



Fig. 10-8-a It's hard to believe there's anything worth rescuing in this 1950s color snapshot. Hardly any detail is visible except in the shadows.

Example 8: Restoring an Almost-Blank Photo

Back in Chapter 5, *Restoring Tone*, on page 167, I introduced you to Figure 10-8-a, the most badly faded photograph I've restored to date. I showed you how a careful scan combined with DIGITAL ROC could restore some semblance of color and detail to the photograph (Figure 10-8-b).

This photograph is still extremely pale, so I added the Curves adjustment layer shown in Figure 10-8-c. The curve greatly darkens the photograph and increases the contrast in the highlights and midtones by a factor of three. I incorporated a radial gradient mask in the layer to eliminate light falloff in the original photograph. That falloff wasn't apparent until I applied the Curves correction, but as Figure 10-8-d, left, shows, it was there just waiting to come out. The gradient mask neatly eliminated most of it; I left some falloff to focus attention on the baby.

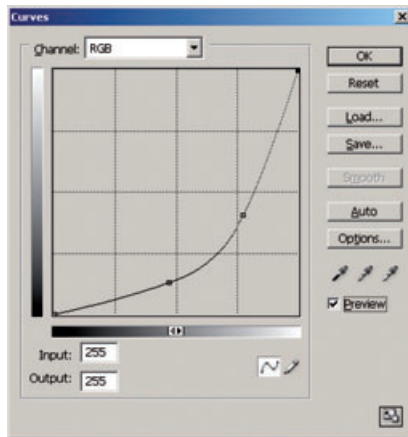
Now that I could more clearly see the photograph, not to mention the dirt and scratches, I cleaned it up with my usual technique. I applied the Dust & Scratches filter with a radius of 11 pixels and a threshold of 8, assigned that filter to the History Brush, and reverted to the previous History state. I set the Brush to Lighten mode and cleaned up the photograph. The Clone tool picked off the few blemishes that the History Brush missed.

Figure 10-8-e, left, shows what the photograph looked like after I'd cleaned it. It's apparent that the color is a little uneven; it's hard to make

Fig. 10-8-b A careful scan and DIGITAL ROC make a big difference. Now there's color and detail in the baby and crib. It's faint, to be sure, but it's something to work with.



Fig. 10-8-c A Curves adjustment layer turns Figure 10-8-b into Figure 10-8-d. This RGB curve darkens the photograph and greatly increases contrast and detail in the highlights. The radial gradient mask for the layer evens out the exposure, eliminating the vignetting at the corners of the photograph.



out, so I added a Hue/Saturation layer set to +50 points. That amplified the color differences, producing the figure on the right. Now the pattern of red and green mottling is very clear.

I went after that with a couple of Curves adjustment layers. These work like the dodging and burning-in adjustment layers I introduced in Chapter 5, page 160, except that here I'm using them to correct color instead of tonality.

Example 8: Restoring an Almost-Blank Photo



Fig. 10-8-d Here's Figure 10-8-b after applying the Curves adjustment layer from Figure 10-8-c. The photo on the left shows the effect of the RGB curve before I added the gradient mask; the photograph has serious light falloff at the edges. The mask evens out the lighting in the photograph (right).



Fig. 10-8-e The Dust & Scratches filter, used in conjunction with the History Brush, cleans up Figure 10-8-d very nicely. The photograph on the left has normal saturation. I added a Hue/Saturation adjustment layer with +50 points saturation to the photo on the right. This makes it easier to see the color blotches while I correct them with some adjustment layers.

First, I tackled the reddish tinge around the perimeter of the photograph with the curves in Figure 10-8-f. The green and blue curves shift the color toward the greenish-cyan, the complement of the color cast that I want to remove from the photograph. I filled in the mask channel for that layer with black, set the Brush tool to white, and painted out the unwanted tint. Just as in Chapter 5, I ignored what was actually happening in the mask channel; I only paid attention to the color in the photograph. The enhanced saturation produced by the Hue/Saturation layer worked like a kind of a magnifying glass for color; it was really easy to see subtle differences in the tint and paint them away. The finished mask is shown on the right.

Next, I went after the greenish-yellow splotches in the center of the photograph with the Curves adjustment layer in Figure 10-8-g. The red

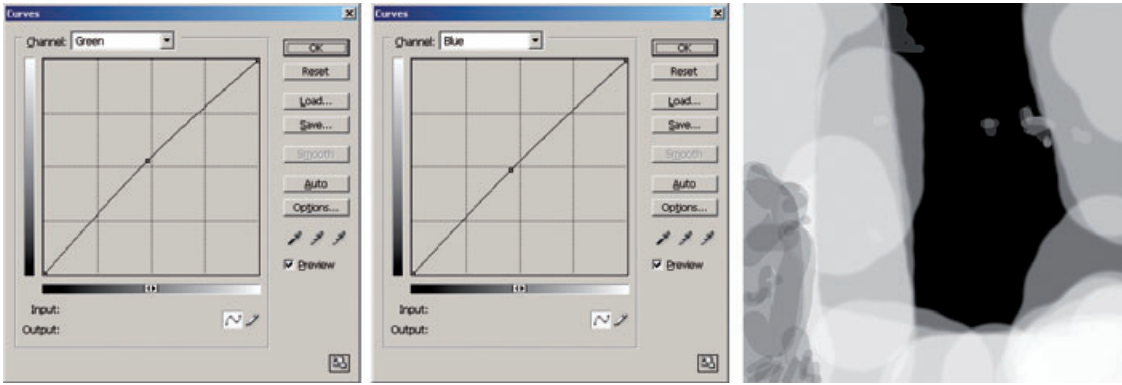


Fig. 10-8-f This Curves adjustment layer eliminates the reddish tinge around the periphery of the photograph. The green and blue curves shift the hue away from red. I hand-painted the mask on the right the same way I created burn-in layers in Chapter 5. The mask restricts the curves' effects to just those parts of the photograph I need to erase the unwanted red from.

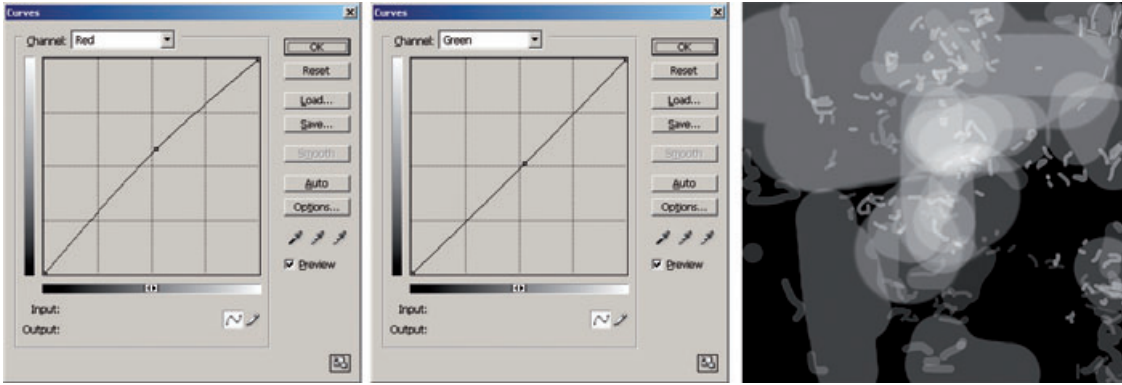


Fig. 10-8-g A second hand-painted Curves adjustment layer eliminates most of the green-yellow spots. The red and blue curves shift the color toward neutral. Figure 10-8-h shows the results.

and green curves shift the color toward red-magenta to cancel the color of the splotches. I painted in the mask channel wherever I saw that greenish-yellow tinge in the photograph until most of it was eliminated.

After I finished getting rid of the color mottle, I discarded the Hue/Saturation layer. The photograph that this color retouching produced, shown in Figure 10-8-h, has pretty good overall color balance but the saturation is very low. Also, there's a lot of grain and noise in the photograph, as is evident in the enlargement. Tackling that noise was my next challenge.



Fig. 10-8-h The two Curves adjustment layers in Figures 10-8-f and 10-8-g did a good job of eliminating the large areas of uneven color. As the enlargement on the right shows, though, there is still a lot of grain and color noise, especially cyan, in this photograph.

I turned to the Neat Image Pro+ plug-in (Figure 10-8-i). I selected an area on the back of the crib (gray square) and let Auto Profile compute the noise signature for the photograph. Then I ran Auto Fine-Tune to fine-tune the noise profile using the whole image. I applied that profile with the default filter settings to get Figure 10-8-j. The fine noise is gone, and the photograph looks a lot cleaner. The most distracting problem is an overall pattern of fine, slightly dark and bluish marks that obscure the delicate, light tones in the photograph. There's no way to filter those out; it's time for handwork.

The dark marks are very hard to see clearly, so I added a new Curves adjustment layer (Figure 10-8-k) to the photograph that greatly increases its contrast and darkness. Now the defects stand out, permitting me to retouch them the same way I corrected the large pink and green areas in the photograph. I created a dodging adjustment layer with the curves shown in Figure 10-8-l. The RGB curve lightens up the tones. Since the dark spots are, on average, a little cooler in color than the rest of the photograph, I also adjusted the red curve to remove a small amount of cyan. I filled in the mask channel with black and went to work with the white Brush tool set to an opacity of 20%.

It took me about 45 minutes to clean up the photograph, producing the mask in Figure 10-8-l, right. While doing this work, I noticed that there were some pink-green color variations that I hadn't completely cleaned up in Figure 10-8-h. I went back to the Curves adjustment layers that dealt with that and did a little more fine work on their masks. Adjustment layers are great that way; you're not locked into one set of corrections. You can modify or improve on them at any time.

The result of all that work is shown in Figure 10-8-m, left. The contrast-enhancing layer is still in place. The photograph doesn't look perfect; there's some residual tonal noise and variation visible in the

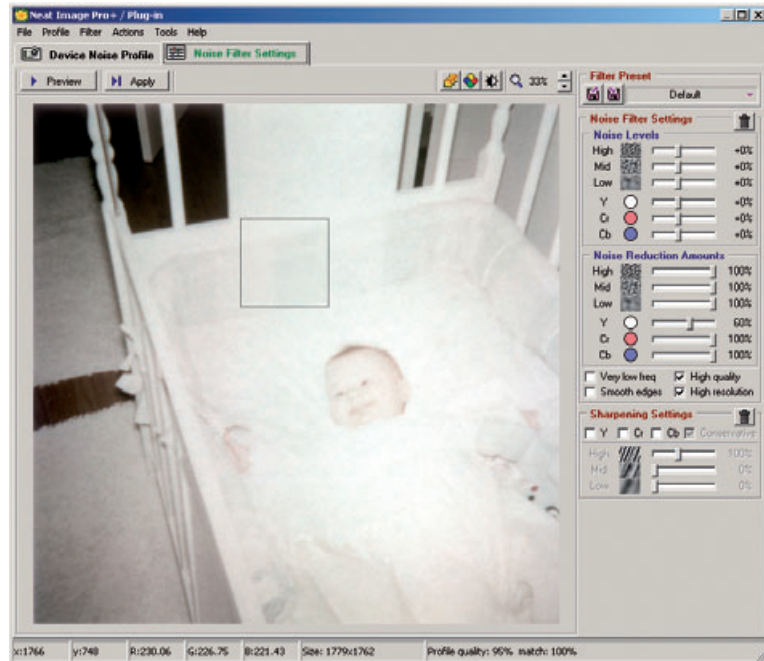


Fig. 10-8-i Neat Image is a great tool for fixing difficult noise problems. In the first control panel (top), I selected an area on the back of the crib to analyze for noise and grain, and ran Auto Profile and Auto Fine-Tune to create a noise profile for the photograph. In the second Control Panel (bottom), I applied that noise profile with the default filter settings shown on the right.



Fig. 10-8-j Here's Figure 10-8-h after Neat Image has finished with it. The grain pattern is completely gone, and the color noise is greatly reduced.

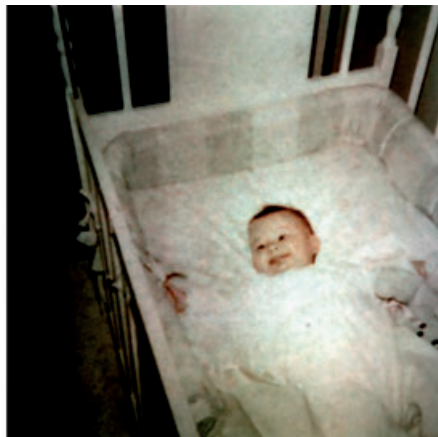
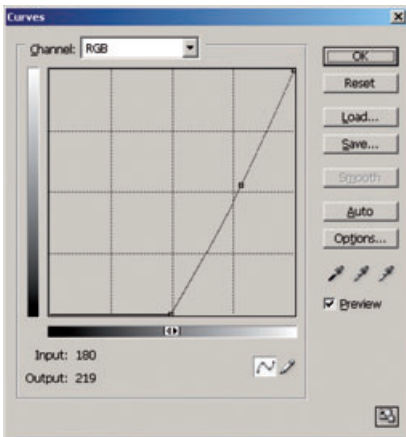


Fig. 10-8-k I added a Curves adjustment layer with the RGB curve on the left to the photograph, to exaggerate highlight contrast. This makes it easier to see the tone and color variations that I want to retouch out of the photograph.

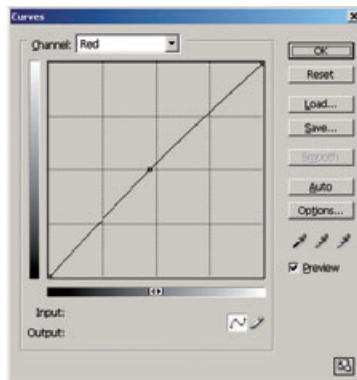
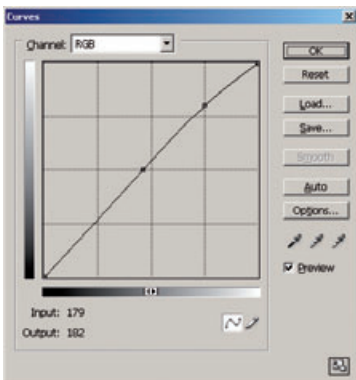


Fig. 10-8-l This Curves adjustment layer eliminates the pattern of faint dark spots that obscure the photograph in Figure 10-8-j. The curves lighten and slightly redden the parts of the photograph that the mask (right) allows to be affected. I hand-painted this mask to clear out those dark spots, producing Figure 10-8-m.

Fig. 10-8-m On the left is the retouched photograph, using the dodging adjustment layer from Figure 10-8-l. The contrast-exaggerating layer is still in place. Deleting that layer yields the figure on the right; compare this to Figure 10-8-j.

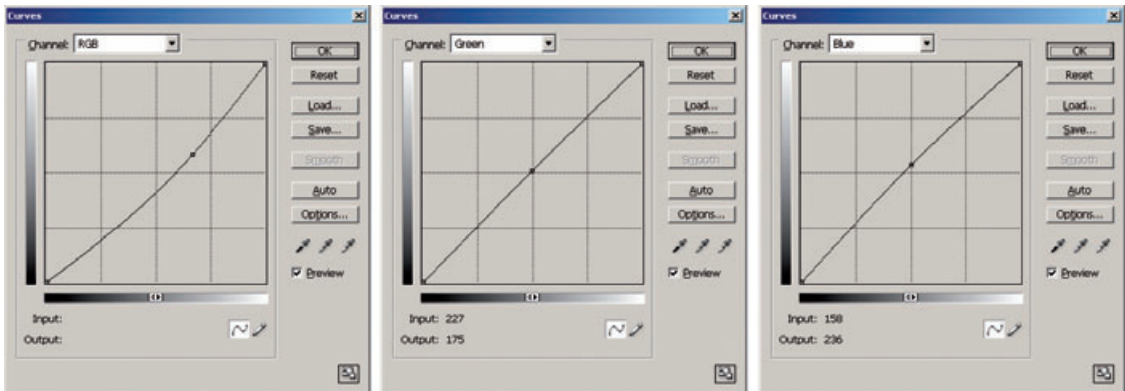
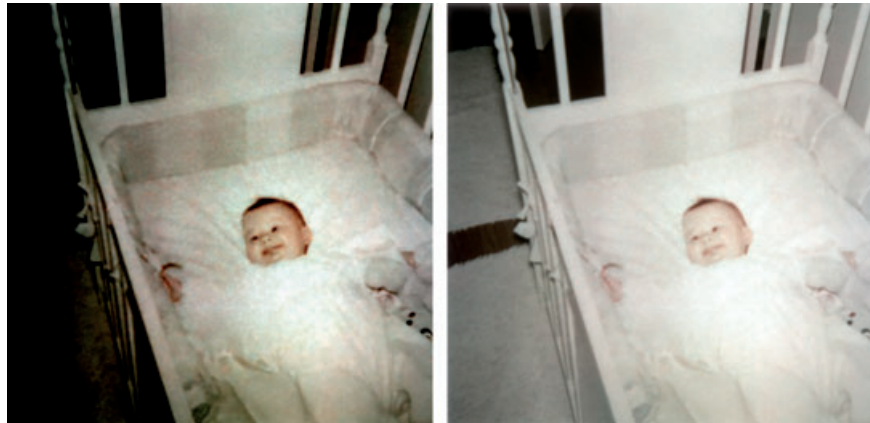


Fig. 10-8-n This Curves adjustment layer makes the final tone and color corrections to the photograph. The RGB curve darkens the photo a little and improves highlight detail, while the green and blue curves correct the color balance by removing a little yellow-orange cast.

photograph. But that's only visible because of the enhancing layer. As soon as I strip that off (right), the photograph looks nicely uniform and even. Compare this to Figure 10-8-j.

I finally have a clean photograph, and I'm on the home stretch. I'm ready to make the final tone and color adjustments to this photograph. I created a new Curves adjustment layer with the curves shown in Figure 10-8-n. The RGB curve darkens the photo a bit and increases contrast in the highlights. The green and blue curves remove a little bit of excess yellow-orange color and make the photo more neutral overall.

I felt the baby's face still lacked healthy color, so my final correction was to add the Hue/Saturation adjustment layer shown in Figure 10-8-o. I corrected the reds, shifting the hue by -5 points, which made the skin tones a little pinker. I increased the saturation by 31 points and lightened the color by 22 points. That gave me nice baby skin tones. To restrict the effect of this layer to just the baby, I hand-painted the mask shown in the lower part of the figure.

The finished photograph is shown in Figure 10-8-p, along with its layer stack. It truly amazes me how much photographic information turned out to be buried in Figure 10-8-a. I never guessed I'd be able to do this much with that photograph when I first looked at the nearly blank square of paper.

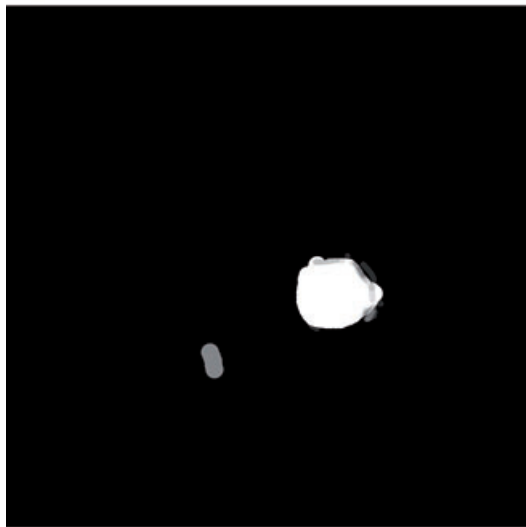
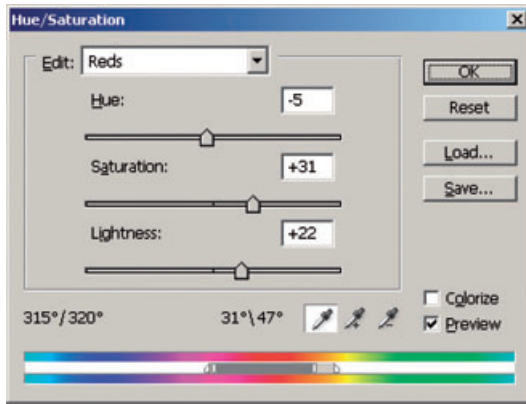


Fig. 10-8-o This Hue/Saturation adjustment layer improves the color in the baby's skin, making it lighter, pinker, and more saturated. The hand-painted mask prevents the rest of the photograph from being altered by this layer.

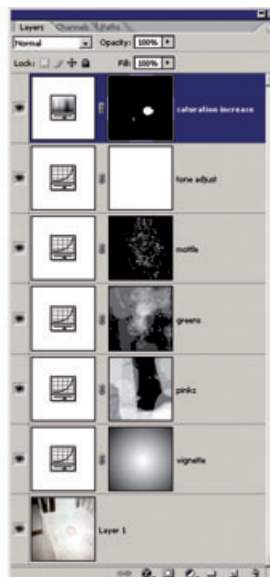


Fig. 10-8-p The finished restoration is an amazing improvement over Figure 10-8-a. It shows details I didn't even realize existed before I started the restoration. On the right is the layers stack that makes up this extraordinary reconstruction.

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