



The Newsletter of E.J. Peiker - Nature and Travel Photography

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Winter 2023/2024 - Vol. 23, Issue 1  
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China Cove - California (a7r5, 17-28mm)



Central California Coast – a7R5, 70-200 f/4

## In the Field

The third quarter of 2023 saw me on a fly-away photo trip for the first time in 1.5 years. My significant other and I went to the central California coast for 5 days with morning and evening landscape shoots everyday in some of my favorite Big Sur and Monterey Bay locations including some I had not photographed before. The weather was cool but very nice with evening color in the clouds on a couple of the days. I was a bit disappointed that previous weather had caused enough destruction to close some of my favorite places including the magnificent McWay Falls Trail in Julia Pfeiffer Burns State Park but this opened up other possibilities so all in all it was a great trip. I was also able to finally complete a photo project that has been rattling around inside of my brain for quite a few years. See the “Story Behind the Photo” section later in this newsletter – it is an image that I am proud of and I don’t say that very often. Photos from the trip are included throughout the newsletter.



Lone Cypress, California - a7R5, 28-75 f/2.8

Earlier in the quarter, I ventured out for central Arizona fall color. While I often do Aspens during this time of year, I focused more on the golden hues of Cottonwood trees since I have done Aspens many, many times and Cottonwoods just once before. A favorite spot of mine yielded some nice photos. In general, everything was very late this year due to warm temperatures extending much later into the season and quite a heavy monsoon season in late summer keeping the ground and trees well hydrated. On average, virtually everything in the state changed color about 2 weeks later than usual and there were literally no clouds in the state for the entire fall color season.



Cottonwood, Arizona - a7R5, 28-75 f/2.8

## Gear Talk

Recent months have seen a number of new lens introductions that look like they would be of great interest to landscape and wildlife photographers - the core audience of this newsletter. Interestingly, there hasn't been too much hype in the forums about these. Largely gone are the days of photographers chomping at the bit for new gear and pre-ordering things sight unseen – sure there is still a little bit of this but it is a tiny fraction of activity that one would see 10 years ago. In fact many really cool introductions seem to fly so far under the radar these days that many photographers don't even realize what's available for their systems. I'm going to talk about some of this gear in this newsletter.

Sony a9 III - Before we get on to the things that nature photographers might be interested in, we must talk about a new camera that is decidedly not for most nature photographers but it is exciting for the technology it embodies and the potential for some of these features finding their way into future camera bodies that are more targeted towards landscape and/or wildlife photography. The camera I am referring to is the Sony a9III. Literally within hours of its announcement I was receiving emails complaining about

the a9III and seeing similar comments in photography forums about this camera. My response: “The a9 is not and the a9 series of cameras was never intended for the vast majority of you but the future it portends is very exciting”. As I said, the headline spec is nothing that a nature photographer in 2023 is going to get excited about – namely just 24 megapixels.

So why the hype? This camera encompasses something that we have been talking about for a long time and had not previously been implemented on larger sensors due to the limits of technology. It is called global shutter. In a traditional camera, or those that we have been using since the dawn of CMOS sensors in digital photography, when we trip the shutter the image is taken line by line in sequence. So the top and bottom of an image are taken at a different point in time. The duration of that difference is a function of the sensor’s scan and readout speed. Some sensors like the Sony a1 are very fast so that



McWay Falls, California - a7R5, 70-200mm

there is very little distortion in a moving subject due to readout speed but in slower read-out sensors, such as the 62 megapixel sensor found in the a7R4 and a7R5, the readout is much slower and can result in distortion of moving subjects when using an electronic shutter. One can easily see this if you are in a vehicle speeding by a picket fence and take a picture of the fence out of the side window of the car. The faster the scan/readout speed, the more vertical each picket looks; the slower the speed, the more the fence will appear to be leaning to the side. A way around this phenomenon is to use a mechanical shutter that only lets light onto the sensor for the duration of the desired shutter speed and the readout can then take place after the image was captured. The drawback of it is that it is mechanical and as such there are some limitations in how fast the shutter action can take place and also it is a mechanism that wears out. The Sony a9III is the first full frame camera to implement a global shutter – this is a sensor that reads out the entire image at the same time; thereby, completely eliminating the leaning picket fences, distorted bird wings, distorted baseball bats and golf clubs when shooting during a swing. It allows incredibly fast shutter speeds and frame rates. As such, the a9III can shoot at a staggering 120 frames per second with shutter speeds up to a mind blowing 1/80,000 sec. and sync with a flash at that speed; although, there is no flash that has a flash duration that short making this more of a marketing number.

A second technology that is very exciting in the a9III is pre-capture. When you half press the shutter, the camera starts buffering images at your selected frame rate and then when you do hit the shutter button, not only do you get all of the shots that occurred at the time of pushing the shutter button, the camera also records onto the memory card all of the shots for the second leading up to that point. This is fantastic for a bird photographer that has their lens trained on a perched subject waiting for the decisive moment when the bird takes off. We often miss that and just get a tail or a bird leaving the frame due to

our reaction time. With this technology you get the entire takeoff sequence and with today's exceptional bird-eye recognition autofocus, there's a great chance that they will all be in focus too. Looking forward in time by 2-4 years, these technologies will improve so that it can be implemented on a higher megapixel scale on future generations of the a1 and possibly even the a7R type bodies.

Canon Lenses – Canon has been very aggressive with new lenses including some very unique and interesting offerings. For example, when it came time to do a 16-35 f/2.8 “holy trinity lens” Canon said, let's make it a 15-35 f/2.8 and how about a 14-35 f/4? This could be all the wide angle lens a landscape photographer ever needs! You say you want an ultra wide zoom? Here's a 10-20mm f/4 and just for fun, we'll make all three of these in our highest grade professional L-build. Are you tired of the age old 24-105mm f/4 designs – here's a 24-105 f/2.8 and it is also an L lens. If you are a sports or wildlife photographer, we have a 100-300mm f/2.8L lens. There's even a 7.4lb 1200mm f/8 lens. In short, Canon has been absolutely killing it with lenses. I am not quite as excited about their current camera lineup but the lens lineup is exceptional. Unfortunately Canon is the only manufacturer that has locked out their mount so there aren't any third party offerings.

Nikon Lenses – Nikon has continued to round out their mirrorless lens lineup in the second half of 2023, not only with lightweight rebadged Tamron lenses but also with some new offerings designed and manufactured by Nikon. Easily the most exciting of these lenses is the Z 600mm f/6.3 VRS lens. This is the Phase Fresnel design lens that many were hoping for after the wildly successful and popular 500mm PF lens for DSLR's that many are still using on mirrorless cameras with an adapter. PF optics allow for a smaller and lighter lens than a traditional optical design making them much more “in the field” friendly. At just 11 inches long and 3 pounds, it is tiny in relationship to the 600mm f/4 beasts that so many wildlife photographers rely on. It is of course 1.33 stops slower too but with the exceptional high ISO performance and high ISO noise reduction available today, this is a compromise that many are willing to make – a truly hand-holdable 600mm with still a reasonably maximum aperture. At \$4800 it is also way more affordable than the \$15,500 that Nikon is asking for the 600mm f/4 lens.



Whimbrel, Monterey Bay, CA – a7R5, 70-200 + 1.4x

Sony Lenses – While the others are just rounding out their mirrorless lens lineups, Sony is pretty much already done with their second generation of lenses. They were in the full-frame mirrorless game years before the others. Besides having the most complete lens lineup of the big three, they also have by far the best third party lens support due to the Sony mount being an open and licensable mount from its inception. Besides the surprisingly great and versatile 70-200 f/4 II that I covered last quarter; a lens that has become my favorite lens to shoot with, Sony has just introduced a lens that many sports and wildlife photographers have been waiting for. This is a lens that was a mainstay of sports and wildlife photography in the SLR and DSLR era and for some strange reason has not previously been introduced by any full frame camera manufacturer to date – a 300mm f/2.8. This lens is a light weight full featured ultra high end professional model due to ship in February 2024. In addition to this, Sony just released the third and final Mk II lens in their f/2.8 holy trinity – a new 16-35 f/2.8 GM II that is lighter and claimed to be better optically. This second claim is almost hard to believe as the original 16-35 GM lens was pretty flawless but lighter is always good. Finally, Sony is shipping its 20-70mm f/4 G lens. If you need to keep it light and small and can only take one lens on a landscape shoot, this is the one to consider.

Sigma Lenses – Sigma continues in the mirrorless world with their three tiered lens build model: C-Contemporary for budget minded lenses, S-Sport for action oriented professional grade lenses, A-Art for professional grade fine art lenses. They have primarily made lenses for their own L-mount and Sony E/FE mount. Sigma has a very complete and highly acclaimed series of prime Art lenses that are coveted by astro photographers due to the various options available and some with very fast f/1.4 and f/1.8 apertures. A new and very notable lens for the astro community is a 14mm f/1.4 lens. Similarly, they have a complete lineup of zoom lenses including a very fast 24-35mm lens and a wildlife oriented 60-600mm f/4.5-6.3 lens. They do not offer fast long telephoto primes like the 300/400/500/600mm telephoto primes for mirrorless cameras yet.

Tamron Lenses – Tamron is easily the third party mirrorless lens leader with many Sony offerings and now some Nikon offerings as well as Nikon rebadging some Tamron lenses as Nikkor lenses (17-35, 28-75, 70-180mm). In many cases Tamron lenses are as fast, but lighter and just as good optically as Sony or Nikon lenses and if weight and space savings is important, they should be seriously considered. I currently use the Tamron 17-28mm f/2.8 and 28-75mm f/2.8 as my main lenses and used to complement that with the 70-180mm f/2.8 until I replaced it with the Sony 70-200mm f/4. Tamron has recently released a very interesting 17-50mm but I haven't had a chance to try it; although, the reviews are iffy at best. Potentially it could replace the 17-28 and 28-75mm leaving just a 50-70mm gap in my lenses – not something I desire but something I lived within the Fuji medium format system.



Central California – a7R5, 28-75 f/2.8

## The Story Behind the Photo



For years now I have been envisioning and planning a photo where the camera is inside a downed tree looking straight up with a beautiful grove of trees above. The ideal trees for this, in my mind, were always old growth Redwoods because they tend to grow very straight, have no low branches and are rich in color. The problem is finding a hollowed out stump with a beautiful grove above. Whenever I was in the coastal Redwoods of the American Pacific coast, I would look for the right set of circumstance and have even tried a few times but I was never quite satisfied. While on the central California coast in November, I decided to visit a State Park in the area that I know has many old growth Redwoods from previous visits. My hopes weren't high as I hadn't had much luck a couple of times before but I started to explore anyway. I came upon a stump right at the edge of a small ridge with a beautiful grove above. It had a small hole but getting a camera in there and being able to set it up and operate it would be difficult. I went down the embankment that the tree was at the edge of (perhaps a 3 or 4 foot drop) and much to my surprise the tree was hollowed out at the root on one side from below and it was just wide enough to get the camera, tripod and my forearms/hands into. Since the hole was relatively small, I would have to raise the camera inside the stump to where it was over my head and upside down. It took on the order of

25 minutes just to get things set-up and framed. I chose the Tamron 17-28mm f/2.8 lens for the shot and the right composition required a 20mm focal length. Operating the camera with it above my head and backwards was a challenge. The shot was going to require both extensive focus bracketing (also known as focus stacking) as well as multiple exposure values due to the approximately 25 stops of difference in light between the interior of the stump and the bright sky. I was very thankful that the Sony a7R5 finally incorporates automated focus bracketing as doing the focus stacks manually would have been a nightmare. The new fully articulating rear LCD was also a great help – I'm not sure I could have framed the shot without that as there was barely enough room for my head, the camera and my arms. The photo below was taken while I was setting up – I had to get much farther up into the tree for the final images. This became one of the most difficult shots I have taken and processed. The final image is comprised of 50 photographs. I took a focus stack of 10 images at 5 exposure levels. Each stack was then rendered with Helicon Focus for a sharp rendering from just a few inches away all the way up to the treetops. The resulting 5 images, after



combining the stacks at different exposures, were processed in three different ways in Photomatix HDR software. The three resulting images from that were then combined in Photoshop layers and manipulated to get something natural looking. Just at the end I was able to capture a small sunburst which adds nicely to the image and this was something I had not even envisioned! A photo of the scene that I saw as I approached is shown above. The small hole measuring about 8 inches wide is at the far end of the trunk and I climbed in underneath on the other side – the picture doesn't really show the drop-off on the other side but the bases of the trees in the photo are well below the base of the stump on the side this photo was taken from.

Overall I am very happy with the final outcome. Setting up and taking the 50 frames probably took on the order of 40 minutes as the interior trunk shots required some long shutter speeds in addition to the 25 minutes of setting things up. The processing on the computer took about 2 hours and involved a lot of trial and error. I feel like I can check this "vision" for a photograph that I have



had in my brain for years off of the to-do list!

## Digital Darkroom

I briefly covered Topaz Photo AI when it was first released and wrote that it was a good idea but implemented poorly to the point where I didn't find it useful at the time. Photo AI has since grown up a lot. Basically Photo AI is now a combination of Topaz Sharpen AI, Denoise AI and Gigapixel AI in a single application with a shared user interface. Topaz customers no longer need to launch three applications individually to use all three on a single image. It can all be done at once plus it incorporates some additional features that allow you to adjust lighting and color balance in an image. It has masking features that; for example, allow you to just apply the noise reduction to a background or to just sharpen a subject. Each of the modules in Photo AI's interface also has multiple options and customization similar to what is available in the individual stand alone applications. There are multiple view options including my favorite, the split screen that allows you to slide back and forth across the image to see before and after adjustment renderings. There is also a 1 step option where the program makes a suggested correction in all of the modules (except the Gigapixel-like upscaling option). I generally have found this to be an OK starting spot but it is a bit overly aggressive in sharpening and noise reduction. Photo AI fully utilizes a graphics processor so it will work much faster with a higher end graphics card. On my nVidia GEFORCE 3900 GPU, everything happens pretty much instantaneously after the initial image analysis. On my laptop things can take a couple of seconds but it certainly is not slow. This application can be run in stand-alone mode or as a Plug-in from photo editing programs like Photoshop and Affinity Photo. Overall, I now find Photo AI as the standard plug-in that I go to from Photoshop to finalize any sharpening, noise reduction or upsizing rather than invoking multiple plug-ins.



Bixby Bridge Gateway to Big Sur at night, California – a7R5, 17-28mm



Gentoo, Antarctica - Nikon D3, 100-400mm

CaptureOne launched their 2024 update late in the quarter, on their annual pre-holiday release schedule. There are several improvements that make the upgrade worth it. The most notable is AI masking. The program analyzes an image and when you click in an area, it suggests a mask and more often than not, it is 100% accurate or at most only needs a very minor tune-up. If you want to select an entire object, just drag a box around it and it figures out what the subject is and what the background is. As an example, in the Gentoo Penguin image to the right, dragging a box around this Penguin perfectly selected the entire Penguin with absolutely no accidental selection of any snow – that is impressive since the snow and the Penguin are predominantly shades of white. The entire masking operation took a fraction of a second (see below). It is also additive so you can add multiple AI rendered masks together into one or more layers – whatever works best for you and your image. You can then even restrict the masks using the Luma selection tool, color tool, and can use any of Capture One's sliders and tools on these masks. Continuing on The Gentoo example, I could easily use the Luma tool to just restrict any adjustments to the non-black parts or just the

black parts or anything in between. Finally, you can incorporate AI Masking recipes into Styles that can be applied to other images in the future and also use AI Masks in batch mode – for example when you have a focus stack of multiple images. The amount of time this saved me in editing my recent central California shoot was immense. Where I would sometimes spend several minutes making a complex mask, I can now do it in seconds. In a few cases the AI blew me away making correct selections where I thought that there was no way it would be successful. Similar to the AI Mask tool, there is also an AI Erase tool. A cool new trick is that in any brush, you can quickly toggle between brush and eraser simply by hitting the Alt key - it used to annoy me to no end that switching required multiple mouse clicks. Another speedup is in the reset function where you can now Reset All, Reset Crop, Reset Except Crop. These features alone make the upgrade worth it to me due to the large amounts of time they save. Other less important changes to me include significant enhancements for the tethering studio photographer (a core customer block for Capture One), some Live share capabilities, Live in app commenting, and direct publishing capabilities. These tend to not be as useful to the nature photographer but this version definitely adds some very useful and time saving capabilities for us, something that was severely lacking in the last major release a year ago.



CaptureOne finally clarified their new upgrade pricing strategy – something that they had made a very confusing and incomprehensible mess of in the months prior to this release. For a perpetual license the \$299 upgrade price to the new version out in October is 40% less for those that have upgraded

religiously over the years. That actually puts the price lower than the old \$199 upgrade price. This discount goes up by 20% each year as long as you don't skip a year meaning that after 5 annual upgrades (clock started in 2021) you get the 5th one for free. I still think their model is unnecessarily complex but at least in 2022, they did continue to update, upgrade and add camera models throughout the year and did not make you wait for the next full release to realize these.

Intel launched new mobile computing Core Ultra processors just a few days before this newsletter went out. It is the first serious attempt at closing the gap between the very efficient Apple M processors used in the MacBook Pros and highest-end iPads (and recently even in their desktop range of computers) and the power hungry Intel i7/i9 mobile processors. These are based on Intel's 7nm Meteor Lake platform which includes significantly improved integrated graphics, a much more efficient CPU and the first incorporation in Intel processors of a Neural processing unit (NPU) making it much more efficient at AI tasks. On paper it should close the gap to the Apple M processors substantially in performance per watt of electricity consumed and in some regards it may even surpass it but this will need to be thoroughly benchmarked. Battery life for photography and video oriented machines should double or even triple over the current machines which require a discrete GPU such as one of nVidia's GeForce mobile offerings to get acceptable imaging performance. As programs are optimized to utilize the new NPU for AI tasks (think the Topaz AI plug-ins) which relieves the integrated GPU, performance should get some significant improvements. The new internal graphics called ARC have at least double the performance of the very best Intel integrated graphics of the past. While this is still not as good as a high end nVidia discrete GPU, it is likely more than good enough without the expensive, heavy, and power consuming hardware overhead. I have ordered one of these new laptops, a 16" model that is thinner and half the weight and nearly half the price of my current 15" high end laptop. I will be putting it through its paces and will report back in the next newsletter on whether or not it is worth replacing a heavy, high performance i7 or i9 laptop with discrete graphics with one of these machines. I hope it can completely replace my heavy Razer 15" laptop with power brick that is huge and weighs almost as much as the laptop itself and its loud and hot exhaust fan that runs at full song anytime the nVidia GPU is in use. Stay tuned...



## Gear Garage Sale Continues

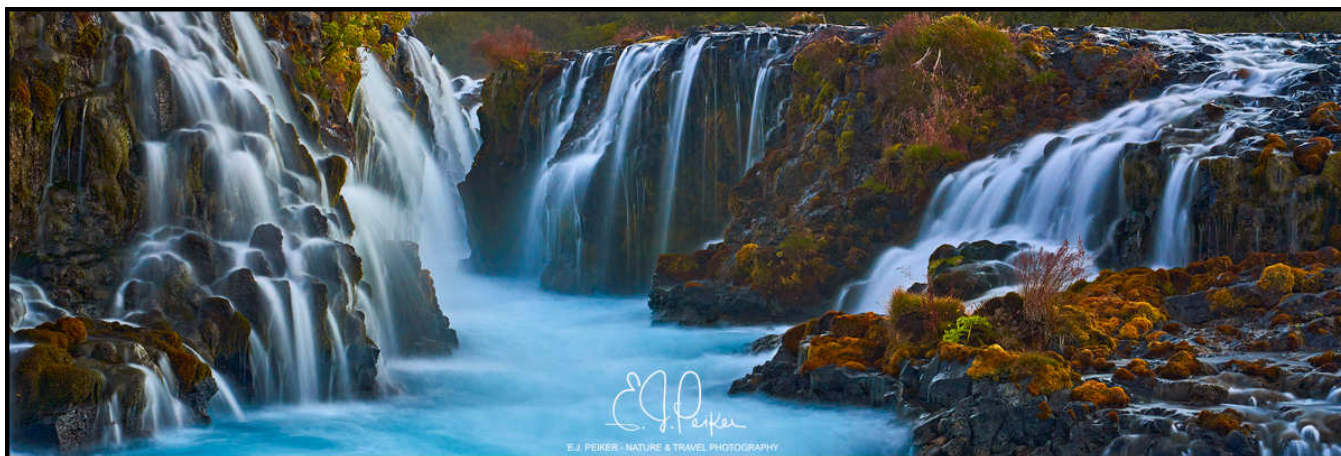
I have added several new items due to my liquidation of my medium format gear. This includes small items such as Fuji batteries, L-brackets for the GFX-100S and GFX-50S, and more. Additionally, Sony a7R4 support gear is now listed. The headline item now for sale is the fantastic Arca-Swiss Core75 geared leveling tripod head. Many filters and camera support items are still available. All sales are within the USA to USA addresses only. Prices include ground shipping and I am not charging extra to cover PayPal fees – the price you see is what you pay, no hidden fees. Venmo and Zelle are now also accepted and the preferred method of payment. See the full and up to date listing here:

[https://ejphoto.com/gear\\_for\\_sale\\_page.htm](https://ejphoto.com/gear_for_sale_page.htm)

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