

## CHAPTER 7



# Photo Retouching and Repair

Pictures quite often have flaws that digital correction can drastically improve. In some cases, the culprit are imperfections such as red eye or skin blemishes. Other times, the photo may have incurred physical damage over time. This chapter looks at techniques for retouching and repairing flawed and damaged images. Here's what we'll cover:

- *Red Eye Correction:* This part looks at the Red Eye Reduction tool and how it works its magic
- *Touching Up Blemishes Using the Spot Heal Tool:* In this part, we'll see how effective this tool is for clearing up facial blemishes.
- *Repairing Damage Using the Spot Heal and Clone Stamp Tools:* In this part, we'll tackle repairing an image that has sustained a collection of scratches, punctures, and creases over time.
- *Reducing Digital Noise:* In this part, you'll see how images with excessive noise can be improved.

## Red Eye Correction

Everyone has seen them—those demon-like red eyes that become that can spoil an otherwise good picture. Red eye is caused by the camera's flash reflected off the retina of the eye when the picture is taken in ambient light (the pupils are open wide, allowing a large amount of light to enter). The red color is the result of blood-rich choroid, which is connective tissue that lies behind the retina.

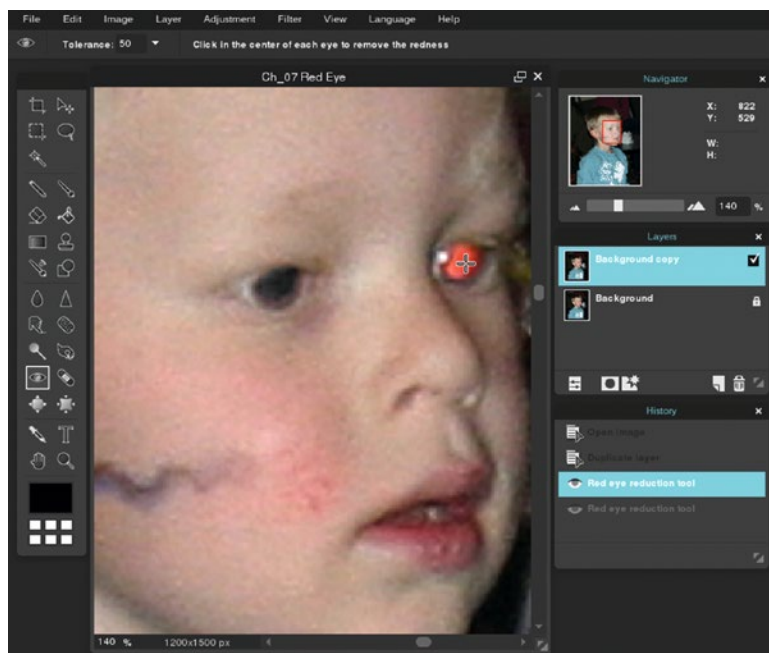
Fortunately, the Red Eye Reduction tool can quickly come to the rescue. In most cases, it works fine by itself. However, it only does what the name implies—reduces the effect without completely fixing it. Sometimes, the red eye effect is severe enough to require several extra steps and tools to end up with more natural results, as you'll see shortly.

## TUTORIAL 13: RED EYE CORRECTION

### Correcting Severe Red Eye Using Multiple Tools

In this tutorial, we'll correct an image of a little boy with severe red eye.

1. Open the image titled `Ch07_Red Eye.jpg` found in the `Ch07 Practice Images` folder.
2. Duplicate the background layer (Layer ► Duplicate Layer).
3. Click the Red Eye Reduction tool icon.
4. Click in the center of each eye in the duplicate layer. I used the default tolerance setting of 50%, but you can increase this slightly if needed (Figure 7-1).



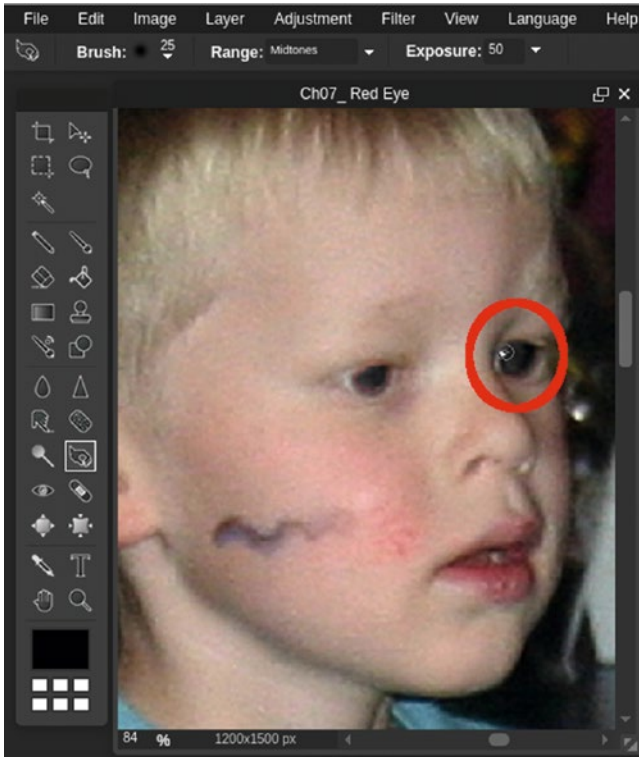
**Figure 7-1.** Using the Red Eye Reduction tool to remove the red

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■ **Note** After applying the tool, the eyes look much better (and we could stop here and call it finished), but there are several steps we can take to make them look more natural—let's continue.

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5. We'll need to make a couple of local tonal adjustments in the child's left eye. Click the Burn tool icon or press the letter N on your keyboard.
6. Select the soft, 25-pixel diameter brush from the presets and leave the Range and Exposure at their default settings.
7. Brush the lighter part of the left eye until it matches the darker outer portion (Figure 7-2).



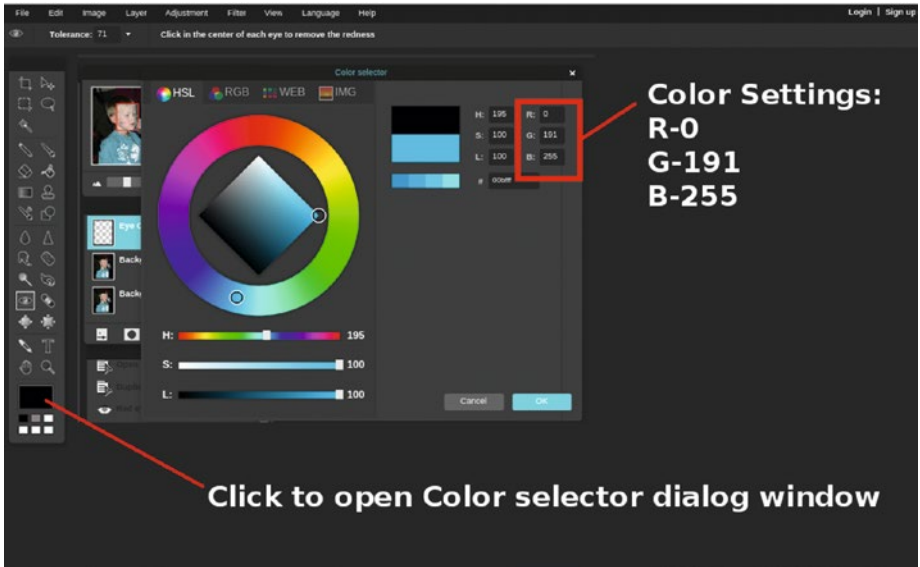
**Figure 7-2.** Using the Burn tool to darken the pupil area of the left eye

8. Now we need to lighten the iris portion of the eyes (the outer area surrounding the pupils). Click the Dodge tool icon or press the letter O on your keyboard.
9. Select the soft, 15-pixel diameter brush from the presets and change the Range to Shadows and Exposure to 20.
10. Brush around the pupils to lighten the iris, as shown in Figure 7-3.



**Figure 7-3.** Using the Dodge tool to lighten the area around the pupils

11. Create a new layer (Layer ► New Layer). Click the Toggle Layer Settings icon and change the Mode to Overlay.
12. Rename the layer Eye Color using the layer thumbnail's textbox.
13. Click in the Set Main Color swatch to open the Color Selector dialog box. Select a light blue using the numeric inputs: R-0, G-191, and B-255 (Figure 7-4). Click OK when you're done.



**Figure 7-4.** Launch the Color Selector dialog box and use the numeric settings shown to achieve a light blue

14. Click the Brush tool (or press B on your keyboard).
15. Select the soft, 20-pixel diameter brush from the presets.
16. Brush around the pupils to apply the eye color. Lower the layer's opacity to about 15% (Figure 7-5).



**Figure 7-5.** Applying the eye color with the Brush tool

The final result should be close to that shown in Figure 7-6. As mentioned, in many cases the Red Eye Reduction tool will suffice without extra measures, but when it doesn't, you'll now know how to handle those extreme cases of the red eye effect.



**Figure 7-6.** 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).*

## Touching Up Blemishes

Touching up images with facial blemishes is a very common service provided by professional photographers and retouch artists. Pixlr Editor has a powerful weapon to use against blemishes (at least in photographic images), and that is the Spot Heal tool, as you'll see in the lesson that follows.

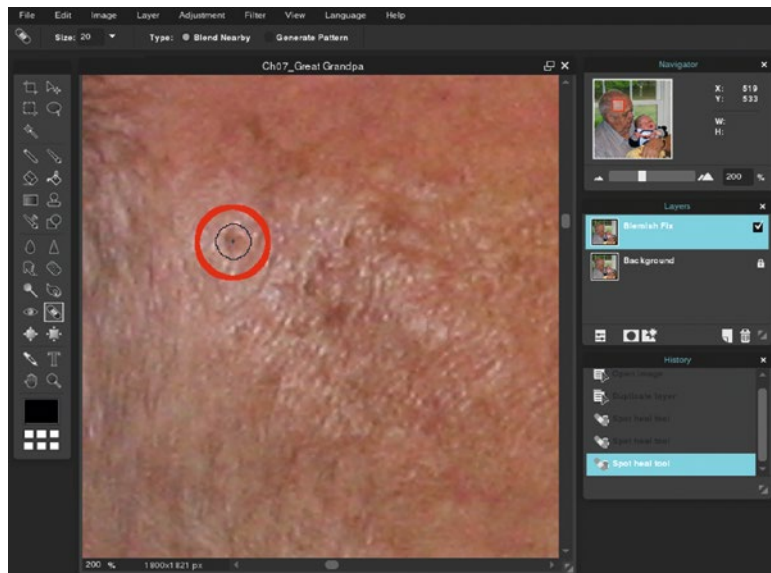
### TUTORIAL 14: BLEMISH TOUCH UP

#### Removing Blemishes Using the Spot Heal Tool

In this tutorial, we'll quickly remove the largest, most obvious blemishes using the Spot Heal tool.

1. Open the image titled `Ch07_Great Grandpa.jpg` found in the `Ch07 Practice Images` folder.
2. Duplicate the background layer (Layer ► Duplicate Layer).

3. Rename the duplicate layer **Heal Layer** using the layer thumbnail's textbox.
4. Click the **Spot Heal** tool icon, set the brush diameter to about 20 pixels, and make sure the **Blend Nearby** option is checked.
5. Zoom in close enough to view comfortably. Starting at the top of the head, click over the larger blemishes (Figure 7-7). They should disappear seamlessly, but if not undo the step and try again.



**Figure 7-7.** Use the *Spot Heal* tool starting at the top of the head

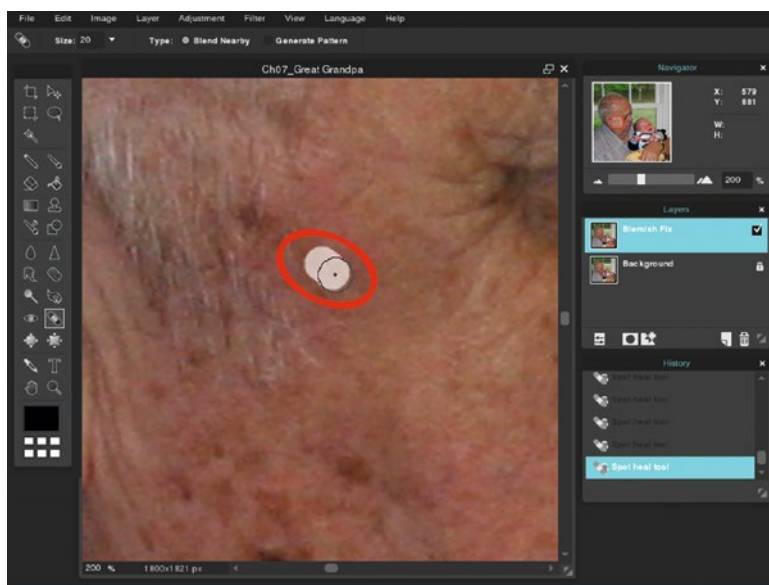
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**Note** The brush size should be only slightly larger than the blemish, so adjust as needed.

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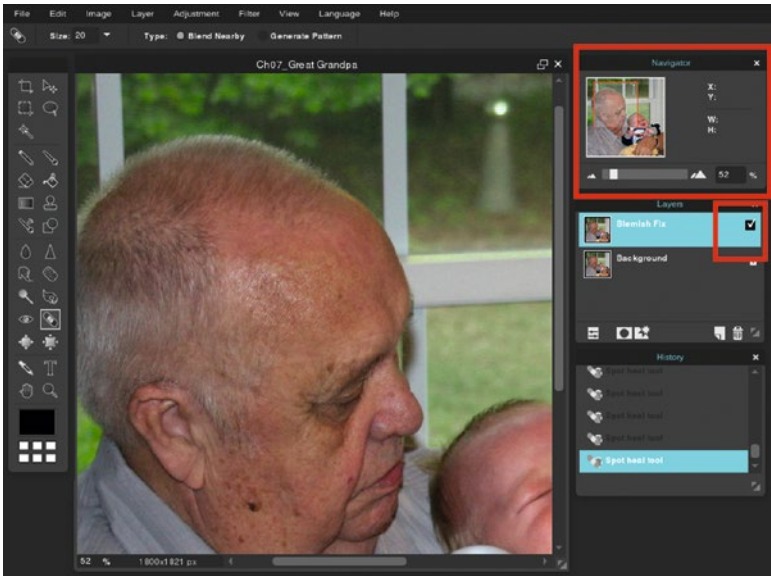


6. Work down along the side of the face, as shown in Figure 7-8.



**Figure 7-8.** *Work downward along the face*

7. As you're working, zoom out occasionally to monitor your progress (Figure 7-9). Toggle the duplicate layer's visibility off and on to compare the original to the work in progress.



**Figure 7-9.** Zoom out occasionally and toggle the layer’s visibility to monitor your progress as you work

The end result should resemble that shown in Figure 7-10. As you can see, the Spot Heal tool is extremely useful. 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 7-10.** *Before and after comparison*

## Removing Scratches and Damage

Repairing damage is another popular service provided by retouch artists. In the forthcoming lesson, we'll repair a photo that has incurred some damage over time because of poor storage practices. We'll be using both the Spot Heal and Clone Stamp tools for this assignment.

### TUTORIAL 15: REMOVING SCRATCHES AND DAMAGE

#### Repairing a Photo Using the Spot Heal Tool and the Clone Stamp Tool

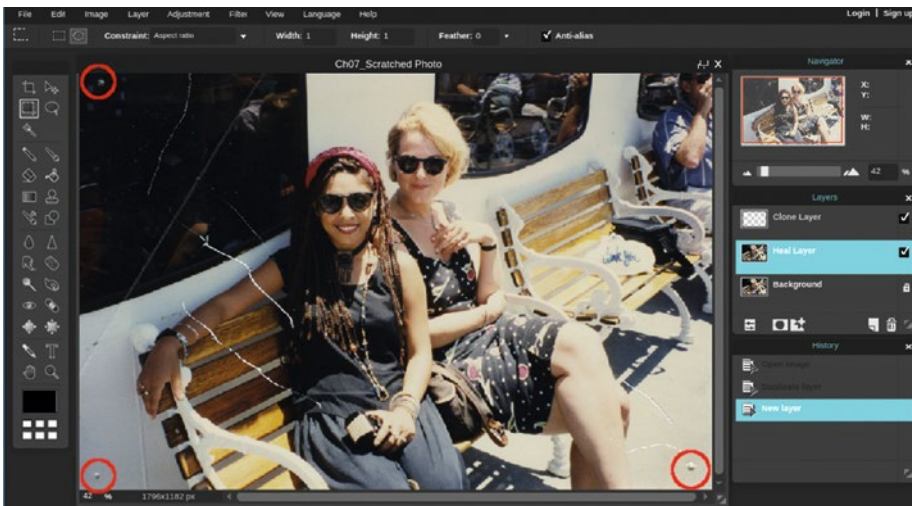
Although the Spot Heal tool is generally used for removing skin imperfections, it can be used for repairing scratches and other types of damage. The downside is that it doesn't always work (it largely depends on the image content). In instances when it doesn't work, the Clone Stamp tool can take over, as you'll soon see.

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■ **Note** It's a good idea to review the Clone Stamp tool section of the supplemental *Tools Tryout Guide and Practice Images* folder, which can be obtained from the Source Code/Downloads tab from this Apress page: <http://www.apress.com/9781484226971>.

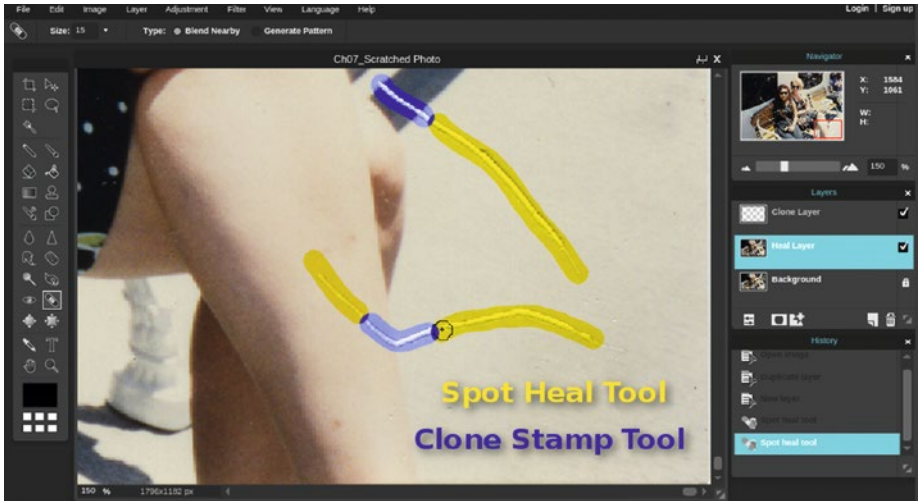
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1. Open the image titled `Ch07_Scratched Riverboat Ride.jpg` found in the `Ch07 Practice Images` folder.
2. Duplicate the background layer (Layer ► Duplicate Layer) and rename it `Heal Layer` using the layer thumbnail's textbox.
3. Create a new layer (Layer ► New Layer). Rename the layer `Clone Layer` using the layer's textbox. (It won't be used just yet, so click the duplicate background layer to make it active.)
4. Click the Spot Heal tool icon, set the brush diameter to about 30 pixels, and make sure the Blend Nearby option is checked.
5. Remove the three puncture marks on the Heal Layer layer (Figure 7-11) using the Spot Heal tool.



**Figure 7-11.** Remove the puncture marks shown

6. Use the Spot Heal tool on the scratches (indicated in yellow) shown in Figure 7-12 on the Heal Layer. The default brush diameter is 10 pixels—if necessary, increase the diameter slightly.



**Figure 7-12.** Use the Spot Heal tool on the areas indicated in yellow

7. Click the Clone Layer to activate it.
8. Click the Clone Stamp tool icon or press the letter S on your keyboard. Make sure the Sample All Layers option is checked.
9. Repair the areas indicated in blue using the Clone Stamp tool. Be sure to re-sample often (Control+Click) as you work to avoid repeating patterns.

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**Note** Using the Spot Heal tool in one stroke over areas with distinctive tonal differences (such as where the shadow of the bench and the sunlit deck surface meet) usually ends up with smudged results. That's the purpose of using the Clone Stamp tool in those transitional areas.

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10. Continue the process, working upward, as shown in Figure 7-13. Be sure to activate the corresponding layer when switching from one tool to another.



**Figure 7-13.** Continue the process working upward

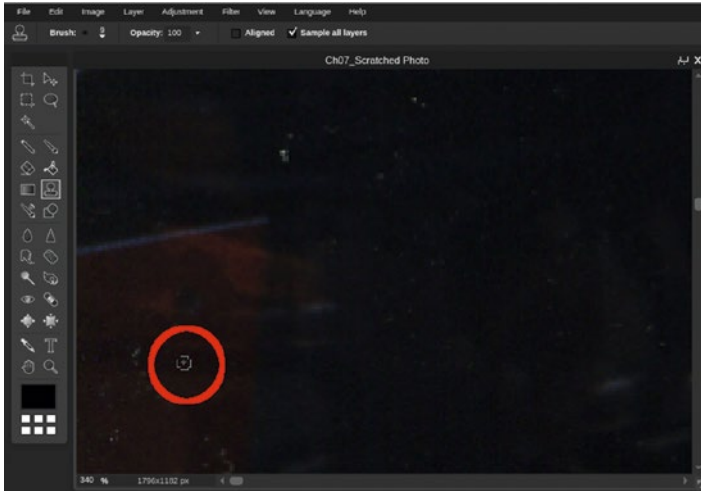
11. Use the Clone Stamp tool on the remaining scratches, the tear, and the crease indicated in blue (Figure 7-14).



**Figure 7-14.** Use the Clone Stamp tool on the remaining scratches, the tear, and the crease



12. Choose the soft, 9-pixel diameter brush from the presets and finish by removing the remaining specks and dust (Figure 7-15).



**Figure 7-15.** Use the Clone Stamp tool to finish the remaining specks

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**Note** Be sure to zoom in and look all around the image using the Navigator to make sure everything is cleaned up.

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When you're finished, the result is an image that looks almost new (Figure 7-16). This type of work is time consuming, but can work wonders when repairing damaged photos—the key to making undetectable repairs is practice. When you're finished, either close the image without saving or save it as a PSD file for future reference. *If you are a student, your teacher may instruct you to save the image with a certain name in and a certain location (such as a flash drive).*



**Figure 7-16.** Before and after comparison

## Reducing Image Noise

Image noise is an undesirable by-product that has a gritty appearance. It usually results from taking pictures in low light situations. Pixlr Editor's Denoise Filter helps smooth the image's appearance. The Denoise Filter is a “one shot” filter—it does not offer a dialog box with additional options, but it can be applied repeatedly. However, its effectiveness will be limited on images with excessive noise.

### TUTORIAL 16: REDUCING IMAGE NOISE

#### Using the Denoise Filter

1. Open the image titled `Ch07_Noisy Image.jpg` found in the `Ch07 Practice Images` folder.
2. Duplicate the background layer (Layer ► Duplicate Layer) and rename it `Noise Reduction` using the layer thumbnail's textbox.
3. Zoom in to see the noise more closely (Figure 7-17).



**Figure 7-17.** A close-up view of image noise

4. Apply the Denoise filter (choose Filter ► Denoise) twice.
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This process won't magically turn a poor quality, noisy image into a beautiful photo, but it will improve it to some extent (Figure 7-18). When you're finished, either close the image without saving or save it as a PSD 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 7-18.** Before and after comparison

## Summary

This chapter described several techniques for retouching and improving images with various imperfections.

The Red Eye Reduction tool is very useful for correcting the red eye effect caused by the camera flash. As you learned in the tutorial, in some cases extra steps are necessary to make the eyes look more natural.

In the tutorial featuring the elderly man holding his great-grandchild, the Spot Heal tool was used to remove the blemishes from his face.

Next, both the Spot Heal tool and the Clone Stamp tool were used to repair and clean up an image damaged by scratches, a tear, a crease, and dust specks.

The last thing we covered was using the Denoise filter to improve the appearance of an image with excessive digital noise.

The next chapter covers altering images by digitally removing unwanted elements and replacing backgrounds.