



The Newsletter of E.J. Peiker - Nature Photographer

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Welcome to the quarterly newsletter from E.J. Peiker, Nature Photographer and www.EJPhoto.com. In this quarterly publication, I share with fellow photographers my photographic experiences, photo equipment reviews, photo and processing tips, and industry news. I also inform subscribers about upcoming workshops and products that I offer. 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



Jokulsarlon, Iceland (Sony a7R, Zeiss 24-70 f/4)

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Photokina 2014

Every two years in September the photographic world meets in Cologne, Germany for the largest photography oriented trade show in the world. Every manufacturer from mega companies like Canon, Nikon and Sony to much smaller companies like my friend Scott Elowitz's LensCoat are there. The manufacturers often use the days leading up to Photokina and the show itself to announce new products. Here is a quick rundown of notable new introductions and announcements with some commentary from the major players in the camera and lens manufacturing world that might be of interest to my audience:

Canon: finally one of the big companies is introducing a true pro-featured APS-C camera. The EOS 7D Mark II really has almost everything built into the camera that you would want including state of the art bullet-proof magnesium build quality, top-tier autofocus, 10 frame per second speed, pro level metering, intervalometer, and even GPS. Well, everything except for the most important thing; a state of the art sensor. Canon continues to plod along with truly ancient sensor technology and as a result gets poor sensor ratings due to compromised dynamic range and noise. While the jury is still out, the sensor in the 7D Mk II is a newer version of the EOS 70D sensor which does not have high dynamic range or noise ratings. On the lens front, Canon introduced the 400mm f/4 DO Mk II lens which adds video features like power focus as well as the latest IS module. The optical formula is tweaked from the original 400mm diffractive optics (DO) lens which was its weakness. We will need to see how out-of-focus specular highlights are handled by this lens to be sure that the issues with the previous version were fixed. Additionally, a 24-105mm f/3.5-5.6 consumer grade STM (stepper motor) lens was introduced and also a crop sensor EF-S 24mm f/2.8 pancake lens. Canon introduced an interesting compact, the G7X, which features a 20 megapixel 1" sensor similar to what Sony uses in its highly acclaimed RX-100 series. The camera has a 24-100mm f/1.8-2.8 equivalent lens. If the image quality is there, this could be a very popular compact camera.



Disappointments: Canon once again allowed rumors of an updated 100-400mm lens go unchecked and then did not introduce such a lens. Instead they introduced a lens that the market simply has not asked for - a new version of the 400mm f/4 DO. The 100-400mm lens in their line was dated 10 years ago and is nowhere near the optical quality or focus speed of similar lenses by other manufacturers at this point. Also, as stated above, Canon failed to introduce a higher dynamic range sensor and continues to warm over ancient sensor technology. On the sensor manufacturing side, they are 3 to 4 semiconductor technology nodes behind. Finally, I think a camera like the 7D Mark II should have WiFi and an articulating touch-screen to make it a truly modern camera but Canon is an ultra-conservative company (Toyota) when it comes to their product line so it is not surprising that these features were left off.



Fuji: After a huge year for Fuji that brought us the X-T1, they warmed over the concept by giving us one with a silver top plate, a fully electronic shutter with 1/32,000 top shutter speed and some other minor enhancements. The X-T1 and new X-T1 Platinum, in my opinion, are the best mirrorless cameras made from a pure photographer's usability and functionality standpoint. Fuji also introduced the next version of the X-100 fixed lens range-finder camera, the X-100T, which is a very

minor update to the excellent X-100s. The main update here is a new version of Fuji's unique hybrid viewfinder and an all electronic shutter. It also sports a larger rear LCD and other more minor changes. The imaging part of the X100T is identical to the X100s sporting the same sensor, same lens, etc. Fuji continued to round out its excellent system of lenses for the X series with the introduction of a 56mm f/1.2 portrait lens and a 50-140mm f/2.8 tele-zoom. Fuji also introduced the X30 compact but anything under a 1" sensor is not worth talking about these days. The X30 uses a 2/3" X-trans sensor.

Disappointments: There is still no X-Pro 2 and they are still using the same old 16 megapixel X-trans sensor that simply does not deliver the benefits that it touts and is difficult to demosaic well by the most popular RAW converters. If Fuji would put a good 24 megapixel APS-C Bayer sensor (Sony or Toshiba) in the X-T1 instead of the 16 megapixel X-trans sensor, I would probably own an X-T1 and a few lenses - it might even be my primary camera for everything but birds - the body itself is that good.

Leica: A new and improved version of the highly acclaimed M range finder camera was announced. It is called the M-P. It uses the same 24 megapixel sensor as the M-240 but adds a deeper and faster buffer, better weather sealing and sapphire crystal for its LCD. Video functions have been enhanced. It sells for a whopping \$8000. Also a CMOS version of the Leica S medium format with 4K Video, 1/1000 flash sync with leaf shutter lenses, GPS and 3.5 frame per second shooting rate for \$25,400. Additionally the lens line was rounded out and many lenses have been updated and there's always the new \$4500 shoulder case... Disappointments: Well there is price but then what else is new?

Nikon: Nikon's eagerly anticipated D750 announcement did not live up to expectations. The hype for weeks had been that this would be a D700 replacement - in other words pro metal build and features, high frame rate but with a 24 megapixel AA filter free sensor. But what we got is the Nikon plastic consumer grade body with 6.5 frames per second and added WiFi with a slightly warmed over D610 sensor. Nikon's own marketing film is pushing it primarily as a B-roll video camera which is seemingly bizarre. While early reviews have been generally positive, I would look at this more as a D610 upgrade with better video and a tilt screen. It is handicapped with a 1/4000 top shutter speed and only a 1/200 flash sync speed - most definitely not D700 like! The camera does have an anti-aliasing filter so it will not have as good of resolution as some other 24 megapixel options for still photography but will be great for video. Perhaps a more interesting announcement is a 20mm f/1.8 lens with Nano Crystal Coat. We will have to see how this performs. If it's decent, it's \$800 price tag will be a bargain compared to the much higher priced exotic lenses in this category. Unfortunately Nikon's own MTF curves would suggest that you get what you pay for and the options that are two to three times more expensive are also a lot better. A compact SB-500 flash was also announced that includes a small video light.



Disappointments: The D750 is not what was expected and the Nikon FX strategy appears to be an incoherent mess. Nikon still has no answer for those that need a pro build DX body. Nikon continues to ignore the needs of DX shooters with no quality DX lenses and no pro level DX body in 6 years. Not having a product to compete with the Canon 7D Mk II seems suicidal. Nikon failed to update the 300mm f/4 lens - the current lens is ancient and doesn't even work with the newest 1.4x teleconverter.

Olympus: It's been a low key and relatively quiet Photokina for Olympus with one new camera - the Pen E-PL7 which is its entry level micro 4/3 rangefinder style mirrorless camera. With the small 14-42mm (28-84 equivalent) lens, it could make for a nice alternative to a point and shoot camera with better image quality.

Olympus also brought forth a silver version of the O-MD EM-1 flagship camera and a pro spec 40-150mm f/2.8 telephoto zoom.

Disappointments: There appears to be no answer for the dead end, from a still photography standpoint, that is the 16 megapixel micro 4/3 sensor. The 16mp m43 sensor is diffraction limited at f/5.6 and this would only get worse if they pack more pixels into the smallish sensor in the future. It's a shame since they have an outstanding camera body in the O-MD EM-1. However, if you are shooting video where the m43 sensor excels but if you are buying m43 for video, Panasonic is the way to go.



Panasonic: The LX100 was introduced. This is actually a quite exciting camera as it is a smallish compact camera with a micro 4/3 sensor and a very good Leica 24-75 f/1.7-2.8 lens. It has a bigger sensor and superior lens to the competition in this segment of the market which has been dominated in recent years by the Sony RX-100 variants. Panasonic was only able to squeeze 12 megapixels out of the m43 sensor on the LX100 due to its multi-aspect design which maintains the same megapixels regardless of what form factor you are shooting. Panasonic also introduced another member to its m43 interchangeable lens camera line with the tiny GM5.

Disappointment: I wish they had not gone the multi-aspect route on the LX100 allowing a standard 4:3 ratio frame to

be 16 megapixels instead of just 12. As noted above for Olympus, micro 4/3 in general is running out of steam at 16 megapixels for still photography due to the laws of optical physics. While they could squeeze more pixels onto that small sensor but then you are recording diffraction at ever larger apertures. The only path practical to higher resolution seems to be multilayered sensors or sensor shift technology where several images are taken and the sensor is shifted slightly between each shot. The data is then integrated into one larger megapixel final image. This has inherent problems for moving subjects though. Micro 4/3 is a phenomenal format for video all the way up to 4K and a little beyond though an!

Pentax: The Ricoh owned subsidiary has had a big year with the Pentax 645Z. For Photokina, Pentax was relatively quiet this year with just one significant introduction, an entry level APS-C DSLR with 20 megapixels called the K-S1. Pentax DSLR sales in the US are very low so I won't be saying any more about this camera other than that it comes in a really cool looking blue color ;)

Disappointments: They can't seem to get traction in North America due to poor marketing despite some very good products on the APS-C front.

Samsung: This Korean giant basically shocked the photo world by introducing the highest resolution APS-C camera ever made with the 28 megapixel back-side illuminated NX01. Back-side illumination takes all of the circuitry off of the top of the chip allowing more of the real estate to be used to capture light. The camera has a truly impressive array of features including hybrid AF with 205 phase detection sites, 15 frame per second still capture with continuous autofocus, 4K video, built in WiFi and GPS in a weather sealed magnesium body. Samsung has not penetrated the North American market to any appreciable extent but they are the second largest mirrorless camera company, in sales volume, in the world so this will be an exciting announcement for many,



especially those in Asia. Samsung also continued to round out their very good lens lineup with a new 50-140mm f/2.8 stabilized zoom.

Samsung: Disappointment - great products, poor marketing in North America.

Schneider-Kreuznach: This big player in the medium format lens world is dipping its toes into the Canon/Nikon DSLR world with the announcement of three lenses, a 35mm f/1.6, 50mm f/1.4, and 85mm f/2.4 Macro lens. The lenses are manual focus but electronically coupled for aperture and metering controls. Schneider makes some excellent 645 format lenses so it will be interesting to see how these lenses stack up against the likes of Zeiss and Sigma Art lenses.

Sigma: The big news from Sigma is the introduction of two 150-600mm f/4.5-6.3 super telephoto zoom lenses. One lens is in their consumer oriented Contemporary line and will compete with the 6 month old Tamron 150-600mm. Sigma has chosen to build a second 150-600mm lens with much higher grade optics and a metal barrel for their pro oriented Sport Line. I am expecting some very good performance from this lens for such a big zoom but until some lenses go through thorough test suites we won't know. It will certainly not perform as well as the super-tele primes but if it can hold its own against the higher grade super-zooms like Nikon's 80-400 and 200-400 and Sigma's own 300-800, then this lens could steal some market share from the big two! I would not expect it to perform anywhere near the Canon 200-400 f/4L 1.4x lens though. Sigma also introduced yet another iteration of the 18-300 consumer zoom for APS-C cameras and new and improved versions of their 1.4x and 2x teleconverters. Disappointments: f/6.3 doesn't cut it as a maximum aperture in today's high megapixel world since you are already in a diffraction recording position the second you stop down, and you need to stop down to get into the optical sweet spot.

Sony: Sony introduced the development of a number of full-frame E-mount lenses. Finally, a wide angle zoom for the A7 line was announced with the introduction of the Sony-Zeiss 16-35mm f/4 FE lens but it won't ship until the end of the year (and often 1-2 months later in the US than the rest of the world), which is essentially 6 months behind Sony's own roadmap. Sony also announced the development of a Zeiss cobranded Distagon 35mm f/1.4 fast prime with infinite (click-less) aperture adjustment due in March 2015. Next up was the announcement of the development of another fast prime lens for full frame E-mount, a 28mm f/2 with a 16mm fisheye and 21mm wide converter that attaches to the front of the 28mm f/2 lens. These are also scheduled for March. A 90mm f/2.8 macro development was announced for shipment in March and a 24-240 f/3.5-5.6 consumer grade super zoom for February shipment was presented. Finally a compact flash unit called the HVL-F32M was shown. In my opinion, Sony will not ship all of these lenses by the end of Q1/2015 as promised. Their track record on meeting announced ship dates, at least in the US, is not great! Disappointments: Super innovative products, confused and fragmented company - see my article below on Sony!



Tamron: A big splash was made earlier in the year with their 150-600mm f/5-6.3 lens. I feel it is the most overrated lens of 2015 from an optical perspective as it starts to fall off at 400mm and by 600mm the corners resolve very little detail. But the lens has been a good seller for them. For the Photokina season, Tamron introduced a consumer oriented 14-150mm f/3.5-5.6 super zoom for APS-C cameras. They also

announced the development of, and showed a prototype of a 15-30mm f/2.8 stabilized pro lens. If it is anything like their excellent 24-70 f/2.8 lens then this lens will be a hit but it will not have filter threads.

Zeiss: The premium optics company announced four new lenses. First, new full frame E-mount Loxia lenses available in 35mm and 50mm focal lengths were designed for the a7 trio of bodies and any future full frame E-mount cameras. Image quality looks to be very much of the Zeiss standard, that is to say high resolution, low chromatic aberration and distortion all the way to the corners with the signature Zeiss roll-off in illumination in the corners. These are the highest resolution full frame E-mount lenses made and the first non-cinema lenses with infinite aperture adjustment instead of discrete increments. This is something I have been calling for for several years now on all lenses and cameras. Zeiss introduced the second lens in the OTUS line; a 85mm f/1.4. OTUS is their no compromises ultra premium line of lenses. It costs a whopping \$4500! Initial testing indicates that is on par with the OTUS 55mm f/1.4 and ties this lens for best lens in the world honors. I got to play with the 55mm f/1.4 OTUS while visiting Zeiss in Wetzlar, Germany in June and was absolutely blown away by it. Finally a 35mm f/1.4 lens for Leica M mount was introduced.

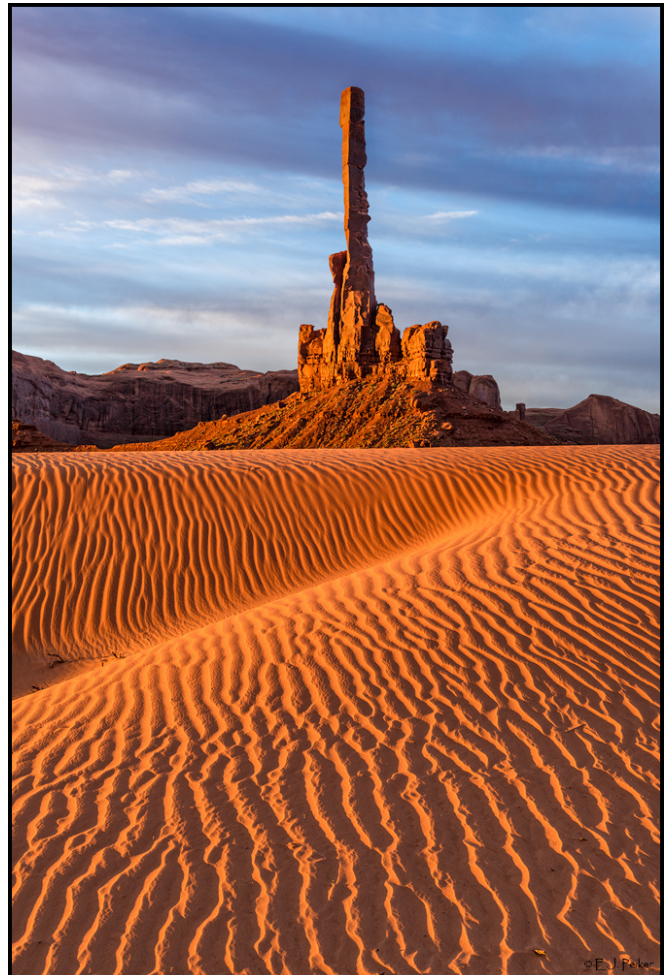
Nikon D810 First Impressions

I've been using a D810 now for a couple of months or so and overall it is a very nice incremental upgrade over the D800/D800E addressing some of the shortcomings of that camera but also not resolving some things that could have been resolved. Here is a summary of the changes from the D800E to the D810 and my commentary:

- Base ISO of 64 expandable down to ISO 32 (compared to base 100 and expandable to 50 on D800/E). Since the base ISO is now 2/3 of a stop lower, this allows slower shutter speeds without using dynamic range compromising expanded ISOs, which is great for waterfalls, time lapse sequences or anything else where slower shutter speeds are important. On paper this should also improve noise by 2/3 of a stop if everything else is equal and indeed some lab tests show slight improvement in noise for this camera over the D800/E.

- SRAW mode. This mode bins 4 pixels into one thereby reducing file size. But it isn't a true RAW format since processing of the image is required by the image processor to get from 36 to 9 megapixels and the file size saving is actually not nearly as much as one would expect. I think shooting in lossless compressed RAW is still the best way to go for most nature photographers.

- 36.3 mega pixel full-frame CMOS sensor with no anti-aliasing filter (D800E has effects of AA filter 'canceled' and D800 has standard AA filter). The



Totem Pole, Monument Valley, D810, Zeiss 21mm

sensor is a newer generation of the famous Sony 36 megapixel sensor. Enhancements include more efficient microlenses, electronic first curtain shutter and lower base ISO.

- 5 frames per second maximum shooting speed in FX mode and up to 7 FPS in DX mode with the MBD-12 vertical grip and the proper batteries (compared to 4 FPS in FX and 6 FPS in DX with the MBD-12 on the D800/E). By being able to shoot the camera at 7 FPS in DX mode is a big benefit especially when shooting small flittery subjects such as warblers or other small birds and insects or fast moving sports action.

- New 'Group Area AF' mode. This new AF mode links 5 AF points together to act as one. It seems to work very well but I look forward to testing this on fast and erratic moving birds in flight.

- New electronic first-curtain shutter and redesigned sequencer/mirror balancer to reduce vibrations. The new shutter is extremely quiet and smooth compared to all previous Nikon cameras. The difference in vibration transmitted through the camera from the mirror and shutter compared to earlier cameras is remarkable and will go a long way to reducing the appearance of camera shake in photos on such a high resolution sensor which is ultra sensitive to this. An electronic first curtain shutter allows the user to lift the mirror and then open the shutter for up to 30 seconds prior to taking the picture so that there is no mechanical movement inside the camera at the time of the exposure. This is a huge benefit and cannot be understated. There is a very significant increase in fine detail sharpness on D810 files compared to either D800E or a7R files due to nothing at all moving in the camera at the time of exposure.

- New 'highlight-weighted' metering option (to preserve highlight detail in contrasty scenes). This metering system basically tries to find a highlight in the scene and then drops the exposure until the highlight is not blown. In practice this tends to underexpose shots a bit and I will likely not call on this function very often. However, I would see it very useful for concert or theater shooters where the subject is lit against a mostly very dark background.

- 1080/60p movie recording with built-in stereo mic (compared to 1080/30p with monaural audio). For video shooter 50/60FPS is a must have feature.

- Power aperture available while shooting video to SD/CF card (compared to only when using HDMI).

- The ability to record video to memory card while simultaneously outputting video over the camera's HDMI port.

- 3.2" 1,229k-dot RGBW LCD screen (compared to 3.2" 921k-dot RGB). When I look at the D800 and D810 LCD side by side I do see a slightly higher resolution and more vivid screen that is more viewable in bright outdoor conditions.



Canyon X, D810, Zeiss 21mm

- Zebras in video mode. Zebra patterns are a visual representation of anything above a certain user defined tonality. It is extremely useful in videography for keeping skin tones constant by setting the zebras to engage at about an 80% saturated tonality. This is something I have become quite fond of in mirrorless cameras even for still shooting. By setting the zebras at 100+ % I can always avoid overexposure of bright areas like sunlit clouds before I take the shot. I wish Nikon had made zebras available for Live View still photography as well like Sony has.

- New 'flat' Picture Control mode. The flat picture control does not apply a tone curve to the data. While this is primarily intended for video shooters, it is quite useful for still photographers that shoot in RAW mode. We finally have a picture style that is very similar to what the RAW file records. In the past we were forced to turn down the contrast on the Neutral picture style in order to fake the rear LCD into not displaying blown highlights when there were none in the RAW file. With this new flat picture style, we no longer need to do that. If you are a RAW only shooter like I am, this is an excellent choice.

- Unlimited continuous shooting (previously 100-frame limit). In the past, even if you could flush the buffer quickly enough to shoot continuously for more than 100 frames, the camera would stop at 100. this limitation has been removed.



Point Imperial, D810, 24-70mm

These are all welcome changes but there are a few others items of note from my use of the D810 so far:

- Finally we have orientation aware AF points. You can now set the active AF point separately in horizontal and vertical mode and the camera remembers which AF points are active and automatically switches to the selected point when the camera orientation is changed. This will come in handy especially when shooting birds on water where I almost always use an AF sensor in the upper part of the frame as this prevents putting the head in the center line and then cutting off reflections. I can now set it above center in both

camera orientations and when I quickly flip to vertical mode, I have the sensor where I want it and not suffer a delay while I move the active AF sensor.

- In mirror lock-up mode (MLU), with the electronic shutter option turned on, both the mirror raises and the shutter curtain opens as soon as the shutter button is pressed but the image is taken electronically some time later on the second shutter button press so at the time of the actual exposure, nothing in the camera is moving. This is great for landscape photographers that use a cable release but for some inexplicable reason this function was not implemented for shutter delay mode. In Shutter delay mode, my preferred method of shooting landscapes, a press of the shutter button flips up the mirror and then takes the shot 1, 2, or 3 seconds later depending on the delay duration you have selected. On the D810 this does not also open the shutter curtain when the mirror flips up even when the electronic shutter is enabled. For those of us that prefer to shoot with a 2 or 3 second delay to avoid mirror slap and don't want to use a cable release, we still have to contend with shutter vibration. Why did Nikon not link the electronic shutter with the delayed shutter mode, which already automatically uses MLU? This is a major inconsistency in the camera's firmware. Fortunately I have found an easy work-around for this shutter induced vibration issue in even when using delayed shutter mode on the D810. If you place the camera in MLU mode instead of single shot mode and select the delayed shutter mode, one can accomplish my desired goal by simply pushing the shutter button twice. Now the first push of the button raises the mirror and opens the shutter and the second push starts the timer to when the shot will be taken. In summary, my new mode of operation for landscape photography is to set the camera to MLU rather than Single Shot and enable the delayed shutter with a 3 second setting and turn on the electronic first curtain shutter. To take a photo, I simply push the shutter button twice and 3 seconds later the picture will be taken with zero internal movement in the camera. The difference in fine detail rendering due to zero internal movement in the camera is significant. I have placed the Delayed Shutter Mode and the Electronic Shutter on My Menu for quick access.



Monument Valley, D810, Zeiss 21mm

- A new shutter release method has been added called Time release. It is not exactly what the name might imply. It is very similar to bulb mode with one subtle but important difference. In Bulb mode, one presses the shutter button and the shutter stays open for as long as the shutter is depressed. In Time mode, one presses and releases the shutter button to start the exposure and then presses and releases it again when the exposure is complete. This could be useful when using a non-locking cable release or when a cable release lock is not working.

- D800/E users using the camera for action were fairly used to hitting the buffer limit pretty rapidly. Nikon clearly has increased the amount of internal RAM for photo buffering as it is now much more difficult to hit the buffer limit.

- Auto bracketing has been fixed! Older Nikon cameras including the D800/E placed an artificial limit on the number of stops between auto-bracketed frames at just one stop. This limitation has been removed and you can now take auto bracketed sequences with up to 3 stops of exposure difference between the frames

The two biggest Nikon shortcomings, relative to some other manufacturers, that are not addressed in the D810 are the lack of adequate AF Fine Tune resources for zoom lenses and Nikon continues to retain an essentially unusable two tiered memory system for commonly used camera presets.

Zoom lenses can have significantly different focus fine tune points at the widest end of the lens compared to the longest focal length. Canon has solved this problem by providing a minimum focal length microadjustment and a maximum focal length microadjustment and then the camera interpolates between those two points for other focal lengths. Sigma has addressed this for their newest lenses with the lens dock where a lens can be fine tuned at different focal lengths and even different focus distances. Nikon's AF Fine tune module only allows adjustment at a single point, which is only optimal at the focal length that the fine tuning was performed. We are thus forced to choose whether to calibrate the focus of body and lens at maximum focal length, minimum focal length or somewhere in between. Common wisdom is to use the maximum focal length and let the increasing depth of field at shorter focal lengths take care of any focus issues when zooming wider. But this is really not a good method, especially since depth of field is subject magnification and aperture dependent, not focal length dependent. Nikon needs to address this in future cameras or perhaps even with a firmware release.

Many, including myself have written about the positively inane system for storing camera presets on Nikon cameras. There are separate storage banks for shooting parameter settings and custom function settings. While that alone can be confusing, it isn't completely unworkable. But Nikon takes it farther by overwriting the stored settings any time you make a change to any setting rather than retaining the stored settings. So if I am shooting with a certain preset bank and I make a quick change to one of the parameters, the next time I go to the stored shooting bank parameters, they are no longer set to my presets but rather to the last used settings. This completely defeats the purpose of presets that allow you to quickly change camera settings to a known predetermined set-up. It remains to be seen if we need to write about this for another dozen years before Nikon will wake up and fix this. Every other camera manufacturer gets this right!

An additional issue that remains unaddressed in the D810 relates to the viewfinder image in crop mode. When going into a crop mode it is possible to gray out the inactive part of the viewfinder but the only way you can do it is to turn off illumination of the AF points in the viewfinder. This is not intuitive and is only barely documented. Graying of the inactive part of the viewfinder and illuminating AF points have nothing to do with each other from the photographer's perspective and should not be linked.

As I was finishing writing this segment of the newsletter, we received word that the initial shipment of Nikon D810 cameras are being recalled for a long exposure heat build-up problem that results in excessive noise. While this only effects images made with longer exposures and long-exposure noise reduction turned off, it

is another disappointing early production lapse by Nikon. Cameras shipping now don't have the problem but if you do have one of the first D810s, like I do, there is more information in the link below. Nikon turned around my repair, door to door in 4 days:

<http://www.nikonusa.com/en/Service-And-Support/Service-Advisories/hyvanded/Technical-Service-Advisory-for-Users-of-the-Nikon-D810.html>

Having shot the D810 during my recent Arizona Navajo Country and North Rim of the Grand Canyon workshop, I find the D810 to be a bigger upgrade than the modest change in specs might suggest. The electronic first curtain results in a very significant increase in resolution due to no movement internal to the camera at the time of exposure. The base ISO of 64 makes things like waterfall photography and time lapse, where you need slow shutter speeds, easier. Having complete control of auto-bracketing rather than artificially limiting this function also is a nice upgrade. While 1 frame per second improvement in frame rate doesn't seem like much, it is a 25% increase in shooting speed at full frame resolutions, which is significant. The D810 is simply better than what was previously the best 135 format DSLR in the world (D800E) and takes that title. Quite frankly I can think of no reason for reaching for the D800E when I have a D810 other than as a backup if something breaks on the D810. My biggest gripes are the things that did not get updated/fixed as outlined above and the movement of the bracket button. Why did they have to move the bracket button? This important function, which used to be easily accessible with one finger, forces you to take your eye out of the viewfinder and look for one of three closely co-located tiny buttons on the front of the camera near the flash. Having different cameras with different locations for important functions is just plain dumb, especially since many pros will have a D810 as their primary camera and their older D800E as a backup.

Sony's Disorder?

Readers of this newsletter know that I am a big fan of some of Sony's cameras. They make what is hands down the best point and shoot camera in the RX100 Mk III (some new announcements from Panasonic and Canon are likely to challenge this once they are available to the public - see Photokina above), by far the fastest focusing mirrorless camera in the a6000, and of course the a7 line of cameras which includes the best low light video oriented camera in the a7s, and the highest resolution mirrorless camera on the planet in the a7R. But Sony users are easily the unhappiest bunch on the photo forums. Sony struggles mightily in keeping their customer base happy. They do not fill out the infrastructure needed to make buyers of these products happy, long term Sony customers. Sony seemingly treats even their high end product lines as if they were consumer electronics made in the Sony Walkman era. This is manifested on several fronts:

1. Lack of firmware updates to fix real problems. Like most cameras, Sony's initial releases of cameras have some issues that crop up when used by the masses. But unlike most camera companies, they never seem to fix them. Sony has issued one minor firmware release in the year since the initial introduction of the a7R and they have addressed virtually none of the issues that photographers, the photography press and even large movie houses have deemed essential. My review of the a7R firmware fixes at the end (<http://www.ejphoto.com/Quack%20PDF/Sony%20Alpha%207R%20Review.pdf>) had a list of reasonable and important firmware updates that the a7R needs to be a better photography tool. Only one of those was implemented (reduced power-on time) and even that one was not fixed properly. Among others, we still have to put up with lossy compression knocking a 14 bit sensor down to one that only effectively records 11 bits of real data, artificial restrictions on auto bracketing making auto bracketing almost useless, a dizzying menu that puts linked function as many as 20 pages away from each other, a viewfinder metering scale that goes from +5 to -5 but only +2 to -2 is active, and an auto ISO function that borders on useless in Aperture Priority mode.

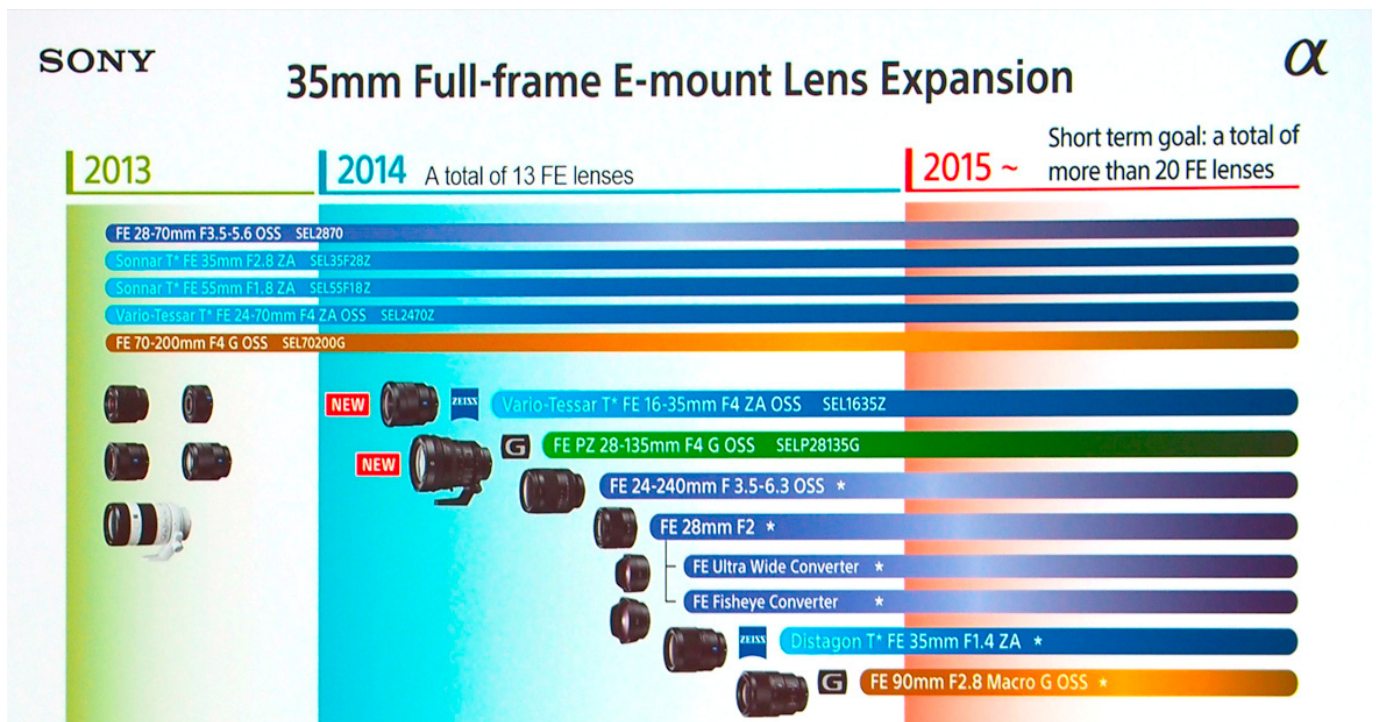


Mystery Valley, a7R, Zeiss 24-70mm

2. Lack of real support for professionals. There is no Sony equivalent of Nikon Professional Services (NPS) or Canon Professional Services (CPS). They don't have loaner program for pros needing a camera fast due to a malfunction of a mission critical tool. They don't have a pro-level service organization that can turn around repairs quickly, or even a place to send the gear other than a service center that you can also send your 30 year old Walkman to. The entire Sony repair process is a black box and oriented towards consumer electronics. Sony will not get many pro converts without a pro service and support organization. Sony has this for Hollywood film makers and sports video media but does not appear to want to delve into true professional photographic services and therefore will never be more than a bit player among pro still photographers until they change their attitude and service processes. Late Breaking News: Sony has announced professional services for Germany only at Photokina but with little meaningful detail on qualification requirements or a roadmap for rolling this out to other countries and geographies.

3. A lens roadmap that seems to be a fantasy. When Sony launched the a7 bodies a year ago, they also put out a lens roadmap to entice buyers. So far they have missed on virtually every delivery date on that roadmap by 3 to 6 months. One year after introduction there is still no real wide angle lens. According to the roadmap, a wide angle zoom was supposed to be out at midyear. Until a few days before this newsletter was published in late September 2014, the 16-35 f/4 lens that is on the roadmap for June had never been shown, there was no patent on file, nor was a mock-up ever been seen, just silence from Sony. When a company puts out a roadmap for future enhancements to its system in order to entice sales, it is an implied promise to deliver the needed components to complete that system. If Sony had come out and issued a statement that there was a delay to the roadmap and that the new scheduled date for the lens was such and such, then that would be much more acceptable business practice. But where we stand is with a roadmap that has fictional dates for future products and critical dates that were missed for existing products leaving many customers wondering what happened to the wide angle lens they need to put this system to its fullest use. This is very poor business practice and poor customer relations. Just as I was going to press

with this edition of the newsletter, Sony finally showed a prototype of the 16-35mm f/4 FE lens at Photokina but availability in the US is late Q4/2014 at best and realistically not until early Q1, almost 6 months behind the roadmap and 16 months since introducing the first cameras. To this day, the roadmap still shows as a June/July 2014 introduction. Below is the revised roadmap that Sony released at Photokina. Note the position all of the lenses that they just announced the development of (with an asterisk) and their position on the roadmap, not to mention the lenses that already exist and when they were actually available - pure fantasy:



From the Photokina presentation, the 16-35 will ship in November (which really means December/January), the 24-240 will ship in February, the 28mm f/2 and 90mm f/2.8 will ship in March... Perhaps when Sony puts out a roadmap, it really means we started thinking about a release date for these lenses on the date where the roadmap starts...

4. Lack of visible support for their mirrored line of SLT cameras commonly referred to as A-mount. Photographers that have invested in the legacy Minolta mount cameras in the Alpha SLT and SLR lines feel abandoned with little new product, introduced over the last two years and not even a mention of it at the world's biggest trade show, Photokina, and essentially no A-mount gear even on display. Even if the news is that we are abandoning it for E-mount is better than no word at all. Sony is hemorrhaging mirrored camera customers to Nikon and Canon due to no visible strategy in the mirrored realm.

I have previously read in various places opinion pieces that claim that Sony, in many of its product lines, has a case of Attention Deficit Disorder and I now totally understand what they mean by that. Sony is fantastic at putting out the latest and greatest innovations in camera bodies and photographic sensors but they are slow to bring to market the support system to be able to use those camera bodies to their fullest or even fix the issues that users find with products that are in the market. Another example is the case of the NEX cameras that were the highest selling mirrorless cameras in the world. Sony was slow to get lenses to market and right around the time they did get the complete system in place, they abandoned the NEX name and rebranded it Alpha, the same name as their larger cameras, thereby completely confusing the market

and its customers. It seems that as soon as they get a product to market and sell it with a promised roadmap, they lose focus on that and move on to the next thing or rebrand it. As a result of all of this turmoil, they have a nervous customer base, and in the case of A-mount, a growing hostile customer base.

Preventing the Laysan Duck From Extinction

In the spring of 2011 I traveled to Midway Atoll, site of the WWII Battle of Midway, in the center of the Pacific Ocean to photograph, among other things, the rarest and most endangered species of Duck in the world, the Laysan Duck. Fossil records show that the Laysan Duck once lived throughout both the windward and leeward Hawaiian Islands from the Big Island out to the remote atolls. By the mid 1800's they only remained on tiny Laysan Atoll located about 930 miles west-northwest of Honolulu having been brought to the doorstep of extinction by rodents, rabbits and other introduced species by humans. Numbers dropped as low as 100 remaining individuals alive in the 1990's. A team led by Dr. Michelle Reynolds of the USGS translocated approximately 40 Laysan Ducks from Laysan Atoll to Midway Atoll in 2004 and 2005 giving them a higher chance of avoiding extinction since a single meteorological, seismological, oceanographically, or medical event would be less likely to wipe out the entire population if it existed in two places more than 400 miles apart. The estimated total population of Laysan Ducks is now in the neighborhood of 500 birds. These low-lying atolls are prone to having their fresh water supply turned brackish due to tsunamis or other events and this raises the level of botulism among Laysan Ducks.



Laysan Duck, Midway Atoll - D300, 300mm

While traveling to Midway I met Dr. Michelle Reynolds as we were on the same Gulfstream Charter flight from Honolulu to Midway. This was just a couple of months after the massive Japan Earthquake that caused the Fukushima meltdown and a major tsunami. It was never really reported in the press that Eastern Island, one of three islands that make up Midway Atoll was temporarily 60% submerged from the tsunami wiping out much of the fresh water on this tiny island and severely damaging the Laysan Duck's habitat. As my time on Midway rolled on I had several conversations with Michelle because we were the only two people in Charlie Barracks that were ever awake after 8:00PM (Midway is 4 hours behind Pacific daylight time and 7 hours behind Eastern Daylight where most of the other guests were from). We became

friends due to our mutual love of waterfowl and the Laysan Duck. We had several conversations about what it would take to increase the odds of survival for this wonderful species including logistics and funding. At the time, getting the funding to do this seemed remote at best.

Our conversations ultimately led to Dr. Reynolds providing me the unique opportunity to photograph Laysan Ducks in places on Sand Island where no other photographers can in exchange for letting her use the photographs for educational purposes. To this day we keep in contact via Facebook and email. Fast forward to now - a few weeks ago I got an email from her telling me the possibility for a second translocation, just like what we had talked about in 2011. The Coast Guard would provide the transportation as part of another mission. The Laysan Duck's third home is to be Kure Atoll which is a little higher above sea level and therefore less prone to seawater incursions. Michelle asked me if the photos I took could be used for the press releases should this second translocation, to a third home in the leeward Hawaiian Islands, be successful. Of course I granted her permission since this is a cause very near and dear to my heart. The picture above was used by media outlets to report this news. I am very happy to say that the translocation has been completed and is proceeding well. A total of 24 first year birds and 4 second year birds were released. Now the Ducks will hopefully breed on Kure Atoll this spring thereby reducing the risk of extinction by approximately 30%. I am very honored to have participated in this in my own very small way.



Laysan Duck, Midway Atoll - D300, 500mm

The New Nikon TC-14E III 1.4x Teleconverter

In the spring, Nikon announced a new 1.4x Teleconverter, the third revision of its TC-14E. The AF-S Teleconverter TC-14E III features revised optics, with a 7 element, 4 group construction. The barrel has also been redesigned for increased moisture and dust resistance. Being an NPS member, I received one of the first ones shipped in the USA. Below are my findings comparing it to its predecessor, the TC-14E II.

I have done a resolution test on the D7100 with the 500mm f/4VR lens. The D7100 is Nikon's current highest pixel density sensor and it does not have an anti-aliasing filter making it the best camera to evaluate center resolution. There is a very small increase in resolution and a very slight decrease in Chromatic aberration. Both are very near the limit of sample to sample measurement error but it is repeatable so there is a very minor center frame resolution increase with the new 1.4x teleconverter.

I then used the D810 to evaluate corner sharpness and resolution since it is the highest resolution full frame sensor available. Again I compared the new vs. old 1.4x using the 500mm f/4 VR lens. There is a significant difference between these two samples in corner resolution. On this full frame camera, using the new TC, the corners resolve almost 1000 more lines per frame than the old TC does when shooting wide open at the combination's largest aperture of f/5.6. The old teleconverter has to be stopped down by 1 2/3 stops before getting the same corner resolution that the new one gets wide open. Of course stopping the new one down also increases it's resolution but even at equivalent f/8 apertures, the new TC resolves about 500 more lines per frame than the old teleconverter in the corners.

On the D7100, the AF Fine Tune calibration offset is less than it is with the old TC. With the D7100, the AF fine tune compensation with the old teleconverter was +13 and this dropped to +8 with the new converter. A similar drop in offset was recorded with the D810. The old TC is notorious for requiring extreme amounts of offset specifically with the AF-S 500mm f/4 VR lens, in many cases not within the user adjustable range so this change may allow some owners of 500mm lenses that couldn't previously be fully tuned for focus to now be within the range of user adjustment..

The new TC-14E III does not function with the Nikon AF-S 300mm f/4D lens. The new model does not have the moving tab at the edge of the TC barrel on the lens side that couples the manual aperture ring to the camera. As a result, the camera returns an FE error on the top LCD just as if you had the lens aperture ring set at some aperture other than minimum aperture. This TC is not compatible with manual aperture ring lenses and manual aperture ring lenses are not listed on the compatibility list in the owner's manual for the TC-14E III. (see the small tab on the right side of the TC-14E II on the picture below)



I noticed no difference in AF speed but these sorts of things, unless there is a gross difference, usually don't reveal themselves until one has done extensive shooting in various conditions.

This seems like a nit, but Nikon has moved the TC to lens alignment dot from the lens side edge of the TC to the middle of the barrel which is a very odd place since visual alignment is not as precise when placed a small distance away than it is when placed right next to where the lens is going to mount (see picture above). While this is something that a user will quickly get used to, it is odd at first and the last thing the

Nikon mount needs is anything that makes it harder to mount things. Nikon already is by far the hardest mount to repeatably engage, especially in low light where visibility is poor.

My conclusion is that if you are shooting a DX body, don't upgrade, as you will see very little difference. If you use the 300mm f/4 lens, don't upgrade, as the new TC will not work with that lens. If you are shooting an FX body and want corner to corner sharpness even wide open, or you own a AF-S 500mm f/4 VR lens that can't be fully adjusted with the TC-14E II, then this is an excellent upgrade. I will have no hesitation using this TC wide open when needed which is something I never did with the old one or any other teleconverter.

The Best Lenses For Your Nikon and Canon Cameras

Canon released its 16-35 f/4L this quarter and stunned the photography world with what is the best wide angle zoom currently available. I place it ahead of the long standing champ, the Nikon AF-S 14-24mm f/2.8 due to its lower linear distortion and ability to accept standard screw-on filters while giving up nothing to the Nikon 14-24 in image quality. In my testing, it is the sharpest wide zoom currently available and excels even in the corners and at large apertures. I have been asked about adding macro lenses to the list. Once I have a big enough database, I will add medium and long focal length macros.

Lens Category	Canon EF Mount	Nikon F Mount
Ultra Wide Prime	Zeiss 15mm f/2.8 ZE	Zeiss 15mm f/2.8 ZF.2
Extra Wide Prime	Zeiss 21mm f/2.8 ZE	Zeiss 21mm f/2.8 ZF.2
Wide Prime	Zeiss 25mm f/2 ZE	Zeiss 25mm f/2 ZF.2
Moderate Wide Prime	Sigma 35mm f/1.4	Sigma 35mm f/1.4
Standard Prime	Zeiss 55mm f/1.4 Otus	Zeiss 55mm f/1.4 Otus
Portrait Prime (short telephoto)	Canon 85mm f/1.2L II	Nikon 85mm f/1.8G
Medium Telephoto	Zeiss 135mm f/2 Apo Sonnar ZE	Zeiss 135mm f/2 Apo Sonnar ZF.2
200mm Prime	Canon 200mm f/2L	Nikon 200mm f/2G
300mm Prime	Canon 300mm f/2.8L IS II	Nikon 300mm f/2.8G VR
400mm Prime	Canon 400mm f/2.8L IS II	Nikon 400mm f/2.8G VR
500mm Prime	Canon 500mm f/4L IS II	Nikon 500mm f/4G VR
600mm Prime	Canon 600mm f/4L IS II	Nikon 600mm f/4G VR
800mm Prime	Canon 800mm f/5.6L IS	Nikon 800mm f/5.6E VR
Wide Angle Zoom	Canon 16-35mm f/4L IS	Nikon 14-24mm f/2.8G
Standard Zoom	Canon 24-70mm f/2.8L II	Tamron 24-70mm f/2.8 Di VC
Telephoto Zoom	Canon 70-200mm f/2.8L IS II	Nikon 70-200mm f/4G VR
Super Telephoto Zoom	Canon 200-400mm f/4L Extender	Nikon 200-400mm f/4G VR II

Upcoming Workshops

I continue to offer workshops in some fantastic destinations through NatureScapes Certified Workshops. Click on the Workshops below for all of the info. For the complete schedule of Workshops offered by NatureScapes, please click <http://www.naturescapes.net/workshops/>

Arizona DuckShop: (Jan 18-21 - Sold Out - Waitlist Only)

Join NatureScapes' Technical Editor and widely acclaimed professional nature photographer, E.J. Peiker, for this exclusive Phoenix, Arizona DuckShop!™ This 3-day DuckShop™ will put you right where you need to be to walk away with breathtaking images of an array of ducks, waders and other species at some of the best hot spots in the U.S.! 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, Mexican Duck Hooded Merganser, Cinnamon Teal, Green-winged Teal, Bufflehead, Redhead and many other bird species. Get all the info here: http://www.naturescapes.net/workshops/arizona_duckshop_2015

Northern Iceland - Arctic Adventure: (May 27- June 14, 2015 - just a few openings left)

We will soon be taking registrations for this workshop in 2015. Join NatureScapes.net co-founder and Technical Editor E.J. Peiker and Iceland's world renowned Ornithologist and photographer Jóhann Óli Hilmarsson on a very unique and diverse Northern Iceland Workshop. This workshop has it all, from the most spectacular and powerful waterfalls in all of Europe, to one of the richest waterfowl breeding lakes in the world, to cliff dwelling birds such as the colorful and comedic Atlantic Puffins, Razorbills, Murres and many other sea birds and Arctic species. It is also one of the most spectacular landscape spectacles on the planet. Upon arriving at the modern Keflavik International Airport, our journey starts in the capital city of Reykjavik. After photographing geothermal features and local waterfowl in the area, our journey takes us north to the amazing Hraunfossar waterfall complex and then onward to the north and east, ultimately ending up at the edge of the Arctic Circle in the Mývatn area where it will be light 24 hours a day. We will make plenty of stops to photograph amazing sites like Godafoss and the incomparable Icelandic Horse along the way. Mývatn will provide us opportunities to photograph multiple waterfowl and grebe species in a spectacular environment. this area also boasts some of Iceland's most interesting geothermal features and beautiful landscape photography opportunities including Europe's most powerful waterfall and several other spectacular waterfalls that stand with the world's finest. After three days in this vicinity we work our way west, stopping to photograph along the way, to the Vestfirðir Peninsula where we will photograph the amazing Dymandi waterfall complex which, at this writing,



only the NatureScapes workshops offer, and then on to one of the major highlights of all NatureScapes Iceland tours, the Latrabjarg sea cliffs featuring the Atlantic Puffin at close range and many other cliff nesting and other species. After 5 full sessions of photography in this area, we will depart for the small and incredibly quaint island of Flatey where we will spend the night. Our past participants universally regard Flatey as a major highlight of our Iceland adventures. After departing Flatey and working our way back to Reykjavik, we will visit the Snaefellsnes Peninsula for numerous landscape opportunities as well as some potential sea bird opportunities. All the info is one click away:

http://www.naturescapes.net/workshops/iceland_adventure_arctic_2015

Stay tuned on the [NatureScapes Workshops Page](#) for more amazing workshop announcements in and 2016!

Private Photography Instruction and Consulting Services

In addition to the photo workshops that I launched over 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:

<http://www.ejphoto.com/Quack%20PDF/Rate%20Schedule%202014.pdf>

Two eBooks Available

Be ready for Duck Photography season which starts in just a couple of months, with my eBook "**Ducks of North America – The Photographer's Guide.**" It 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

Image Recovery from CF and SD Cards

New Lower Price! 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 \$50.

Facebook Page

<http://www.facebook.com/pages/EJ-Peiker-Nature-Photographer/150804446733>

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E.J. Peiker is a co-founder of www.Naturescapes.net and leads photographic workshops under the NatureScapes Certified Workshops banner

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Storm Brewing Over Watson Lake (Nikon D800E, 24-70, stitched verticals)