

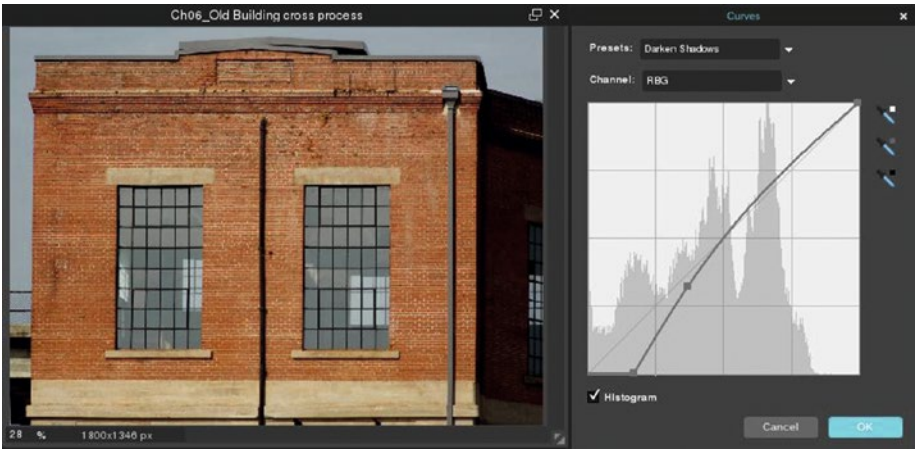

Figure 6-23. *The Darken Shadows preset*

- *Chillauto*—Increases blue and slightly increases green and cyan for a cool tone (Figure 6-24).

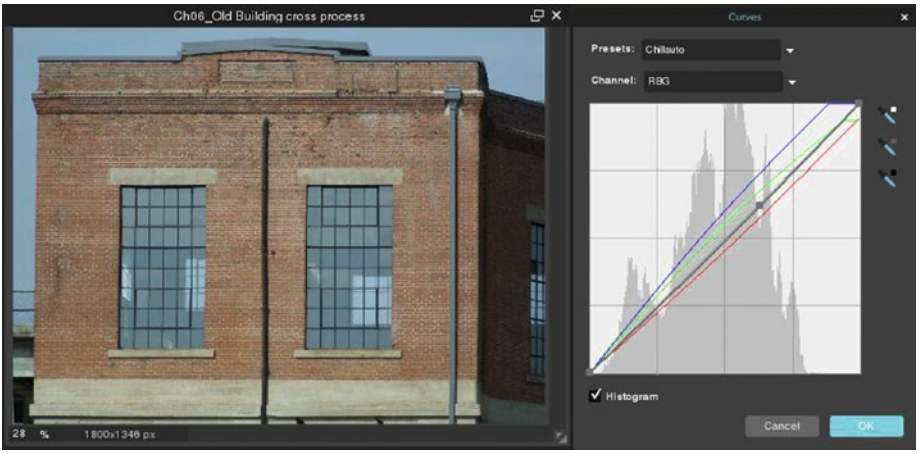

Figure 6-24. *The Chillauto preset*

- *Cross Process*—Mentioned in the Adjustments section of Chapter 3, this mimics the technique of purposely processing one film type using a photographic chemical intended for another film type (Figure 6-25).

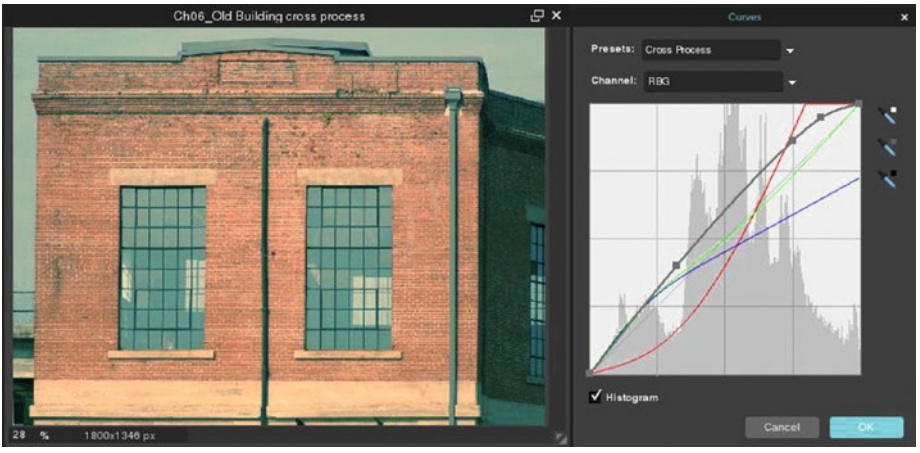

Figure 6-25. *The Cross Process preset*

- These are just the first nine presets—if you scroll further down you'll discover many more (Figure 6-26).

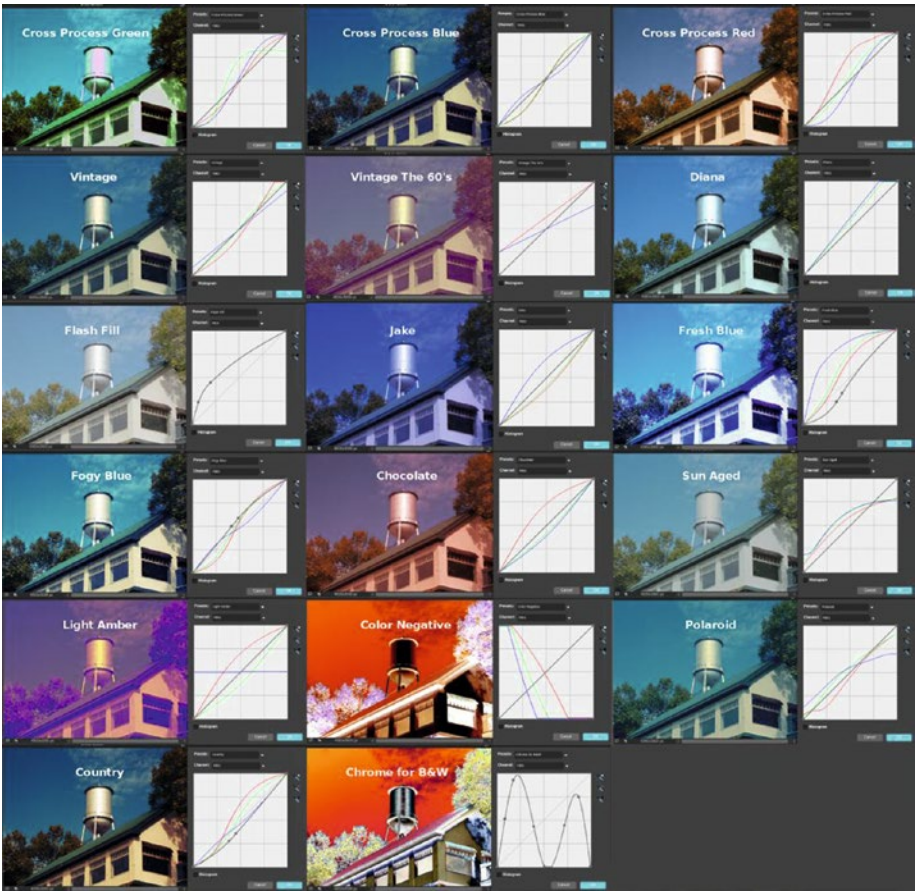

Figure 6-26. *The remaining Curves presets*

Summary

This chapter described several techniques for correcting and adjusting color. We first covered (very briefly) how RGB images are comprised of red, green, and blue light. Color channels are essentially storage containers for lightness value information for each color.

The Color Balance adjustment works by increasing the offending color's opposite to balance it out (such as a blue color cast being corrected by increasing yellow).

The Levels dialog was used to adjust each color channel to restore the vibrance to a faded color image.

The Curves dialog was used to set the gray point of an image with a magenta color cast. The Sponge tool was used to reduce the blue tinge in a local area, and the Unsharp Mask filter was used to sharpen the image slightly.

Lastly, we looked at the various tonal and color adjustments available from the Curves presets.

The next chapter looks at retouching and repairing photos using Pixlr Editor.