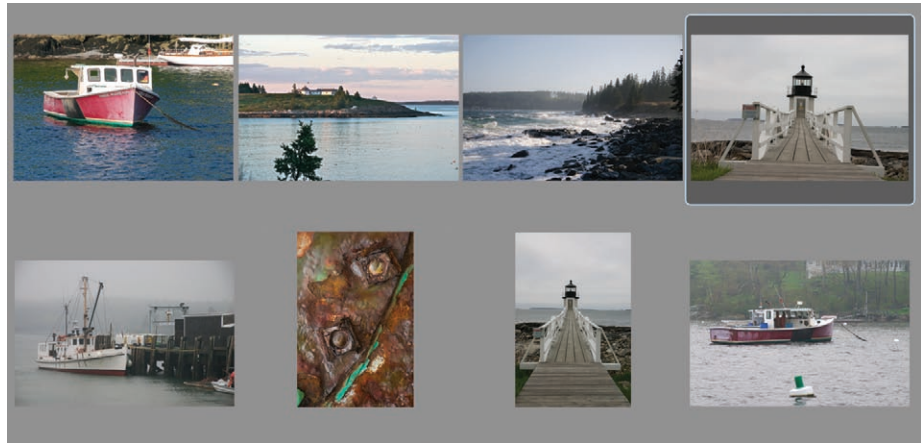




Maine Day in May

Simplifying a Photograph to Achieve a Hand-Rendered Result



Photos taken over two days offered a variety of choices. The lighthouse was a place I particularly liked, and I took the photograph with exactly this hand-rendered process in mind.

The realist Winslow Homer did not attempt to create precise detail in his works but instead chose to represent such things as leaves, cloth, plants, and wisps of hair with casual swipes of color, leaving these for the viewer to interpret. Complex details were reduced to larger fields of color and suggestive strokes, allowing the viewer's mind to fill in the missing information.

Simplifying a photograph to render a hand-rendered look does not require a perfect representation of the original, and not every image responds well to the process. While almost any photograph can render acceptable results, I prefer images of low-to-medium frequency for the simple reason that they respond more favorably to heavy applications of filters.

A chilly Maine vacation offered an opportunity to photograph many

interesting places under a variety of conditions, many of which resulted in less-than-optimal quality. One sequence of shots provided excellent compositions, but the cloudy sky and lack of a tripod produced relatively poor exposures, void of vivid colors and perfect focus.

The shot of the lighthouse stands out as a good candidate for this process because of two key reasons: low frequency and a relatively small range of color. The low frequency prevents Photoshop's filters from becoming so noticeable, and the flaws from the poor shooting conditions are easily remedied using Camera Raw.

In most photographic settings you can shoot confidently using Aperture Priority mode, choosing to capture the depth of field and allowing the camera to determine shutter speed. In this circumstance, however, the

camera required manual settings for both speed and aperture to capture the shot. The depth of field required a high f-stop and long exposure, but without a tripod any camera shake would throw the photograph out of focus. The neutral gray sky prevented me from increasing the ISO settings, because the higher it is set the more color noise is introduced, which is undesirable during this process.

Shooting with my Nikon D200, I left the ISO at 100 and selected my 17–85mm lens. An exposure of f/18 and 1/80 second was nearly two stops underexposed, just fast enough to stop the water motion.



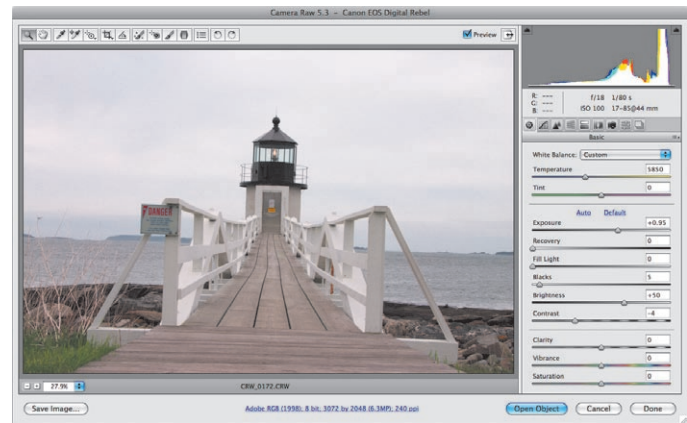


The original exposure is nearly two stops underexposed. The neutral grays are highly susceptible to color noise.

1 Opening the digital original. The “as-is” exposure in the image above reveals a dark, low-contrast image. Highlight areas start in the low midtone range, with the fractal highlight at an extremely high 37%! An optimal starting point when opening the original in Camera Raw requires balancing three basic settings: exposure, brightness and contrast.

For this photo, using Camera Raw’s Exposure and Brightness sliders is only subtly different. Increasing the exposure should be your first step. The Exposure slider is adjusted nearly one full stop, to +95. On a normal, full range exposure, changing the Exposure would affect highlights more than midtones and shadows, but because the highlights fall squarely in the midtone range the changes affect all tones equally.

Adjusting the Brightness slider to +.50 adjusts the range between the original highlight and shadow areas, resulting in greater midtone detail without blowing out either end. After this adjustment the spectral highlight (the whitest part of the image, usually a reflection) is considerably smaller than it would be if only the Exposure had been adjusted. A contrast adjustment of -4 improved the image by slightly reducing the difference between the



The Camera Raw dialog showing basic adjustments.

dark and light ends. Later steps exaggerate the contrast of dark to light, so it is undesirable to have heavy shadow coverage at this point.

Noise suppression while opening the digital original is important and can even be used to soften the image prior to opening it in Photoshop or Painter. Gray is especially sensitive to color noise because it is made up of relatively equal values in each of the RGB channels. Brightly saturated pixels amongst neutral gray pixels stand out, and noise reduction techniques often produce blotchy grayish areas of color that are nearly impossible to eliminate.

Moving to the Detail panel, the Color Noise Reduction is set all the way to 100, whereas the Luminance is left alone to retain shape detail. With images that have less noise the noise reduction does not need to be so extreme, but even the best photos will most likely benefit from careful attention to the amount of noise.

Greater Color Noise Reduction can reveal distinctive stepping between colors and reduce smooth transitions between color fields. Because this has somewhat of a sharpening effect, and sharpening exaggerates noise, the sharpening slider is adjusted to zero.



The image is cropped and rotated at the same time.



Edits are painted directly onto the image.

2 Cropping, straightening and original editing. The first step once the file is open is to crop and scale it to the target output size, in this case 4200 x 3150 pixels.

Like many photographs, the horizon of the lighthouse photo requires a slight rotation. This is best done during the cropping process so that both can be done at the same time, resampling one time instead of two. Begin by opening your file in Photoshop. Select the Crop tool, and enter your desired dimensions and resolution in the Options bar, select a corner for your image and drag to the desired crop. Positioning the pointer slightly outside of the selection allows the image to be rotated, reverting back when the pointer is moved to a corner or inside the selection. When satisfied with the cropping, press Return. The cropped, rotated and scaled image now rests on a flattened layer titled background.

This is the optimal time to make large edits to add or delete elements within the image. The sign on the lighthouse door is eliminated by selecting the Eyedropper tool and clicking next to the sign to sample the gray color, then brushing over the area with the Soft Round 27 brush from the Brushes palette. The same process is used to roughen up the letters on the sign in the foreground.



Using Photoshop's Smart Objects. Smart Objects are truly wonderful when used correctly. By making the background layer a

Smart Object at the very beginning, then duplicating that layer when it is needed, future edits to the content of the Smart Object are automatically incorporated into each instance in which it is used.

To make the background a Smart Object, choose Filters > Convert for Smart Filters. Now, changes to this layer are done either by double-clicking on the layer on the Layers palette, or by using Layer > Smart Objects > Edit Smart Object. The Smart Object opens in a new window. Edit the layer as much as you like, then save and close the window.

Each instance of the layer is immediately updated, with the filter(s) applied. If you use this feature be sure to examine other layers and masks carefully to make sure no unexpected changes crept in!

Be careful not to expect to open files with Smart Layers in them using Painter. As of this writing, Painter does not support Smart Layers.



Dust and Scratches is applied to the Dust and Scratches 8/0 layer and set to Lighten mode on the Layers palette.

3 Saving and applying layering effects. Save the file by choosing File > Save As, and at the end of your file name, type the word *original*. Do this one more time, this time replacing *original* with *working*. This step ensures your access to the original file should you inadvertently alter the original working layer in future steps.

At this point you should have a single layer document, with the layer entitled *Background*. Rename this layer by double-clicking its title and typing *original*. Use Layer > Duplicate Layer to make a copy, then choose Filter > Noise > Dust & Scratches. Adjust the Radius slider to 8 and the Threshold to 0, then press Enter or Return. Dust and Scratches removes noise and small details without blurring the edges by averaging the colors in a given area, the size of the area determined by the Radius and the number of rendered colors by the Threshold sliders. On the Layers palette, set the Blend mode to Lighten and rename it Dust and Scratches 8/0. Using the Lighten mode on the layer eliminates many of the original sharp, dark edges, softens the overall image and makes larger areas of pixels a more uniform color.

Once again, duplicate the layer titled *original*, then choose Filter > Artistic > Dry Brush. Setting a small



The Dry Brush filter produces a lot of painterly daubs, but lines such as the shadows between the planks suffer.

Brush Size (2), high Brush Detail (8), and the lowest Texture amount possible (1) results in a modified layer that does not look quite as computer rendered as it would with a bigger Brush size or higher Texture setting. Double-click on the layer's name and rename the layer Dry Brush 2/8/1. Because the Blend mode is set to Normal, it now becomes the lowest visible layer in the document, sitting above the original layer and below the Dust and Scratches 8/0 layer. The image has less detail and wider color fields than the original photograph. Save your file.



This comparison shows the difference between setting the Dust and Scratches on Normal (left) and Lighten (right) Blend modes.



Using *Unsharp Mask* produces a painterly white edge. A layer mask allows undesired white details to be reduced or eliminated.

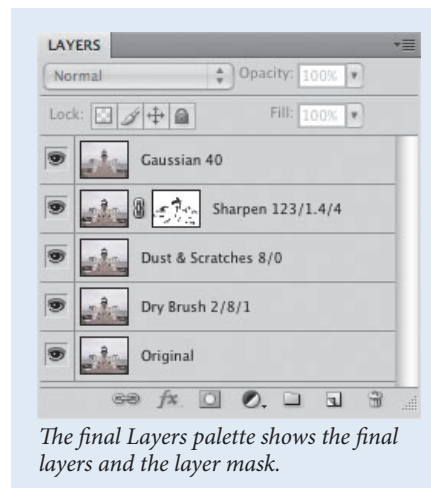
4 Softening and brightening. A close look at a well done watercolor reveals how paper white is left when color fields almost butt one another, either by intent or accident. This effect is difficult to duplicate using Photoshop filters, so in an attempt to emulate it, select the Dry Brush 2/8/1 layer and copy it by choosing Layer > Duplicate Layer. Click and drag the layer's name on the Layers palette and drag it to the top of the stack. Choose Filter > Sharpen > Unsharp Mask, and drastically oversharpen. The sliders should be set to Amount:123, Radius:1.4 and Threshold:4. Again, in the Layers palette set this layer to Lighten. A white halo effect appears around different elements in the image. Rename this layer Sharpen 123/1.4/4.

Not all of the white detail on this layer is desirable. To remove unwanted white areas, apply a layer mask by clicking on the Add Layer Mask button on the bottom of the Layers palette. Choose a large, soft brush and paint black on the mask, eliminating excessive edges, especially around the windows and the waterline.



A heavily blurred layer derived by combining all layers is set on *Soft Light* to produce a soft, watery effect.

Finally, to soften the image and enhance colors, make a composite layer of the document by selecting the top layer and pressing Ctrl-Alt-Shift-E/⌘-Shift-Option-E. This merges every layer while keeping all the original layers intact. Apply a heavy blur to this new merged layer, somewhere around 40, by choosing Filter > Blur > Gaussian Blur. Rename the layer Gaussian 40, then set the layer mode to soft light.



The final Layers palette shows the final layers and the layer mask.