

QUACK

Newsletter of E.J. Peiker, Nature Photographer and www.EJPhoto.com
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Summer 2012
(Vol. 10, Issue 2)

Welcome to the quarterly newsletter from E.J. Peiker, Nature Photographer and www.EJPhoto.com. In this quarterly email publication, I keep subscribers posted on upcoming workshops as well as sharing photos and experiences with you. I will also give you brief impressions on any new equipment that I get the opportunity to use and any other general information in the world of digital Nature Photography. Please feel free to forward this to other photographers and interested parties but please do so only by forwarding this newsletter in its entirety. All content is copyrighted by E.J. Peiker and may not be reproduced. If you would like to be added to the mailing list, unsubscribe, or access back issues, please visit: www.ejphoto.com/newsletter.htm



Atlantic Puffin - Iceland

Luminosity Masking In Photoshop

Much has been written over the last couple of years about HDR or High Dynamic Range processing in order to allow a photograph to represent the full tonal range that our eye can see. In some regards, HDR has become overused and used when not necessary in my opinion. The HDR process utilizing tools such as Photomatix, Nik HDR Effex Pro, Oloneo HDR, or even Photoshop's own (and inferior) HDR tools, when in competent hands on images taken with HDR in mind can lead to stunning natural looking results. It does take quite a bit of work to make them look great including some significant processing in Photoshop after the HDR part of the process is done. Quite often, however, our camera's sensor does capture the full dynamic range but basic processing leaves the photographer wanting more because their eyes saw something completely different due to the way our brain processes what our eyes see. This quarter I want to share with you a simple yet very useful technique I learned about a year ago to accomplish this while saving quite a bit of time. The technique is called Luminosity Masking.

Let's start with the photograph below, which was converted in Adobe Camera RAW 7 and brought into Photoshop CS6 (older versions of ACR and Photoshop CS3 or later work equally well for this technique):



While the picture is nice as is, the sky appears washed out and is certainly much less dramatic than my eyes perceived when photographing the sea stacks at Cannon Beach on the Oregon Coast. The camera was able to record all of the details of the sea stack but in doing so raised the brightness level of the sky to a level that is much brighter than what my eyes saw. The sky was not overexposed and there were no blinking highlights but it was simply much brighter

than my eyes perceived due to my eye's dynamic range being nearly double what the camera's sensor was. This photo will become the basis for our foreground and shadow detail.

I could have taken a second shot with a lower exposure value and overlaid it using either HDR techniques or manual masking and blending but that might make for problems due to the moving water and it would certainly take much more time than the technique described here. Luminosity Masking allows you to create a photo with the tonal balance that your eye saw in about one minute once you commit it to memory. In this situation I simply decided to do another RAW conversion where I made adjustments to allow the sky to look the way I wanted it to based on my perception of the original scene. By simply reducing the exposure control by 1.5 stops, I got the second image to be used for the sky's tonality in this tutorial:



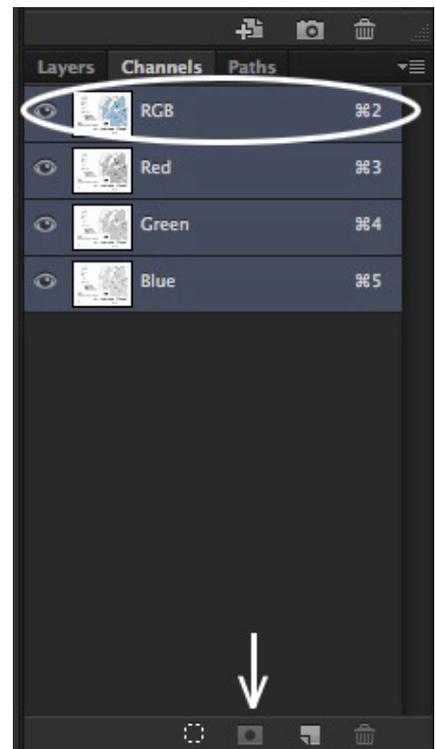
While the sky looks great in this conversion, the sea stack is too dark and blocked up in the shadows. As stated, at this point I could manually blend the images but there is an easier and faster way. Enter luminosity masking:

First bring the brighter layer into the same document as the darker layer by simply dragging the brighter layer onto the darker image while holding the shift key down to keep them aligned.

If the image was taken as two different shots in the camera, at this point you would want to auto-align the images by selecting Edit > Auto Align Layers to compensate for any slight movement between the two shots. Note that this sort of thing should always be done using a sturdy tripod to minimize movement between the two shots. Any extraneous parts of the image that are left over due to the alignment process are then cropped. In this specific case, it was not necessary to auto-align and crop the layers since the source of the brighter foreground image and the darker sky image were the same photograph.

Next click on the Channels Tab (next to the Layers Tab) and then Control (Command) Click on the RGB channel at the top of the color channel list (see circled area at right). This will produce a selection of bright areas. Now click back on the Layers tab and invert the selection (Ctrl-Shift-I on PC and Command Shift I on Mac, or click on Select > Inverse from the menus).

Now click on the New Layer button at the bottom of the layers palette (see arrow at right), which looks like a light colored rectangle with a darker circle in the middle (like the Japanese Flag in black and white). You will see something magical happen. The image is suddenly transformed in a way that leaves the foreground with the lighter information and the sky with the darker information. You may notice a little reduction in detail. This is actually due to a reduction in contrast at light/dark edges and isn't an actual reduction in image detail. This is easily fixed by moving the Feather slider in the Masks palette on earlier versions of Photoshop and the Properties > Mask palette on CS6 to a value of 20 to 50 pixels. The result of this luminosity masking technique is illustrated in the following image:



At this point you may make some other tweaks to the image as per your taste. I simply modified the blues slightly to a more natural looking tone for the final image. This closely resembles what my eyes, with their huge dynamic range, saw when I was taking this photograph:



Cannon Beach, Oregon

Luminosity masking is an excellent technique to stash in your bag of Photoshop tricks and it can be very useful in working with high dynamic range scenes. It is not a replacement for HDR tone mapping but in certain situations can produce a very natural looking image that accurately depicts what our eyes saw.

D800, D800E - A New Generation Of Tools

It has been four years since my switch back to Nikon after 8 years with Canon. In mid-2008 I acquired a D300 and D700 to fulfill my DX (1.5x crop) and FX (full frame) shooting needs. In November of that year I added the Nikon D3x for my serious landscape photography. After acquiring the D3x, the D700 served as my low light camera due to its great noise performance up to ISO 3200. These three cameras have served me extremely well for about 4 years but in the world of digital cameras (computers with lenses attached), 4 years is an eternity. When Nikon announced the D4 in late 2011, I wasn't terribly interested since I was looking for a single camera type to fulfill both my DX and FX shooting needs. The D4 at 16 megapixels is a bit light on resolution for my landscape needs especially since I already have a 24.5 megapixel D3x and in DX crop mode it only provides a bit over 7 megapixels which is a huge step backwards from the 12 megapixels I have in the D300 or the 10 megapixels I have when

shooting the D3x in DX crop mode. So I continued to truck on with my D300/D700/D3x combo but I continued hoping for simplification - one camera body type that provides adequate resolution in both FX and DX mode, a single battery type so that I don't need to carry two chargers, a single user interface, and lighter weight. Of course all of this needs to be packaged in a professional build body.

At the beginning of 2012, Nikon announced the D800 and D800E. This new camera sports over 36 megapixels in FX mode and 15.4 megapixels in DX mode. It is housed in a magnesium alloy camera body and weighs much less than the D3x and about the same as the D700 and D300. This of course piqued my interest so I did a lot of reading and a lot of research and discovered that this camera body would meet my needs if Nikon truly delivered on the specs and the camera performed well in the field. As readers of my writings know, I no longer pre-order

anything and prefer not to ever get any gear from the initial production run. Past experiences and nearly 27 years of working in the technology industry has taught me that in the first couple of months of production, a vast number of improvements are made to all electronic products in their manufacturing. Once the initial shipment of cameras from the first production runs were in the hands of photographers and field reports started coming in, I pulled the trigger and ordered both a



Rio Salado, Arizona (D800E, 24-70mm)

D800 and a D800E through Nikon Professional Services (NPS) and Hunt's Photo and Video (Hunt's is a sponsor of EJPhoto.com and NatureScapes.net). For those unfamiliar, NPS allows qualified NPS members to order gear through an authorized retailer such as Hunt's and NPS simultaneously. NPS then allocates to the retailer a camera specifically for that NPS member. It may seem unfair to non-NPS members but this is one of the perks of being a Nikon sponsored professional photographer and it gets new gear in the hands of Nikon pros immediately. The NPS member basically jumps to the head of the line. In this case, even though these cameras are backordered for months, I was able to get each in about a week and a half including shipment from NY to Massachusetts and then on to me in Arizona.

The D800 and D800E are identical in every way except for the sensor filter. One uses a traditional anti-aliasing filter; the other has a filter that eliminates the slight blurring effects of anti-aliasing. One of the benefits of an AA filter is that it eliminates moiré pattern noise and false color but at the expense of softening fine detail. Moiré occurs when there is an interaction between the pattern being photographed and the pixel spacing on the sensor. If one spent a lot of time photographing things with fine repeated pattern such as fabric, this could be a significant problem. In nature, this is generally not an issue for landscapes but has the potential of being a problem in fine, evenly spaced, feather detail on birds. My D800, the camera with the AA filter, will likely spend much of its life in 1.2x crop or DX crop mode and be used for bird photography. My D800E will spend much of its life in FX mode for my landscape photography. Since the cameras are identical in every other way, my desire for a high megapixel landscape camera and a great cropped body all in one has finally been achieved. This allows me to simplify my photography life significantly while lowering weight. The camera supports both CF and SD cards. In another simplification move, I have decided to shoot this camera using SD cards rather than CF cards allowing me to leave a card reader at home since my MacBook Air has an SD card reader built in.

How does the D800 perform? So far so good! There are a number of things that stand out:

- I love the availability of the new 1.2x crop mode. This allows me to still get a 25 megapixel photo (slightly more resolution than a D3x) but without using the outer edges of the lens, which is generally the weakest, part optically. Additionally this keeps the file size reasonable and similar to the D3x. 1.2x mode also increases the frame rate from 4 FPS to 5 FPS even without the optional MB-D12 battery grip. The 1.2 form factor is reasonably close to the much loved Canon 1.3x APS-H mode. There is also a 5:4 ratio crop available like previous FX Nikon bodies which is an excellent landscape photography format.
- I absolutely love having an automatic sensor cleaner which the D3x lacked. This solves what is probably the D3x's single largest problem for someone living in the desert. The sensor is very dirt prone and extremely difficult to clean due to the sensor chamber's construction on that camera.
- Image noise is amazing given the number of pixels and to my surprise; the dynamic range is better than any of my three previous cameras. The ability to recover shadow detail without introducing undesirable artifacts such as banding, blotching, or color noise is like no other camera I have used. This is of course due to the class leading dynamic range and the awesome job Sony has done in dropping the noise levels in their sensor technology. Yes, the D800 uses a Sony image sensor (like many Nikon cameras)!
- Autofocus is better than my previous cameras and at least as good, if not better than the D3s. This is not surprising since the D800 shares the AF system of the D4. I tested autofocus acquisition on an f/6.7 lens combination (500mm + 1.7x) to see if Nikon truly improved AF at apertures smaller than f/5.6 or if it is just marketing hype since Canon no longer supports AF on lenses slower than f/5.6. I used a low contrast target in low light and compared performance between the D3x and the D800 and, to my surprise, the D800 focused immediately and positively while the D3x hunted a bit before confirming focus. The D300 was unable to focus on the target in my test scenario. There is most definitely a measurable difference in low light, small aperture AF performance.

- On past Nikon bodies, the exposure delay function when used with mirror lock-up only allowed you only a 1 second delay between the mirror flipping up and the image being taken. This was simply not enough time to always allow mirror vibrations to dampen. With the D800 and its super high resolution, mirror vibration becomes a big problem so it is great that Nikon now allows up to a 3 second delay between the mirror coming up and the shutter going off. Of course with a cable release or Live View you can have any delay you want. From a simplification standpoint, I prefer to not use a cable release. My standard shooting method for landscapes is to set the camera for mirror lock-up and shutter delay. Now that delay is set to 3 seconds on my D800E.
- Live view has also been improved. One now can look at a histogram prior to committing the exposure, have a virtual horizon display and level overlayed, and have face detection available for up to 32 faces simultaneously. There are new contrast detect autofocus modes and the balky AF mode where the mirror first has to swing into position is gone. There is a plethora of information available before you ever take the shot. This is how live view should be! I will clearly use it much more after virtually never using it in previous iterations. There are some grumblings about live view's performance with manual focus lenses; specifically, because Nikon automatically stops down the lenses to the shooting aperture for live view, in low light situations this results in a noisy and pixelated live view image that isn't as easy to manually focus as it should be.
- Auto ISO has been revamped from a cumbersome experience to one that works. You can even have the camera decide the slowest shutter speed at which it starts to ramp ISO based on the focal length in use. Even this function can be customized to be faster or slower than the traditional $1/\text{focal length}$ hand holding shutter speed. I would recommend, due to the high sensor resolution, to use something faster than $1/\text{focal length}$. This function even works with zoom lenses, changing the longest shutter speed allowed based on the current zoom level.
- The camera gains a dedicated Bracket button like the D3/D4 series rather than having to use a customizable function button for auto bracketing like the D300 and D700.
- Another nice addition is that the in viewfinder level now measures both roll and pitch where previous iterations only showed pitch (pitch is fore/aft, roll is tilt left/right, yaw is pan left/right). However the display is not lit so in low light situations, the viewfinder level is not easy to see. My previous cameras only measured on the roll axis but it was very easy to see in all lighting conditions. Hitting the shutter button lights them up temporarily.
- A built in HDR function is now also available. The camera takes two shots when you push the shutter release button at an exposure differential of your choosing or you can let the camera automatically decide on the exposure differential based on the brightest and darkest parts of the scene. It actually works very well and does a decent job even when set to Auto. One can also specify up to 3 stops exposure differential between the two photos it uses for tone mapping the image. Unfortunately the HDR mode does not work for RAW capture. One has to choose JPEG or TIFF file capture to utilize this function. It is nice to have it available though especially if you will only have a very short interval in which to capture the HDR image.

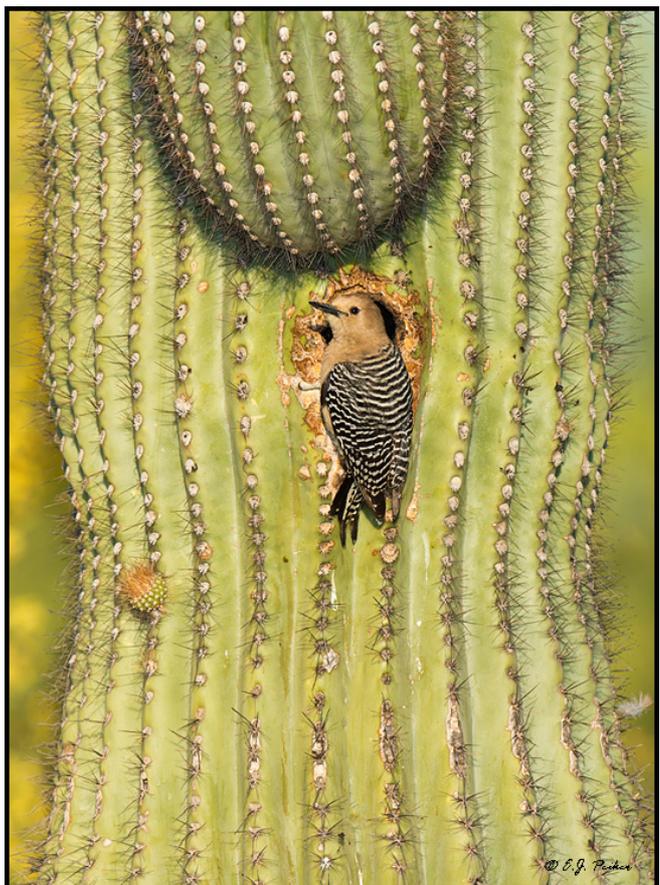
- The way interval shooting is done has been revamped from a confusing mess to something much more intuitive. The camera can now also generate a movie from interval shots automatically.
- Build quality is exceptional. It feels like a solid tool with excellent workmanship all around. The MB-D12 accessory grip, while plastic, is also well built. One note, if you already have a tripod mounting plate for an MB-D10 (vertical battery grip for the D300 and D700), you may not need to buy a new one for the MB-D12. The MB-D10 plate from Really Right Stuff fits perfectly on the MB-D12.
- Finally, I love the charger. Previous Nikon chargers required a power cord. This one can either be used either with a power cord or with a clip on standard plug so that the charger hooks directly to the wall (similar to many Apple products). This saves you from packing yet another cord. Simplification without losing functionality is always better!

Lens calibration was performed on all of my lenses with both bodies. All of my lenses calibrated within 0 and +4 on the D800 and between -4 and +2 on the D800E, which is a much lower adjustment amount than was required on my previous cameras. Even with the 1.4x II on the 500mm f/4, a combination that is notorious for requiring extreme adjustments, often beyond the adjustment range built into the camera, only a +5 adjustment was needed on one body and +2 on the other. On the other hand, the 200-400mm f/4 lens with the 1.7x teleconverter could not be calibrated within the adjustment range available on either camera.

Even at -20, it is not yet focused properly. Something in the neighborhood of at least -30 would be needed. In the default position of 0, the combination is completely unusable from an AF perspective. Fortunately, I never use this combination since, even when perfectly calibrated, the sharpness is below my personal standards. Note that these values are for my lenses and my cameras and cannot be used on any other lens and camera even of the same type.

There are also a ton of video features and in-camera image processing features that interest me a lot less than the still photography capabilities. The major change from the D300s and D3s is the inclusion of 1080p video and the availability of uncompressed video out when utilizing HDMI tethering. I now have true, high quality HD movie capability - let's see if I actually ever use that!

The question about the D800's 36 megapixel sensor's noise performance is bound to be on the reader's mind. When you view images at



Gila Woodpecker, Arizona - D800, 500mm

100% it is much better than I expected but not as good as the D700 and significantly noisier than the D3s. But when you normalize to a specific size then it is exceptional. Let me explain what I mean! Let's say I need an output of a 9x14 print at 300 pixels per inch. This is roughly the native resolution of a D700 or D3/D3s. However when you print a D800 photo at this resolution you are down sampling the image by about 1.5x per side thereby binning 2.25 pixels for each one that is printed. This roughly halves the noise resulting in an image nearly as clean. But let's say you have to make a 20x30 print at 300ppi. The D800 image only needs to be upscaled by 1.5x per side meaning that almost 50% of the printed pixels are original pixels from the camera. The D3/D700 image needs to be upscaled by more than 2x per side meaning that more than 75% of the pixels in the print are manufactured from the original pixels. Which one will look better, all else equal? Clearly the D800! The D800 even has a significant advantage compared to the D3x in this regard and that's before you factor in the D800's better dynamic range, which means better shadow detail.

The spectacular image quality that the D800 and D800E can deliver has been talked about a lot on the Internet and the traditional review sites as well as by many bloggers around the world. At the moment there is no other 35mm format camera that delivers the detail or dynamic range of these cameras. The amount of detail captured and the amount of shadow detail that can be extracted without excessive noise is like nothing we have seen before. But how do these two compare to each other? Nikon markets the D800E as a specialized version of the D800 for those that do not shoot things prone to moiré color artifacts. I decided to put the two to the test to see how much I need to be concerned with this. But before I reveal the test results, I wanted to mention how incredibly sharp images straight out of the camera on the D800E are. I have been missing the days of the original EOS 1D and Nikon D100 where pictures coming out of the camera were dead sharp without the need for capture sharpening to counteract the effects of aggressive AA filters and aggressive detail smearing noise reduction. When you look at D800E images, even at 100%, you get a very sharp rendering and none or almost no capture sharpening is required. The images just put a smile on your face when you first open them in ACR, Lightroom or Photoshop and zoom in to 100%. The D800 images by comparison, while delivering an incredible amount of detail; more than we have ever seen before, still need that small shot of capture sharpening to try to regain the acuity lost due to the AA filter. The difference is more visible the more you zoom in on fine detail.

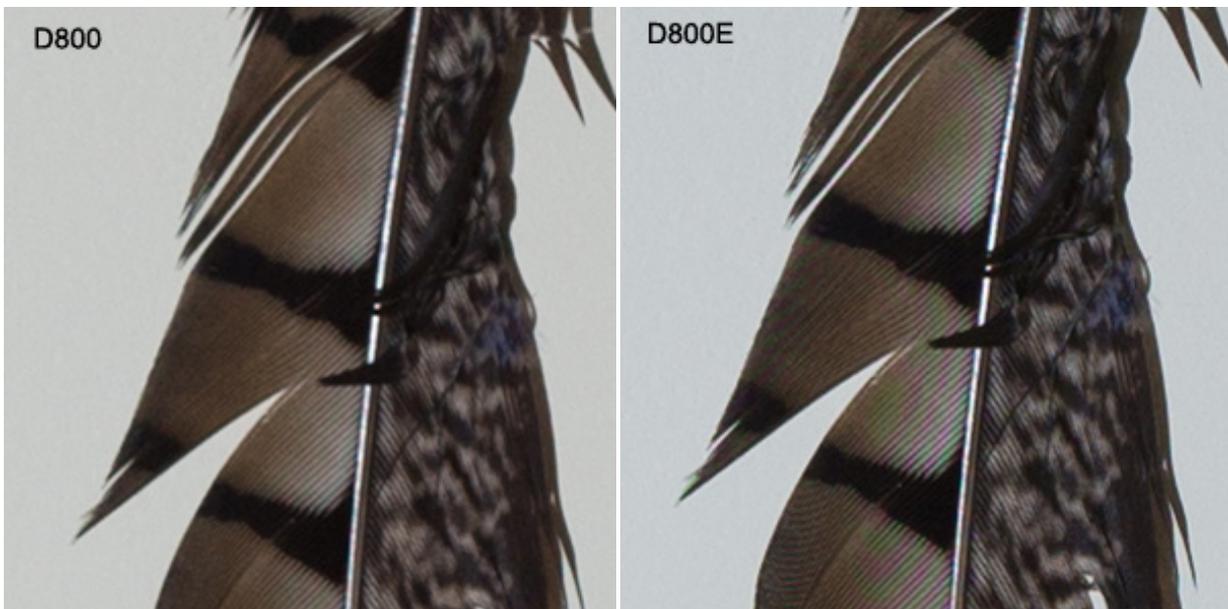
Much has been said and written about the possibility of moiré interference artifacts when there is no AA filter. In fact Nikon probably created more hype about this than necessary in their own warnings about the D800E. Moiré interference is best illustrated graphically by clicking on this link:

<http://upload.wikimedia.org/wikipedia/commons/thumb/b/bb/Moire02.gif/160px-Moire02.gif>

In real world photography, this can lead to strange color artifacts on photos where there is interference between the pixel array and the subject. It is most likely to occur when photographing things with fine repeated patterns such as the texture in fabrics. I set out to try to find this in photographs with the D800E and compare it to identical photos with the D800. I was able to produce moiré with the D800E in almost every photo that includes very small text such as a regulatory sign that is in the distance. While the D800 displays much less of this, it

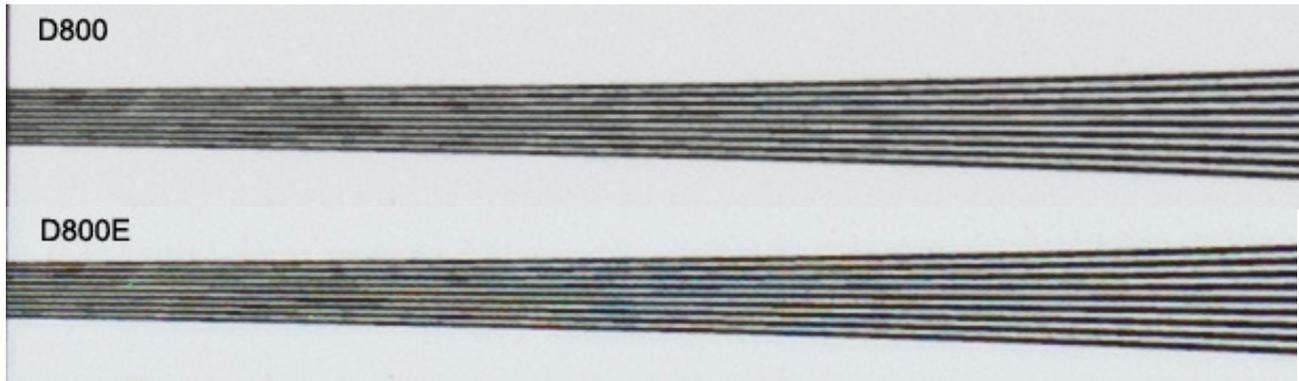
also smears the detail enough on those signs that the text can't be read without some significant small radius sharpening if at all while it can be clearly read on the D800E.

There has also been quite a bit of debate on the various bird photography forums whether or not bird feathers can produce moiré interference that is visible in photographs. I set out to test this by photographing feathers with both cameras under identical conditions. The only difference in the test shots was the camera body. Exposure, lens, and focal lengths were all identical. I can now, without a shadow of a doubt say that moiré can be an issue on bird feathers on the D800E while it is not on the D800. In the two 100% clips below, green and magenta moiré patterns are clearly visible on the D800E sample and are not on the D800 sample. The clips represent just 0.2% of the full frame. It is most evident in the lighter colored feather pattern just to the left of the spine on the D800E image where green and magenta interference is visible:



Additionally, note that the D800 resolves feather detail all the way to the left edge of the feather where the D800E does not. Some of this can be regained by sharpening the D800E image but not all of it can. While I do not think the moiré interference seen here will be a problem for most bird photographs, I do think it can be an issue on close-up photos of birds that reveal a lot of feather detail. Fortunately, Adobe has built in a new Moiré Reduction tool into both the Lightroom 4 Develop module and Photoshop CS6's Camera Raw 7. However, this is an extra, time-consuming step that would need to be taken on each image that has an issue in the digital darkroom.

Below are two 100% pixel level clips from an ISO 12233 resolution test chart. The top is the D800 and the bottom is the D800E. If one looks very carefully, the lack of color artifacts on the D800 clip and the slight color fringing on the D800E clip are apparent. This is the result of not having an AA filter:



My test chart shots were all done with the very sharp AF-S 300mm f/4 lens at f/5.6. This is the first camera/lens combination I have ever tested where the combination significantly outresolved the finest detail of the test chart. I can't, therefore, quantify the true resolution difference between the two. Qualitatively it is clear that the D800E produces fine detail that is slightly more crisp than the D800 as illustrated in the feather clips above.

The following are areas of improvement that I have found:

- I can't go over 6 frames per second and 6 FPS is only available when I use the MB-D12 vertical grip with AA batteries. In actuality it seems that Nikon rounded up a bit here. I thoroughly tested the FPS and under no circumstance can I get more than 5.7 frames per second using freshly charged 2700mAh AA batteries in the grip. My D300 and D700 were capable of 8 FPS with the MB-D10 grip attached. Perhaps, with the EN-EL18 battery pack from the D4, one could hope for maybe 0.2-0.3 FPS more. In 1.2x crop mode, the camera delivered precisely the 5 FPS that is specified. I opted to not get the module that allows you to use a D4 battery in the grip since that adds a huge and very expensive charger (\$400 for the charger alone and another \$200 for the battery and battery endplate). This would return me to two different types of batteries without really adding to the performance of the camera (although battery life would be longer). Since I already have to carry an AA charger for my flash batteries, using the MB-D12 with AA batteries does not add complexity when I travel. I am not and have never been a "machine gun" shooter and typically limited even those cameras capable of 10 FPS to something slower so this isn't a huge deal for me but it would be nice to have the capability on those rare occasions when a higher frame rate would be beneficial.
- High ISO noise at 100% pixel level view could be better but, as I explained above, it is actually much better than I expected so this isn't a disappointment to me in any way. I'm just wishing for the stars. ISO 1600 is still relatively clean – much cleaner than the D300 and still cleaner than the D3x. And when down-sampled for something like an 8x12 print, it is quite good; on par with the D700/D3.
- The third "area of improvement" is battery life, which seems about 50% to 67% of what the D300/D700 was. It provides much less than half the shots per charge of the larger battery in the D3x. The drop from the D300/D700 is partly due to new Japanese Lithium Ion battery construction rules. Ironically, the new batteries have already faced a recall due to the possibility of internal shorting resulting in the batteries exploding and damaging the camera. Fortunately I did not receive the recalled batteries but at the

time of this writing, these batteries are under an extreme shortage and even NPS members cannot get spares easily.

- I don't like the layout of the on screen menus. While this has improved somewhat, the menus are still often a mixture of items that aren't logically grouped and don't always have the functionality one expects. Sure, the Shooting Menu, Playback Menu, Custom Functions Menu and so forth are grouped but the items within those menus are not always logically laid out. Items that most photographers use often and are related to each other should be grouped together and near the top while items that are used once or infrequently should be relegated to the bottom. If this is too hard to do, simply alphabetize them but the current state of affairs simply requires too much hunting for various functions. Furthermore, as in previous models, the shooting banks are separated between regular menu selection items and custom functions. Why would they be different? One should be able to select a single bank and have the camera instantly reconfigure like every other camera manufacturer does. To add insult to injury, the shooting banks are automatically updated if you make a change any camera setting while shooting. So there is no true way to configure a camera, save it to a shooting bank and have that locked down until you forcibly change the programming of those banks. This is truly a brain dead way of implementing shooting banks making them essentially useless unless you never make camera configuration changes during a shoot. Fortunately Nikon gives you the option of making a custom menu for the things you use most but the way shooting banks are implemented should really be made more useful.



Barrel Cactus Blossom, Phoenix, AZ - D800, 500mm

- A modern feature that I wish the camera would have that it doesn't have is focus peaking in live view mode. Once you have seen how amazing this capability is, you will wish that all cameras had it. Some cameras, such as the Sony NEX and A77 systems have this capability. Basically what this does is to put a bright outline on the LCD display around high contrast edges that are critically in focus. This makes manual focusing, seeing what is critically sharp from a depth of field standpoint, or making sure what the AF system is actually focusing on super easy and makes it virtually impossible to mis-focus a photograph involving a stationary subject. I would love to see this in a

firmware update in the future but I am not holding my breath since this would require significant additional code.

- While we are on Autofocus, the contrast detect autofocus method used in live view is slower than contrast detect AF in most mirrorless interchangeable lens system cameras such as those in the Micro 4/3 genre from Panasonic and Olympus. It isn't a problem for me since I would never use this type of AF for action but it could be better. Note, however, that contrast detect focus accuracy is absolute since the data for it is taken directly off of the sensor, rather than off of a phase detection array that must be carefully calibrated and is subject to a number of critical tolerances.
- Like most full frame cameras, as an eyeglasses wearer, I wish for a longer eye-relief so that the full viewfinder and image can be seen without having to smash your face into your glasses to get your eyeball close enough or having to move your head around. Utilizing the 1.2x crop alleviates this but I would gladly take a camera whose prism is a quarter inch taller to get more eye relief so that the full viewfinder can easily be seen even with eyeglasses. Note that the D800 isn't worse than other low profile full-frame cameras like the D700 or EOS 5D models, but it is slightly worse than the large bodies like the D3, D4, and EOS 1Ds models.
- There is apparently a firmware bug or a circuit timing issue that affects some D800 and D4 cameras that cause a sudden lock-up. The lock-up can only be cleared by removing the battery from the camera. While this seems like a big deal, I have seen this sort of thing happen on virtually every digital camera body that I have ever used at one time or another. It has not occurred on either of my bodies to date. For people that have this happen a lot, one can eliminate the problem by turning off the blinking highlights and RGB histogram displays. Unfortunately these are two of the most useful things one can display on the rear LCD. Since this doesn't happen on the majority of the bodies, yet can be toggled by a menu option indicates to me that there is an interaction between the code and something electronic that can happen in certain regimes. My past history in the semiconductor industry has me theorizing that there is a circuit timing issue that can pop up somewhere in the camera based on certain component tolerances interacting with timing requirements in the firmware code. Nikon should be able to solve this with a firmware patch.
- As stated earlier, the viewfinder based level for pitch and roll are black bars overlaid on the image and are very difficult to see in low light and impossible to see if the image behind the level indicators is black. However, bumping the shutter release lights them up momentarily. This is linked to the crop mode display, which is my biggest complaint on the D800...
- Finally, my single biggest issue with the D800/D800E is that when you select a cropped mode, the lighted frame that indicates the new crop area in the viewfinder only stays on for a fraction of a second if you choose to enable the custom function that illuminates the autofocus points. You have to constantly bump the shutter button to clearly see where the edges of the frame are when shooting in anything other than FX mode. You can get a very nice grayed out frame if you turn off AF point illumination via a custom function but this comes at the cost of not being able to see your selected autofocus points in low light or if the underlying image is dark. I much prefer how my D3x did this - these cameras gray the inactive part of the viewfinder while allowing illuminated autofocus points. I would like an additional option added to the firmware that does this.

I have decided to set-up my landscape camera (D800E) with illuminated AF points since I can work slower and more methodically and am often working in very low light. My D800, which will primarily be used for wildlife, is set-up to gray out the unused image borders when selecting a crop mode since it is way too difficult in the heat of action to insure that your subject is fully in the frame when the whole viewfinder, including the cropped areas, are the same tonality as those areas that are in the frame.

Overall I am very happy with the switch to the D800 and D800E so far. All cameras have things that could be implemented better and the D800/D800E is no exception but for me, this is the best tool I have found as it meets the vast majority of my needs in a single camera body type. The amount of detail in photos from this camera is like no other camera I have ever used. I was skeptical about packing this many pixels in a 35mm frame and how good those pixels would be. In short, they are remarkable. I am also happy that I decided to get a D800 for my bird photography, not a D800E since I feared moiré on bird feathers and I was easily able to see it on my feather test shots. I have not been able to find any sign of moiré on landscape shots taken with the D800E while producing slightly more fine detail. This makes me feel good that I chose that camera for my landscape photography. The lenses I am using with these new bodies are the Nikon 14-24 f/2.8, 24-70 f/2.8, 70-200 f/2.8 VR2, 200-400 f/4 VR, 500mm f/4 VR, and Sigma 150mm f/2.8 OS Macro. I have just purchased the new 28mm f/1.8G lens and will have more to say about it at a later date. The 35mm f/1.4G which is simply the most mind blowingly sharp wide angle lens in the Nikon line-up and easily the sharpest autofocus wide angle lens ever made for the 35mm format would be an ideal match for the D800E but it comes at a very steep price. I now only have to travel with two cameras. They are lighter in weight and require fewer support components while producing more detailed photographs.

Photoshop CS6 Arrives

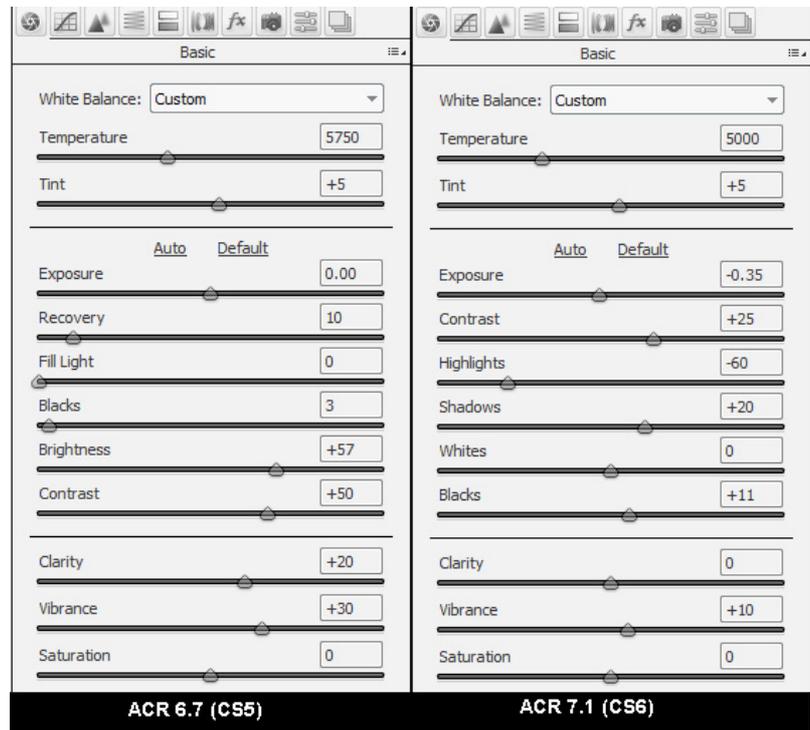
Two years after Adobe gave us Photoshop CS5, Photoshop CS6 was released. It continues its run as the choice for fine-tuning photographs by professionals and serious hobbyists. In the past two years, Adobe's other photography oriented product, Lightroom, has taken some market share from Photoshop among photographers but there are still many things that can not be done in Lightroom. For this reason, even serious photographers that now manage their photos and do their RAW processing in Lightroom, still use Photoshop to finish their



© S. J. Perkins
Ladder-backed Woodpecker, Amado, AZ - D800, 500mm

photos. Photoshop CS6 offers us some great new capabilities. As with the CS5 review, I'll only touch on items of interest to most photographers and not cover features designed primarily for graphics artists and advertisement shops. I have been using both the CS6 Beta and now the production version exclusively for the last three months. Below you will find what I find are the most significant new features in Photoshop CS6 for Nature Photographers:

Adobe Camera Raw 7: ACR 7 has changed how we process photos significantly due to a revamping of the Basic Processing Tab (See below). The basic tab hosts a set of new sliders and despite similar names now work quite differently. You now have individual control of shadows and highlights with two sliders of the same name and it takes much larger displacement values on the sliders than in the past to get the effect you want. White level and Black level gets it's own slider. While overall, the tools are more intuitive, I do miss the Fill slider, which worked as a great fill tool for the lower half of the luminance spectrum. This must now be done



either via a curves adjustment or by modifying the Black and Shadow sliders simultaneously. With ACR 7.1, Adobe added very powerful purple and green defringing tools under the Lens Correction tab. A whole slew of new lenses including many third party lenses are now also included in the lens correction profiles. As I mentioned in my Photoshop CS5 review, these are huge time savers and I recommend turning automatic lens correction on. For those owners of cameras without an anti-aliasing filter such as most medium format digital cameras and the Nikon D800E or Leica M series, ACR now includes a moiré reduction tool found under the adjustment brush tool. The Adjustment Brush tool offers a more complete array of adjustments in CS6 but for some reason it is still missing the Vibrance brush.

New Photoshop Interface: Once you launch into the actual Photoshop application. You will see a new, much more dramatic and darker interface. The defaults can be changed to lighter or darker shades of gray including the old light gray background look. I have always preferred a darker background when working so I welcome this new user adjustable interface. There are also some changes in the way some of the panels are arranged and work. The most significant change for photographers is that when you add an adjustment layer, you now get a properties panel that allows you to make the adjustment and there is a small dark circle on light background tab that one must click if you wish to change the feathering, density or edge refinement.

Background Save and Auto Save: Have you ever had Photoshop crash on you after spending a bunch of time on an image. This can happen on images with a lot of layers and plug-ins in use due to running out of memory. After a few choice words, a crash usually results in a lot of redo. Photoshop now allows you to configure itself to save your work at specified intervals. You can set the interval in the Preferences section. Additionally, Photoshop now saves files in the background allowing you to keep working while the save operation is going on. This is especially useful on very large files with multiple layers. A large panorama with a bunch of layers can take a minute or two to save. Now you can keep working since it does this in the background.

New Crop Tool: Basically throw out everything you ever knew about the crop tool from previous versions of Photoshop! The new tool is completely different and works more like the crop tool in Lightroom or ACR. Rather than the crop frame moving around the picture, the picture moves around inside the crop frame (although you can change this to classic Photoshop behavior where the frame moves and the image stays stationary but even in classic mode, behavior is different than before). The straighten and crop image command that used to be found under the ruler tool is now part of the crop tool, where it belongs. It is, however, well hidden! Look for the small bubble level icon at the top of the screen, then draw your line and Photoshop straightens and crops the image automatically. You can also straighten and crop by rotating the image in the crop frame and the crop borders are automatically adjusted. Crop by default is now non-destructive - it hides the areas cropped off but does not discard



New Crop Tool and new Dark Photoshop Interface

them so you can go back later and further adjust the crop re-revealing previously cropped areas. You can set the tool to destructively crop as in previous versions of Photoshop. A major change in the way the crop tool works is how you select a new resolution. In the past, next to the X and Y dimension boxes, there was a resolution box. This box is now missing. However, one can create any number of presets by clicking on the drop down box just to the left of the x/y dimension boxes. Simply create one for your desired pixel resolution (such as 360ppi for Epson printers) and that then becomes a button or part of a drop down list of recipes. There are many other subtle changes to the crop tool; an entire article could be written on this tool alone. Explore and discover!

New Perspective control tool: If you click and hold the crop tool in the tool bar, you will see a new crop tool for perspective control. This is a welcome change from the old perspective command under the Transform Tools. One simply drags the corners so that edges are parallel to lines you wish to be perpendicular or horizontal and the tool does the reset. It's magic and a major time saver.



New Perspective Crop Tool - tilting a wide angle lens up caused the perspective distortion. This is easily corrected with the new Perspective Crop Tool.

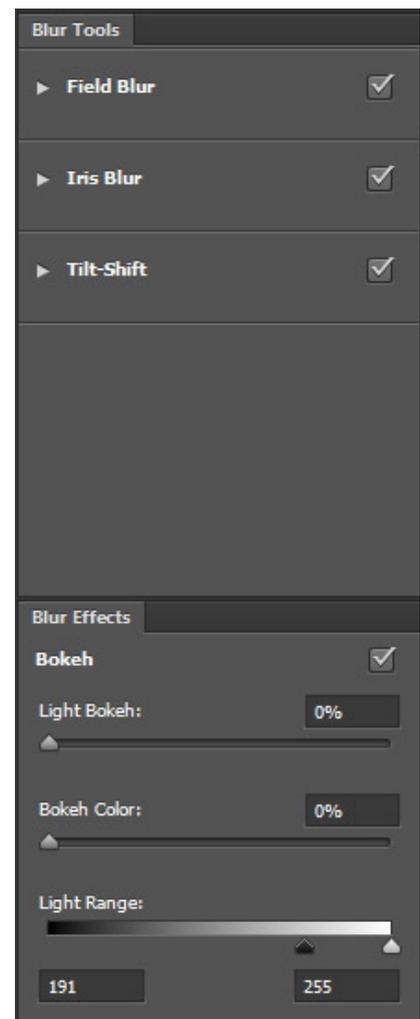
Adaptive Wide Angle Tool: Lets say you have a photo taken with a wide angle lens and even after lens correction and perspective correction, you still have some lines that aren't straight or perpendicular, you now have the very powerful Adaptive Wide Angle filters. These can take the curve out of any line that should be straight and even correct the inherent linear distortion in fisheye lenses. The Adaptive Wide Angle filter has modules for fish eye correction, perspective correction, spherical correction and an automatic tool that works relatively well.

Content Aware Move and Patch Tools: Photoshop CS4 and CS5 have introduced more and more content aware modification tools. CS6 introduces Content aware Move. It is found under the Spot healing Tool - just click and hold to reveal this new tool. You can now move an object in the frame and Photoshop will automatically fill in the area that you moved the object from with the appropriate background. It does a remarkable job in many situations. The Patch Tool, also found under the Spot Healing tool gets a Content aware option as well. It is selected by changing the Patch drop down box to Content Aware.

New Blur Filters: The Blur filter group gains three new options that could be useful in de-emphasizing a certain part of a photo by inducing blur. These are the Field Blur, Iris Blur and Tilt-Shift Blur filters. The field blur filter blurs the entire selected field. The iris blur tool allows you to define a circle or oval and transition zone. Everything within the oval retains sharpness and everything outside it get's blurred. Finally the tilt-shift blur filter allows you to select a foreground region and background region that will be blurred and allows you to select the transition zone and size similar to what you can do with a Tilt/Shift lens by tilting the front element to throw areas more out of focus.. These three filters are designed so that they can be used together rather than as separate steps.

Auto Enhance Brightness And Contrast: Within the Levels and Curves Tools, there is now the new Automatic Enhance Brightness and Contrast tool. Its name is self-explanatory. Some pundits have really touted the new option but I still prefer to use the Enhance Monochromatic Contrast auto tool with the clipping values set to 0.001 to quickly define my black and white points.

There are many other changes and enhancements to Photoshop CS6 including an interesting new Oil Paint filter, numerous 3D rendering enhancements, enhancements for videographers and much more but these are all things rarely



used by photographers and have not been covered here.

As always, the question of whether the upgrade is worth the \$199 comes up. For me, the changes I've addressed above are enough of an enhancement and timesaver to make it very much worth it. Everyone must decide for themselves. Fortunately Adobe allows you to download a fully functional trial version so that you can make that decision based on personal experience with the product. Please be aware that Adobe won't be updating CS5 anymore (other than security issues) so any new cameras that are announced after May 2012 will never be supported in ACR 6 – Photoshop CS5's Raw Converter.

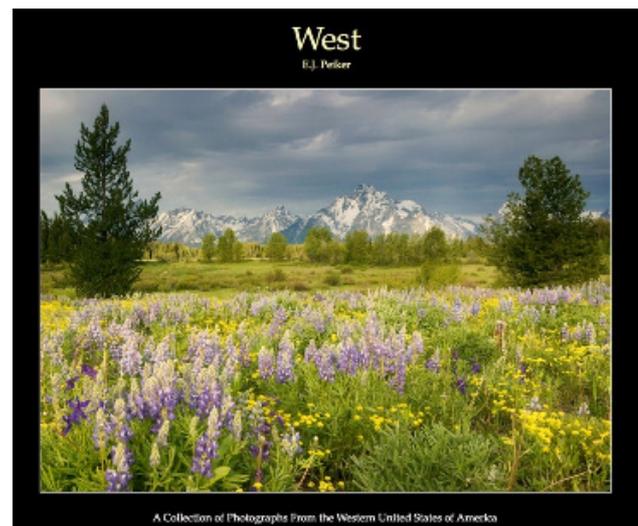
Note: Tim Grey has produced a number of tutorial videos on many of the features described above. They are free and can be accessed at the link below. There are also a number of more detailed and excellent paid courses available at the same site and from Lynda.com <https://partner.video2brain.com/timgrey/courses.htm#/?c=13553&t=1>

Two eBooks Now Available

My eBook "Ducks of North America – The Photographer's Guide" is an essential text that covers all of the techniques needed to get the best shots of waterfowl and birds in general. It covers every species in the wild and in captivity in North America and gives species specific tips on how best to capture them and where to find them. Eleven years in the making, this book is a great tool for the beginning, intermediate or advanced waterfowl photographer. The tips in it are easily applied to all birds and most other subjects too. It sells for \$30. While this is expensive for an eBook due to the incredible amount of time and money it took to create it, it will easily save you 10 times that in aggravation, time, and failed attempts.

I have also released my previously privately published paper book "West – A Collection of Photographs From The Western United States" in a fully updated and revised eBook version. It is available for \$10.

Both books can be ordered from the fine outlets you will find at this link: http://www.ejphoto.com/ebook_page.htm



Facebook Page

On my Facebook Fan Page, I am keeping those interested up to date on what photo excursions I go on as well as short commentaries on a variety of photo related subjects and tools. I also have nearly 100 galleries accessible through there. Please visit: <http://www.facebook.com/pages/EJ-Peiker-Nature-Photographer/150804446733> and if you like what you see, please click the "Like" button.

Upcoming Workshops

Click on the title of any of the workshops for more information. Download a flyer here: http://www.ejphoto.com/Quack%20PDF/Workshop%20Flyer%20Q2_2012.pdf

Arizona's Navajo Country and Grand Canyon North Rim: (Aug. 26 - Aug 31, 2012)

Visit and photograph Arizona's world famous Navajo Country. During this workshop we will explore the incredible red rock formations of the mystical Monument Valley deep within the Navajo Nation. Not only will we photograph some of the well known and iconic spots such as The Mittens, Merrick Butte, and Sentinel Mesa, our experienced Navajo guide, who is also a photographer and has worked with the film industry, will lead us to shooting locations that one is not permitted to go to on their own. This opens up many possibilities for unique images of this spectacular area. After leaving Monument Valley, we will travel to Page, Arizona where we will photograph the Lower Antelope Canyon. Less famous, and in many ways more spectacular, than its big brother, Upper Antelope Canyon, Lower Antelope Canyon does not have the severe restrictions on photographers and the massive number of people of the Upper Canyon making photography difficult. While in the canyon we will photograph the spectacular sandstone formations and the sun playing shadow games on the walls of the canyon. We will also visit and photograph the iconic Horseshoe Bend overlook of the Colorado River. We will conclude the workshop at the North Rim of the Grand Canyon. Much cooler and less crowded than the overcrowded South Rim, the North Rim offers unparalleled views of the canyon and there is the possibility of photographing wildlife as well. Our trip has been timed to coincide with Arizona's monsoon season in hopes of being able to photograph these iconic locations with the backdrop of the common late afternoon isolated thunderstorms in the distance.

Arizona DuckShop[™]: (2 dates: Dec 11 - Dec 14, 2012; Jan 15- Jan 18, 2013)

The original DuckShop is back for Winter 2012/2013 with two different dates for your waterfowl photography convenience. Learn waterfowl photography from one of the world's best known waterfowl photographers. This is the one that started it all but in an expanded format that has us visiting several locations in the waterfowl winter Mecca of South-central Arizona. I will put you right where you need to be to walk away with breathtaking images of a wide array of ducks species, waders and other species at some of the best hot spots in the US! The Phoenix, Arizona area is a very popular winter home for many species of waterfowl and they'll be all decked out in full breeding plumage! Possible species include Northern Pintail, American Wigeon, Ring-necked, Gadwall, Northern Shoveler, Canvasback, Lesser Scaup, Mallard, Redhead Ducks and many other bird species.

SoCal DuckShop™: (Feb 13 - Feb 18, 2012)

Join me for this exclusive Southern California DuckShop!™. This 5-day workshop will put you right where you need to be to walk away with breathtaking images of a large array of ducks, waders and other species at some of the best hot spots in the US! Visiting locations such as Santee Lakes, La Jolla Shores, the famous Bolsa Chica Preserve, San Joaquin Sanctuary and Upper Newport Bay we are likely to see species such as Brown Pelican, Green-winged Teal, Blue-winged Teal, Cinnamon Teal, Bufflehead, American Wigeon, Gadwall, Lesser Scaup, Ring-necked Duck, Ruddy Duck, Northern Shoveler, Surf Scoter, Wood Duck, American Avocet, Western Sandpiper, Least Sandpiper, Long-billed Curlew, Marbled Godwit, Black Turnstone, and many more! I know each of the locations *intimately* and have scheduled this exclusive workshop for the optimum tide conditions and the best chances for creating dramatic images.

Downeast Maine: (Sep 29 - Oct 4, 2013)

This 4-day Landscape Photography Workshop will put you right where you need to be to come home with breathtaking of this rugged and beautiful coastline. Rain or Shine, there is plenty to photograph on the far northeastern seashore of Maine. From sunrise along the beautiful corral sandstone coast, to the lush interior rainforest and the highlands of Cadillac Mountains, and much more, we will photograph the beautiful Acadia National Park. In addition, we will visit one of the USA's most charming lighthouses at West Quoddy Head, the easternmost point in the USA. The shoreline here provides beautiful landscape scenery with and without inclusion of the lighthouse. This workshop will focus on the techniques to record these landscapes in their full glory. This includes focus bracketing techniques and natural looking HDR techniques to really create fine art wall hangers for your portfolio. A general outline follows below however the days and locations may change due to weather conditions so that we can maximize our opportunities in the right type of light for each location:

Private Photography Instruction and Consulting Services

In addition to the DuckShop photo workshops that I launched 10 years, I also offer private instruction in Wildlife and Landscape photography at the place of your choosing within the USA and Canada. These private workshops are of the one on one variety (or two on one). Clients may schedule time in 4-hour time blocks for either classroom or field sessions. With just two people, a number of shooting locations become possible that aren't possible for larger groups and thereby making it possible to photograph some species or locations that are not attainable with larger groups. More specific instruction, based on the client's specific needs, can be given using this delivery method in either the classroom or in the field. For more information please see the following link: www.ejphoto.com/duckshop_private.htm

I also offer both photo equipment and computer workstation/digital darkroom consulting services. This allows me to combine my 27 years of work in the computer industry with my lifetime of photographic experience and provide services at a technical level that are hard to find elsewhere. Contact me for rates and specifics or visit my rate sheet:

www.ejphoto.com/Quack%20PDF/Rate%20Schedule.pdf

New Service – SD and CF Card Image Recovery

I am introducing a new photographic service with this newsletter: SD and CF Card image recovery. Let someone that worked as a professional in the computer industry for more than a quarter century and has a multitude of tools available attempt to recover images from your damaged, formatted, or corrupted media cards. There is a basic \$25 charge for the analysis. If I determine that I can recover images, I will recover them, with the card holder's approval, for an additional \$75.

Disclaimers:

E.J. Peiker conducts consulting services and product design services for a number of photographic product companies. The companies change from time to time:

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Lower Antelope Canyon, AZ

Those that know me, know I would not endorse a product even for compensation if I did not feel it were a superior product.

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