

2018 • ISSUE 3

LIGHT & SHADOW

THE REALLY RIGHT STUFF MAGAZINE



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FRONT COVER: ROBED CHIEF *(Photo by Joe Johnson Sr.)*

El Capitan imposes its majesty over Yosemite Valley at sunset. The scene from Tunnel View is stunning at any time of day, but sunset is by far the most photogenic. My son Joe Jr. and I got there a couple hours early to stake claim to our preferred shooting spots among the inevitable horde of photographers and tourists. Thankfully on this November afternoon we were blessed with nice low-hanging clouds that perfectly veiled the grand monolith.

Shutter Speed: 1/50sec | F-Stop: f/11 | ISO: 100 | Camera: Sony Alpha a7R II
Lens: Sigma 50mm f/1.4 DG HSM Art Lens for Canon EOS and Metabones Adapter
Focal Length: 50mm | Location: Yosemite, Yosemite Valley from Tunnel View
Gear: TFC-14 tripod, PG-01 LR compact pano-gimbal head with built-in leveling base, MPR-CL Nodal rail, BA7R2-L SET L-plate for Sony a7R II

BACK COVER: STEPWELL *(Photo by Oliver Klink)*

Shutter Speed: 1/250 sec | F-Stop: f/11 | ISO: 200
Camera: Sony Alpha a7R II | Lens: Sony Sonnar T* FE 55mm F/1.8 ZA
Focal Length: 55mm | Location: India

Mesa Arch *(Photo by Elia Locardi)*

Shutter Speed: 1/4 sec | F-Stop: f/22 | ISO: 100
Camera: Fuji GFX 50s | Focal Length: 23mm

Light & Shadow Magazine is a love letter from Really Right Stuff to photography. In this publication we hope to educate our readers, showcase the beautiful, and act as an avenue for amateur and professional photographers to meet and converse.

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LETTER FROM THE CEO



Dear Friends,

Welcome to our third edition of *Light & Shadow*! The RRS team has done a super job of putting this together for you and I thank them heartily.

THIS ISSUE

I am truly blessed to count as friends some of the world's great photographers. The articles and photography in this issue inspire me almost as much as the good folks who contributed them for you. I have absolute confidence you too will find tremendous value for the time you invest with this publication.

REALLY RIGHT STUFF MOVE TO LEHI, UTAH

You have probably already heard the news that we're moving our entire operation later this summer from our beloved San Luis Obispo birthplace to an exciting new home in Lehi, Utah. This was a very tough decision which caused me many sleepless nights. Nonetheless, I feel strongly this is the best decision for our employees, company, and customers and I am confident the move will position RRS for long-term success.

One of the key factors for the move is to better control the total supply chain to meet growing demand. But frankly, in the short-term we will be encountering a bit of a supply shortage due partly to the move for which we apologize and beg for your patience. By the time our next issue of *Light & Shadow* is published, all the dust should have settled and we will be in full pursuit of customer service excellence.

QUALITY GOOD ENOUGH TO PASS DOWN

I recently read an online article in *Rust Magazine* (www.rustmag.com) by Jerry Blanchard, a master engraver and craftsman par excellence. Jerry contributes a series of articles "On Craftsmanship" and one that grabbed me is titled "The Pleasure of Quality." Jerry tells about the joy he has using prized tools passed down to him from his grandfather and father. He said, "Among craftsmen, artisans, and machinists, having fine old tools that belonged to your ancestors is sort of like having Grandpa's gold watch."

Jerry is a good family friend. I've been in his shop and I have seen him expertly hand-cut dovetails using some of those cherished tools in much less time, with greater precision and infinitely more soul than I'd ever be able to match with my wiz-bang 3-horsepower router. His story rings true to my heart and I wonder if Really Right Stuff can make tools good enough for you to pass on to your posterity. We strive to.

Please enjoy this issue of *Light & Shadow* and I hope you're inspired to shoot better. ♦

All the Best,

Joe Johnson Sr.
CEO, Really Right Stuff

BY HOLLY HOFFMAN

Product Manager at RRS

WHEN YOU'RE OUT in the field, it can be hard to keep your gear clean. Sometimes to get the perfect shot, you have to risk getting a little dirty. RRS gear is made to be resilient but over time mud, silt, sand and other particles can affect the performance of your equipment if you don't maintain it properly. You trust RRS to help you get the best images possible with reliable gear that encourages rather than inhibits the creative process. The foundation of many RRS rigs is our 1.5" dovetail standard quick-release clamp. This design allows you to quickly adapt to different shooting situations. Just like your car or anything with moving parts, RRS clamps require occasional maintenance to keep seamlessly supporting your work.

TROUBLESHOOTING CLAMPS:

If your clamp lever is no longer operating smoothly, it may need more lubrication. Deposit a few drops of chain lubricant into the shaft mechanism and work the lever or screw knob back and forth. Chain lubricant can be found in a bike shop or anywhere else that sells oil for chains and bearings. Continue to add oil and manipulate the lock to work the

oil through the clamp components until it feels frictionless. If this does not fix the problem and the clamp still feels unsatisfactory, send the clamp to RRS for maintenance.

If the clamp feels gritty, something may have found its way inside the clamp jaw. Unlock the clamp and use your hand to squeeze the jaws shut to expose the shaft assembly (Figure 1). Wear eye protection, hold the clamp so the exposed parts are facing down and use compressed air to blow out any particles. Do not hit the clamp against hard surfaces in attempt to free the grit. Doing so may damage the part. Squeeze and release the jaw repeatedly while blowing the air in any gaps. Next, allow the clamp to fully open and blow out the space between the jaw and clamp body, ensuring nothing is trapped on the shaft assembly or between the clamp surfaces. A dry toothbrush or other small brush can be used to remove anything stuck on the surface.

! Do not attempt to take clamps apart. For lasting issues, or if a clamp has been dropped and damaged, send it in to RRS for maintenance and repair. ♦

Visit rrs.us/clamps for more detailed directions and images. We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.

Photo by: Sara Edmonds



Figure 1

KEEPING CLAMPS SMOOTH
REALLY RIGHT STUFF

CHASING THE NIGHT

STORY AND PHOTOGRAPHY BY
JENNIFER WU

LOOKING INTO THE DARK night sky from the car, I bundle up to stay warm from the chilly 20°F wind. Time passes slowly, but then a wispy light appears in the sky. As it moves like a cloud, I watch it growing brighter and brighter. I quickly hop out of the car and walk down to the lake.

The composition isn't compelling and I move westward for a better view of the northern lights. The wispy white aurora light starts to turn green as auroras begin to fill the sky. Shimmering green and purple hues are like the notes on a piano, with lights popping up and dimming, moving faster and faster.

Transfixed, I am moved by the thrill of the light show. They grow stronger and form an arch over my head as the lights stretch across the sky. Looking straight up, I see the corona, the aurora's center. I kneel in the snow and adjust the RRS ballhead to photograph up into the dancing mass of light. Smiling with excitement, I let out a sigh of relief as I press the shutter. I got it!

CONTINUED >>

Airglow at Zion — There are hints of purple and green airglow in this panorama at Zion National Park, UT. Using the RRS PC-Pro round screw knob panning clamp, I leveled the clamp using its bubble level. I took five vertical images and overlapped each frame by about 30%. I used Photoshop "Photomerge for Panoramas" to stitch it together.

Shutter Speed: 20 sec | F-Stop: f/1.8 | ISO: 2500 | Camera: Canon EOS-5D Mark III
Lens: EF 24mm f/1.4L II USM | Focal Length: 24mm

THE COLORFUL SKY

Auroras

Auroras are beautiful colorful lights in the sky produced when the Sun's solar wind interacts with the Earth's magnetosphere. They are most often seen at high latitudes near the Arctic and Antarctic, and are often the brightest in a range of three to six degree latitude bands.

Airglows

Another colorful night sky phenomena is airglow, a faint and narrow band of light produced by our atmosphere, called nightglow when viewed at night. It is only ten to twenty degrees above the horizon and is often green, but can have all the same incredible colors as auroras. I have not been

able to see it with my eyes, but I have photographed it, as of course the camera can see so much more than our eyes.

WHEN TO PHOTOGRAPH THE AURORAS

Auroras are most active in March and September with the next most active months being April and October. November through February are good, however in May, June and July, the sky generally does not get dark enough to see auroras as clearly in the Northern Hemisphere. I have seen auroras in August as well. Auroras are most active between 10 p.m. and 2 a.m., though they can appear at anytime when it is dark.

Airglow at Bryce Canyon — Airglow produces the green and purple colors at Bryce Canyon National Park. The yellow glow on the horizon is from light pollution.

Shutter Speed: 25 sec | F-Stop: f/2.8
ISO: 6400 | Focal Length: 15mm
Camera: Canon EOS 5D Mark III
Lens: EF 15mm f/2.8 Fisheye



(LEFT) Aurora in Color, Brooks Range, Alaska

Shutter Speed: 13 sec | F-Stop: f/2.8
ISO: 1600 | Camera: Canon EOS 5D Mark II
Lens: EF16-35mm f/2.8L II USM
Focal Length: 16mm

(RIGHT) The same image — still an interesting composition when converted to black and white.



More intense and frequent auroras are around the eleven-year sun cycle with more visible sunspots and solar flares. The next peak year is 2024. However, this year still offers plenty of opportunities.

For the daily aurora forecast, check out www.gi.alaska.edu/AuroraForecast/NorthPolar and the Aurora Forecast app.

WHERE TO PHOTOGRAPH THE AURORAS

Some good places to photograph the auroras include Fairbanks, Alaska and most of Iceland, including Jökulsárlón and Lake Myvatn. Other locations are Tromsø, Norway; Yellowknife Canada; Kangerlussuaq, Greenland; Jukkasjärvi, Sweden and similar latitudes such as Finland and Siberia that are away from city lights.

COMPOSITION

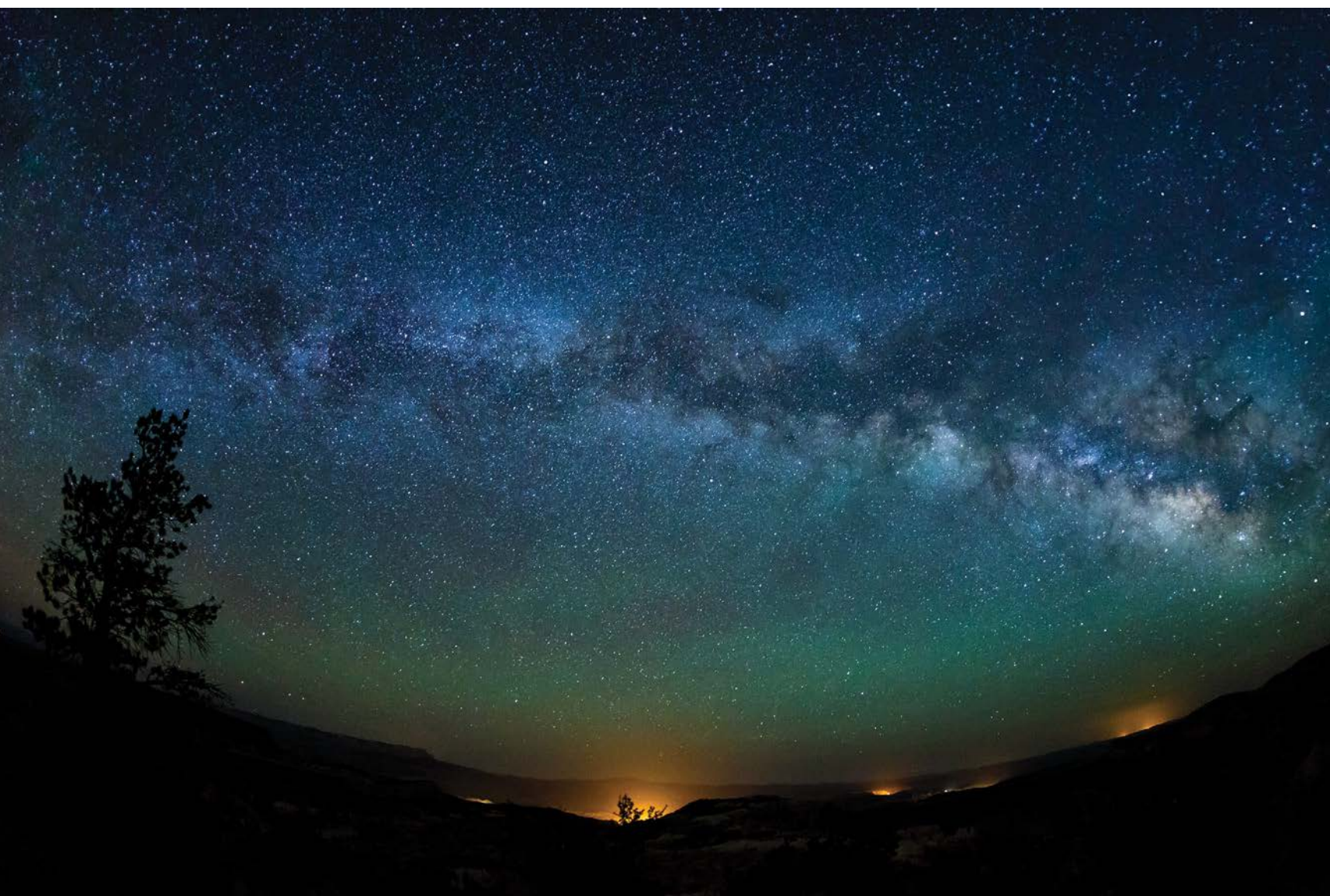
The auroras themselves attract most of our interest because of their intense color, but this alone does not make for a good composition.

Viewing the scene without color is a better approach to composition. Turn on black and white picture style. Then ask yourself, is the composition compelling? Remember that you will still be capturing a color image as long as you are saving a RAW file.

Scout your location during the day and use a wide-angle lens to make compositions including a large area of the sky. The auroras can appear anywhere in the sky but often appear starting from the northeast, sometimes arching overhead and then looking like it touches down to the southwest.

Look for compelling foreground elements like rocks or trees that can make interesting silhouettes or good subjects for light painting. Look for mountains that can be moonlit or lit by the auroras themselves.

While it's still possible to photograph the auroras with a full moon, the colors are less intense and there will be fewer visible stars. However, scenes with and without the moon can both still produce interesting images.



Bristlecone Pine Tree with the green and purple colors of airglow in the White Mountains, CA.

Shutter Speed: 20 sec | F-Stop: f/1.4 | ISO: 2000 | Camera: Canon EOS 5D Mark II
Lens: EF 24mm f/1.4L II USM | Focal Length: 24mm

Find the moon phase, position of the Milky Way, sunrise and sunset times before photographing. Use apps such as Star Walk 2, Photo Pills, Photographer's Ephemeris or Stellarium, which is free for desktop and mobile devices.

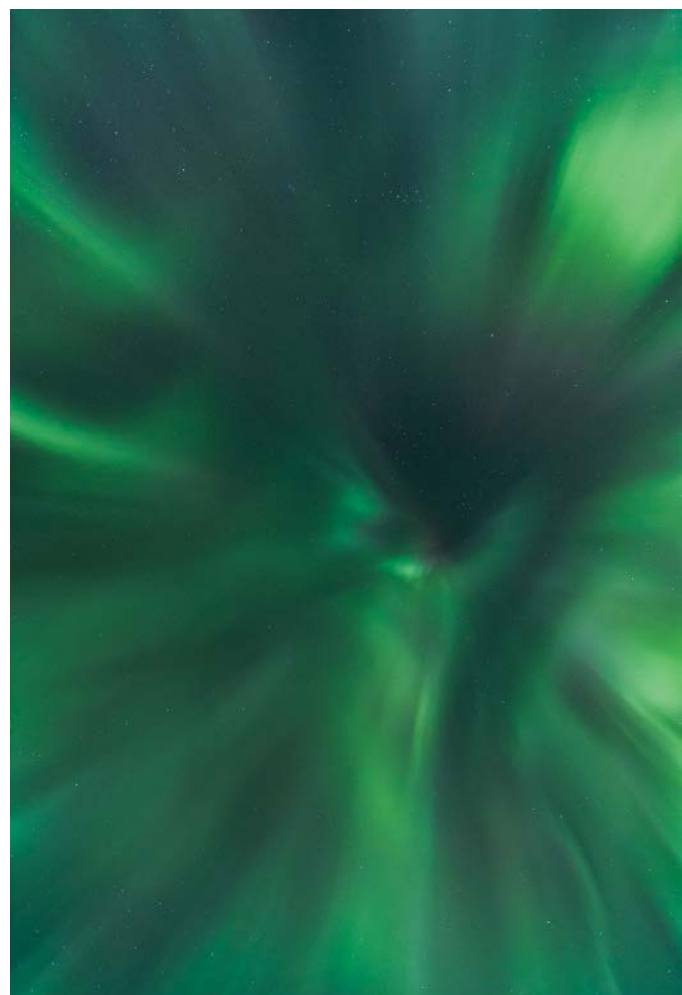
GEAR AND SETTINGS

Any wide-angle lens works well with auroras, the faster the lens, the better. Even an f/4 lens can still work since the light of the auroras will make for a brighter night scene. I prefer faster shutter speeds no longer than ten to twenty seconds so the auroras don't become too washed out from excessive movement.

For auroras, a good starting place is f/3.5 and 10 seconds. Adjust the ISO to what is needed for the scene. Photographing with faster apertures, such as f/3.5, will create sharper images with less chromatic aberrations. For airglow and the stars as points of light, I use f/1.4 to f/2.8 to get as much light as possible. Using a 14mm lens or wider at 30 seconds, 16mm at 25 seconds or 24mm lens at 20 seconds on a full frame sensor will stop most movement of the stars. For crop sensor cameras, convert the lens to the actual focal length. Review your image to check focus and make sure the stars aren't moving too much. Use a faster shutter speed if needed. Check your histogram to make sure the highlights of the aurora aren't clipped. Remember to be mindful of your exposure while shooting as the intensity of the light can change rapidly.

Aurora Corona — Pointing the camera directly up at an aurora corona, Lake Myvatn, Iceland.

Shutter Speed: 13 sec | F-Stop: f/4 | ISO: 2500 | Camera: Canon EOS-1DX
Lens: EF 14mm f/2.8L II USM | Focal Length: 14mm



Curtain Auroras and Moonlit Mountains with 40% of the moon's surface visible, Lake Myvatn, Iceland.

Shutter Speed: 15 sec | F-Stop: f/2.8 | ISO: 3200 | Camera: Canon 5D Mark III
Lens: EF16-35mm f/2.8L II USM | Focal Length: 16mm

I used Really Right Stuff gear for all of these images. A sturdy tripod is necessary. The TVC-23 tripod is my favorite. I grease the joints of the tripod to make sure it doesn't freeze up in cold weather. Get a Phil Wood Grease Tube and use the RRS website's directions on cleaning tripod joints. While my fingers weren't always working from the cold, the BH-55 Ballhead worked flawlessly in the frozen nights.

BE PREPARED

For the cold, I use heavy mittens or gloves over fingerless hand gloves. Chemical hand warmers are good for you and your gear, such as insulating your intervalometer. Wrap one around the lens with a hook and loop fastener. This will help prevent dew or frost from forming on the front of your lens. Keep batteries warm in your pocket. Tripod leg wraps help keep your hands warm while carrying your tripod. Wear thick-soled, insulated boots. Finally, a red LED headlamp or flashlight is a must for seeing well at night to protect your night vision.

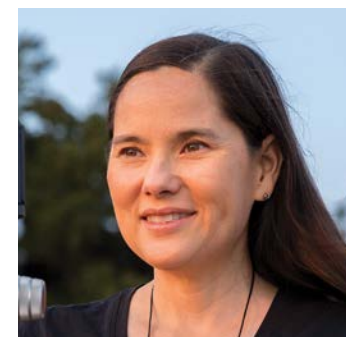
Remember to keep your camera in your camera bag for insulation when going into a warm room from the cold to prevent condensation from forming in the camera and fogging lenses, making them useless. Take out batteries and media cards before you go inside.

It takes some effort to photograph the colorful night sky but enduring the long dark nights, hours of waiting and bitter cold fingers just makes the photographs that much more rewarding. Enjoy the night and happy photographing! ✨

We would love to know what you thought of this article! To send us your thoughts, please visit [rrs.us/LS3](https://www.reallyrightstuff.com/LS3).



BIO: JENNIFER WU



Jennifer Wu is a leading nature and landscape photographer, educator and author, specializing in photographing the night sky. With a BA in Photography, Jennifer has spent over 30 years photographing. She has been named by Canon USA for the Explorer Of Light program. Her images have been published in numerous magazines and books. She is the co-author and photographer of the book, *Photography Night Sky: A Field Guide to Shooting After Dark* (2014, Mountaineers

Books). Jennifer enjoys sharing her passion and techniques for night and nature photography through seminars and workshops in location such as Yosemite, Hawaii, Iceland and Alaska. www.jenniferwu.com.

THE PORTRAIT

STORY AND PHOTOGRAPHY BY
JOEL GRIMES

BEING AN ARTIST

It is hard to believe, but it has been over 45 years since I processed my first roll of black and white film. I was a freshman in high school and at the time, I had no idea I would choose photography as a lifetime career.

During those early years I looked at photography as a way to document the world around me. I was an avid backpacker with a love for the outdoors and using a camera was a great way to share my adventures with others. But it wasn't until my first year as a freshman in college that my perception of photography changed drastically.

For the first time, photography became more than just documenting the world around me. It became an artistic creative outlet. It was like I had this new awakening, and the idea of being an Artist became all consuming. I was hooked, and for the last 42 years I have been on a mission to use the photographic process as an outlet to fulfill my vision as an Artist.

During my college days I was completely sold out on capturing the grand landscape. Like many young landscape photographers, I was heavily influenced by Ansel Adams. Back then, long before the digital revolution, the final black and white print was the crowning achievement to the photographic process. And of course, Ansel's Zone System was the pinnacle of control to achieve the perfect negative and final print. It was exciting times to be studying photography.

CONTINUED >>



After I graduated from the University of Arizona with a BFA in Photography, I was quickly introduced to the real world. Using my large format view camera skills, I started working as an architectural photographer and then as my client base grew, I transitioned into portraits. Surprisingly, the transition to portraits was fairly smooth. I credit this to my first art history class in college having studied the Baroque/Renaissance painters such as Rembrandt, Vermeer, Rubens, etc. Their use of cross light to build depth really captivated me. My first portraits were heavily influenced by them and their influence is still present in my work today.

THE TWO-DIMENSIONAL WORLD

A photograph is not reality, it never has been nor will be. It is at best a representation of the world around us and in some ways, it is an illusion of what we see with our eyes.

A photograph is a two-dimensional realm and to sell the illusion, you need to win over your

viewers by tapping into their emotions. I often refer to myself as a magician and in the end, I need to win over my audience by selling a fake. My goal as an Artist is not to try and replicate reality, but to cross into the world of fantasy. This is a much easier sell because reality is what we see every day. The world of fantasy is a way of escape.

A landscape photographer uses tools like wide angle lenses, forced perspective, long exposures, oversaturated colors, and other techniques to win over their viewers. As a portrait photographer, it is no different. I want my viewers to stop and go "wow!" To see something they don't see every day. Today we have more tools and techniques than ever to do this. We are living in the greatest time in the history of photography.

LIGHT STRIKING THE FACE

For me, how light strikes the face is paramount. I have spent a great deal of time and resources testing and perfecting my craft. The most

flattering light striking the face falls from top down (Clam Shell Lighting) or across the face (Rembrandt Lighting). The three-light edgy look that launched me into the photographic

According to their definition, I had crossed the line. If you look at history, our most cherished and revered artists all crossed the line during their time. Sticking with the so called established

STICKING WITH THE SO CALLED ESTABLISHED TRADITIONAL APPROACH WILL RARELY GET YOU NOTICED.

limelight is really Clam Shell Lighting with two kickers or edge lights. It builds drama and depth and gives a superhero or larger than life feel to my subjects. This lighting is perfect for sports and really served me well in the advertising arena.

The Rembrandt cross light which I used exclusively for my first 25 years as a commercial photographer, is more of a classical lighting approach because it is generally created by a large window or early or late light from the sun. We see this lighting replicated every day and photographically, it easily creates depth in a two-dimensional realm. The Baroque/Renaissance painters capitalized on this to give their subjects more of a realistic look or feel.

Just like a magician who has a performing show in Las Vegas, a successful photographer has spent endless hours practicing his or her craft. Repeat, repeat, repeat. This is the key to mastering your craft. My success is not based on my college degree, natural born talent or the idea I am a creative genius. It is because I have repeated the process more than 99% of the people on the planet.

ARTIST WITH A SET OF TOOLS

For years I defined myself as a Photographer. This made sense; I was creating images with a camera. When the digital revolution took place, I began to create composites using multiple images into one. Many photographers began to criticize me saying I was no longer a "Photographer" but an Illustrator.

traditional approach will rarely get you noticed. It is the risk-takers who forge new ground that make a splash and set new trends.

After about a year of trying to defend my definition of what a photographer was, I had a revelation. I was just an Artist with a set of tools. This changed everything for me. At last I was free to create without preconceived ideas





established by others. I was free to do what felt right to me. As a result, my work exploded onto a whole new level.

TOOLS OF THE TRADE

I love photography gear. What photographer doesn't? It's human nature, and it sort of comes with the territory. However, we can say that having all the right gear does not make an Artist. I also love techniques. But once again, the most technically executed photograph can be a complete bore. When I create images, I have to put this all into perspective. The best way for me is to look at where I want to end up. Then I choose the right tools to get me there.

For my camera, I am currently using a Canon 5DS R. I have a camera bag full of lenses, but I primarily use a 24-70mm 2.8 II for most of my portraits. I also do a fair amount of stitching

images together in my portraits to achieve a larger mega pixel output. I generally use the Really Right Stuff PG-02 Pano-Gimbal Head to create three images and stitch it into one final image. With the Canon 5DS R I end up with a 120-130 mega pixel image capture and this gives me the ability to print a 60x90 inch print with little to no image interpolation. The prints are breathtaking.

If you follow my teaching, you will always hear me give a lecture on the importance of a sturdy platform to rest your camera. In fact, 99.9% of all my images are shot on a tripod. The sturdier the platform the sharper your image. You can do a test to prove it to yourself. Set your camera's shutter speed to 1/200th (your camera sync speed) and then shoot one image handheld and one on a solid tripod weighted down. Then blow it up on your

computer monitor (100%) and you will see a difference. The single greatest degradation to image sharpness is camera movement. This is Basic Photography 101 teaching. However, many young photographers are not taught this. I get emails all the time from photographers asking why their images are not sharp.

My tripod of choice is the RRS TVC-33 Versa Series 3 with the BH-40 Ballhead. I challenge anyone to find a better tripod on the planet. For most of my commercial ad work, I lock the camera and tripod down and do multiple plates and exposures and I have the confidence that later in post it will be a breeze to register everything into one final image. [↔](#)

We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.

BIO: JOEL GRIMES



For over 26 years I have worked for many of the top advertising agencies across the globe. Over the years my assignments have taken me to every state across the USA and to over 50 countries around the globe.

In 1992 I produced my first coffee table book, *Navajo, Portrait of a Nation* which received a number of photographic and design awards. In addition, this project also produced an eighteen-month 60 print solo exhibition at the Smithsonian American History Museum.

Over the years I have sought to be an ambassador for the photographic process by teaching workshops and offering video tutorials. I feel that by being an open book with my process, I have an opportunity to inspire others to follow their dreams and passions to create. As of 2015, I have now been added to the prestigious Canon Explorer of Light team, giving me an even greater platform to promote photography and the creative process. I currently reside in Phoenix, Arizona. You can view more of my work at www.joelgrimes.com

STORY AND PHOTOGRAPHY BY
MILES MORGAN

MAKING THE MOST OF THE (PHOTOGRAPHY) TIME YOU HAVE

Drone / Hood

Shutter Speed: 1/640 sec | F-Stop: f/2.2 | ISO: 100 | Camera: DJI FC220
Lens: DJI 26mm f/2.2 | Focal Length: 26mm

FOR MOST OF US who make our living doing something other than shooting landscape images, photography trips take on special significance. Without the “luxury” of spending 300 days in the field, we must learn to make the most of the limited time we have for photography. Some people are content to simply explore unfamiliar terrain and enjoy their time in nature. I am most definitely not one of those people. I’ve been known to become a “pout-a-potomus” if I come back from a photography trip without a decent image to show for it. It seems logical in my childish mind that spending significant time and money chasing photographs needs to yield results in order for me to be able to consider an outing a success. Therapy may be in order. But in the meantime, I’ll share with you a few techniques I’ve picked up over the years in my attempts to maximize my keeper ratio.

Finely tuned professional athletes don’t walk onto the field/pitch/court and just create greatness out of thin air. They practice. A lot. To be a pro-caliber photographer requires the same level of commitment. So how do you hone your skills when you aren’t able to get out into the field to work on your technique and creative process? I suggest looking at a lot of photographs. Try blocking out some time every day to go visit your favorite photo sharing website and see what the talented shooters are posting. Engage in something I call “active viewing.” It’s not enough to pull up an image and say to yourself, “mmm pretty.” You have to ask yourself why is it pretty? What makes the image work for you? What could have been improved to make the photograph stand out even more? Looking around the frame, what clever techniques did the photographer employ to make the composition cohesive and pleasing to the viewer? Equally as important is to go back through your own work with a harshly critical eye and consider what could have been improved in the field. By keeping your brain actively engaged in the photography process, you’ll be ready to get right into the compositional groove when you finally get the chance to be on location shooting.

CONTINUED >>



Shutter Speed: 2.5 sec | F-Stop: f/16
ISO: 50 | Camera: Nikon D810
Lens: 14-24mm f/2.8 | Focal Length: 24mm

Moving on from the overall theory of keeping your eye and mind #photographystrong, preparation is the key component to increasing the odds of your photography trip being productive. When time is limited and the light is good, wasting precious moments trying to get the lay of the land in a new area is, well, wasteful. The invention of the internet has made this remarkably easy and effective. Take Google Earth for a spin and you can get yourself onto ridges, down near lake shores and in between valleys to see how they will look long before you strap on your boots. Hiking websites are fabulous for information about trails, difficult passages and prime locations and times. Loads of hikers will post images from their outings, and though the results may not be ideal from a fine-art landscape perspective, they often give you a great idea of what is out there in a given location and can help you zero in on a particular spot that might yield some compelling compositions. Topographical maps are also good for plotting

dramatic elevation changes. Lastly, I always run my location and itinerary through the wonderful "Photographer's Ephemeris" app. This will show you how, where and when the sun and moonlight will fall during your visit.

The sister to preparation is how you scout for cohesive compositions once you have arrived on location. I typically spend hours hiking around with my camera honing my location. If I can dial in a composition beforehand, I won't be flailing when the light is really good. If the location allows, I work very hard to find compositions in all four general directions. I can't count how many times I've been dialed into a shot only to have the best light show up behind me. It's much better to have flexibility built into your plan by preparing shots in more than one direction ahead of time.

So what are you looking for when you are attempting to create this compelling composition? That's another article entirely, but the first question I ask myself when looking

through the viewfinder is whether the image is visually balanced. If there is a heavy visual element like a large rock in the bottom right corner of the frame, I'd better find something with strong visual weight in the upper left. It can be a sunstar, a bright mountain peak, a dramatic sky or an escaped bag of Cheetos. The point is that it needs to command as much attention as the element that you are trying to balance it against. Next I'm looking for a visual path for the eye to follow. For example, leading lines shouldn't disappear out the side of the frame. In most cases, it helps to have a strongly defined foreground, mid-ground and background that are connected in some way. Typically, once I've selected the background (a mountain for example), a careful search will reveal a mid-ground that lines up visually. Lastly, wide angle lenses are excellent for making small elements in the foreground look larger than life to finish the composition.

Congratulations, you've done it. You've poured over your research, nailed your scouting and are proudly sitting on your incredible and unique composition. The next cover of *Light & Shadow Magazine* is going to feature this brilliant image, correct? Well, perhaps. But you're only halfway there. If you think back to your active viewing practice, the photos that make you drool the most prolifically are the ones that have incredible light. Unlike studio photographers, we are reliant on Mother Nature for that one. And oh, what a fickle mistress she is. Which light is best? Side, front or backlight? The answer is "yes." Each of these can yield impressive results when employed effectively. We all know that light is usually at its most dramatic on the edges; edge of a storm, edge of the day, edge of the moon. Are you one of those shooters that waits for "maximum pink burn" in the sky? If so, chances are you're too late. Next time, start several hours before sunset or keep shooting



Dunes

Shutter Speed: 1/250 sec | F-Stop: f/16
ISO: 400 | Camera: Canon 5D Mark II
Lens: Canon 70-200 f/4
Focal Length: 70mm



Mauri Sea

Shutter Speed: 1/2 sec | F-Stop: f/16
ISO: 64 | Camera: Nikon D810
Lens: Nikon 14-24 f/2.8
Focal Length: 14mm

long after sunrise. You'll find the light dancing across the landscape brings it to life in ways the big pink afterglow could only dream of.

The general photographic formula is that light + weather = drama and internet glory. That's great when you're shooting your local haunt and can wait for the perfect conditions to nail your shot. But when you've planned a big trip months or even years in advance, you have effectively given Mother Nature the reins. Again, preparation to the rescue. Many locations have obvious and ideal times for photography. New England in fall, Norway in winter, Death Valley in summer (just kidding). Hiking and photography websites are awash with great location information, all just a quick Google search away. Sometimes, however, even the best laid plans can run afoul of the photography karma patrol. While it can seem like all hope is lost when a big trip is busted by uncooperative conditions, creativity can salvage good results. Skies clear? Focus on twilight and astrophotography. During the day, work on your telephoto skills. Eliminate the sky from your composition and work with the light as it moves across the landscape. Pouring rain? Those moody conditions can make for excellent waterfall and creek images. The wildflower bloom you planned your trip around got trampled by a pair of amorous buffalo? Break out a drone and do some aerial images which don't rely on closeup details.

Lastly, if you travel a lot for work, try to sneak out for a quick sunrise or sunset while you are on

the road. I've outfitted myself with the excellent RRS TVC-24L paired with the BH-40, and they come with me frequently on my trips as an airline pilot. For folks like you and I who have more commitments than shooting opportunities, those sneaky side trips can be exhilarating and productive. While we may never have the variety of images of the traveling pro landscape shooter, with a little practice, preparation and knowledge, we can still manage to carve out a place for ourselves in the world of photography. [↔](#)

We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.

BIO: MILES MORGAN



"We" are a small group of amateur Fine Art Landscape Photographers located in the beautiful Pacific Northwest; Portland, Oregon to be more precise. By "we" I mean "me" and by small, I mean a group of one. And when I say "Photographer" what I really mean is that I'm actually an airline pilot who occasionally goes out and takes a few snapshots hoping that something pretty will get in the way of my lens.

My father, Hank Morgan, is a successful photojournalist, so I've always had cameras close by; but I never took the time to learn much about them. It wasn't until April 2009 that I decided that I wanted to try my hand at landscape photography. After a short period of time, I was hooked, and have been trying hard to hone my skills both in the field and in Photoshop to produce images that are pleasing. The greatest gift that photography has given me is the return to nature that I was definitely missing in my life. I have seen enough stunning scenes during my brief stint as a landscape photographer to last a lifetime, and hopefully my images will allow you to enjoy them with me.


milesmorganphotography.com

THINKING OUTSIDE THE FRAME

STORY AND PHOTOGRAPHY BY
MATT MEISENHEIMER

Featured New Talent

COMPOSITION IS EVERYTHING for a landscape photographer. It's the glue that holds our photos together and it's what separates a great shot from a mediocre shot. Our compositions tell a story; it's our artistic expression of the natural world. Although composition is constantly discussed in theory, it can be tough to define in practice.

For me, composition usually involves two key components — a focal point and the available elements in a scene. Composition in its most basic sense is arranging those elements so that the final image offers a smooth, visually pleasing transition to the focal point. How you include (or don't include) those elements can make or break your composition. The following are a few of my favorite methods.

CONTINUED >>

View Through the Trees, Hoh Rainforest, Olympic National Park

Shutter Speed: 1/30 sec | F-Stop: f/2.8 | ISO: 200 | Camera: Nikon D800e
Lens: Nikkor 14-24mm f/2.8 | Focal Length: 14mm | Gear: TVC-24L and BH-55

PRE-VISUALIZATION – FINDING A FOCAL POINT

When I think of a focal point and the elements of a composition, I think of them as having two different magnitudes. I refer to these magnitudes as macroscale and microscale. Macroscale is the general location of a place and the available focal points, while microscale is the smaller elements within that location. Think of macroscale as the jagged mountain peak and microscale as the stream flowing at the base of that peak.

To create a great composition, you need a great foundation. That means your focal point needs to be exceptionally strong. If you don't have a strong focal point, then your composition is bound to fail. Finding a powerful focal point can be difficult, especially when you're looking to get a shot from a remote area that's rarely photographed. Not all of us have an unlimited amount of time to scout new locations and travel as much as we'd like so it's important to have resources for finding great focal points in a short amount of time.

My most powerful tool is Google Earth. Google Earth's 3-dimensional view is one of the most useful resources for me as a landscape photographer. It's great for scouting locations

you've never visited. It gives you the information you need to determine if a certain location has a good focal point and ultimately, if it has the potential for an exceptional composition.

For instance, the picture below shows a 3D view of Oregon's Mount Hood. After flying through the area via Google Earth, I found what I thought to be a spot that had a lot of potential to produce a great composition. Mount Hood is the clear focal point of the scene. The ridges below Mount Hood form a nice U-shaped bowl and frame the mountain. There's even so much detail in the 3D imagery that I could see a glacier-fed stream flowing down the valley. From just a few minutes of scouting on Google Earth I had an idea of what this spot could offer, what the focal point would look like and even what microscale elements (the stream) I might be able to incorporate in my final composition. I also believed that the greenery shown in the alpine valley might contain some wildflowers.

I did visit this spot to photograph a few weeks later on my trip. You can view the result below, but this composition was almost entirely generated from finding a focal point I liked via Google Earth. I had never seen another picture here or been to this spot before.

(LEFT) A Break in the Clouds, Mount Hood, Oregon

Shutter Speed: 1/30 sec | F-Stop: f/13 | ISO: 200 | Camera: Nikon D800e
Lens: Nikkor 14-24mm f/2.8 | Focal Length: 14mm | Gear: TVC-24L and BH-55

(BELOW) A Google Earth snapshot showing the 3D representation of Mount Hood, Oregon



Mountain Light, Glacier National Park

Shutter Speed: 1/4 sec | F-Stop: f/11
ISO: 100 | Camera: Nikon D810
Lens: Nikkor 14-24mm f/2.8
Focal Length: 14mm
Gear: TVC-24L and BH-55

CAPTURE THE ACTION

A few things come to mind when I think about what makes some of Earth's grand landscapes so dramatic. The sensational mountains, deep canyons and lush forests are dramatic enough on their own, but I think about their respective climates and natural elements as well. I meditate on the high winds of the mountains, the rushing streams and waterfalls of the forest, the monsoonal storms of the desert and so on. Those elements define some of our landscapes and whenever I can, I look to add those elements to my composition. I want to capture the action. It's a very effective way to strengthen a composition, while also adding a sense of drama and awe.

The above scene is of Two Medicine Lake in Glacier National Park. It was a particularly blustery morning with freezing temperatures and 40-50 mph winds. I wanted to capture the moment as I experienced it, so I chose to incorporate the waves on the lake in my composition. I spent a

full hour that morning with my feet in the water, taking hundreds of exposures to capture the wave action I wanted. I think the waves give some reference to the viewer as to how windy it was, and they also offer a nice transition from the foreground to Sinopah Mountain.

I can't stress enough how important a high-quality tripod is when you're capturing action and dramatic scenes. Most of the time you will find yourself in less than favorable environmental conditions. I consistently find myself shooting in fast moving water, in high wind situations and in extreme temperatures. I chose Really Right Stuff gear because most of the conditions I capture only show themselves for a brief moment. I need to be able to quickly setup a stable platform that I know won't fail on me. It's in these decisive moments that gear shows its true colors. I use the TVC-24L Tripod with the BH-55 Ballhead and they have served me extremely well.

This technique of adding drama can also be seen in my photo of the high country of



First Snow, Glacier National Park

Shutter Speed: 1/90 sec | F-Stop: f/16
ISO: 100 | Camera: Nikon D810
Lens: Nikkor 14-24mm f/2.8
Focal Length: 14mm
Gear: TVC-24L and BH-55

Glacier National Park. During an afternoon hike to Grinnell Glacier, I found myself caught in a brief flurry of snow. Again, wanting to capture the snowfall and dramatic light, I quickly setup and started taking exposures at 1/90s to freeze the snowflakes. If you can visualize the scene without the snow, the composition is relatively basic. However, you can see how much atmosphere the snow adds to this scene. The viewer can almost feel the snow falling and the composition is much stronger as a result.



Fall Clearing, Glacier National Park

Shutter Speed: 1/500 sec | F-Stop: f/8
ISO: 400 | Camera: Nikon D810
Lens: Nikkor 14-24mm f/2.8
Focal Length: 16mm
Gear: TVC-24L and BH-55

FRAME YOUR FOCAL POINT

The wide-angle lens is one of my favorite creative tools we have as photographers. No other lens can naturally distort a landscape like a wide-angle. It can make small objects seem enormous and it can distort natural lines/shapes to our liking. I specifically like to use the unique properties of a wide-angle to find interesting ways to frame my focal point. Framing immediately draws the focus to your subject and keeps the viewer confined as the eye transitions between the frame and the focal point. I like to use the wide-angle to my advantage when it comes to framing and I refer to my technique as 'looking smaller.' An example is the shot from the Hoh Rainforest of Olympic National Park (title image on page 24).

The dangling moss was just inches away from my camera and because my lens was so close the moss appears much larger than it actually was. The gap between the moss was only a few inches across, but I was able to use my wide-angle lens to accentuate the gap and use it as a frame for my composition. I also framed

Mirror, Elowah Falls, Oregon

Shutter Speed: 1 sec | F-Stop: f/16 | ISO: 100 | Camera: Nikon D800e
Lens: Nikkor 14-24mm f/2.8 | Focal Length: 14mm | Gear: TVC-24L and BH-55

the furthest tree with the two staggered trees. Looking for small scenes like this can really lead to some dynamic framing opportunities. The only downside is that because you have to get so up-close and personal, you will frequently be required to focus stack exposures to ensure the entire scene is in focus. Having a solid tripod setup also really helps with this method. You really have to contort your tripod legs into odd configurations to get the desired angle on some of these smaller scenes. There have been many times where my RRS tripod had one leg fully extended at 90°, one leg collapsed at 45° and another somewhere in between that. Not all tripods can do that and remain stable.

In the shot on the bottom left, I was flat on my back with my tripod over my body so I could get a perspective of the branches framing Sinopah Mountain. I wish there was more fall foliage in the bottom right hand corner to provide some additional framing, but the negative space also works as an entry point for the viewer.

REFLECT YOUR FOCAL POINT

Reflections can result in powerful compositions. When I think about an idyllic reflection, a vast mountain range reflected in a large alpine lake comes to mind, but I stress again to look smaller. Subtle, smaller reflective scenes are all over where there's water; you just have to look for them. If you do find those scenes, the symmetry between the subject and its respective reflection often results in a fantastic shot. When I explore water worlds, I always keep in mind that even the smallest pool can be used as a reflective element.



In the shot from Elowah Falls, the pool in the foreground is very small, probably around 1'x1'. I again used my wide-angle lens to magnify the scene. My camera was almost touching the pool of water because I needed to get it as low as possible so that the reflection would be clearly visible. After some tough setup, I was in the right position to create this final image. The key is getting your camera almost level with the reflective surface so that a reflection is possible.✦

We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.

BIO: MATT MEISENHEIMER



Matt Meisenheimer is an award-winning landscape photographer based out of Wisconsin. His artistry revolves around wilderness adventure and exploring locations that few have seen. He strives to capture those brief moments of dramatic light and weather, which make our grand landscapes so special. Matt loves the process of photography – from taking the shot in field to post-processing the final image. meisphotography.com



GIMBAL VS. BALLHEAD

FOR WILDLIFE PHOTOGRAPHERS

STORY AND PHOTOGRAPHY BY
AARON BAGGENSTOS

IT'S BEEN A TRUE PRIVILEGE to work closely with the team at Really Right Stuff over the past several years. Many of their products have accompanied me around the globe for the more than 100 wildlife photography workshops I've led over the past four years alone.

When it comes to tripod heads, two RRS products stand above the crowd: the FG-02 Fluid Gimbal Head and the BH-40 Ballhead. Both of these tools are always with me, whether I'm in Alaska's Katmai National Park eye-to-eye with giant brown bears, above the Arctic Circle capturing images of polar bears and the Aurora Borealis or on safari in Africa observing big cats hunting. They are two incredible products designed to shine in different applications, and together, they always have me covered. So, which one is right for you?

CONTINUED >>

Thumbnail from Aaron's award-winning video, currently on display at the Nature's Best Exhibit in the Smithsonian Natural History Museum, which was shot on the FG-02 Video Head:
<https://www.youtube.com/watch?v=EjLhollK0pw>



Out of the Shadows, Botswana, Africa

Shutter Speed: 1/500 sec | F-Stop: f/4 | ISO: 1800
 Camera: Nikon D5 | Lens: Nikkor 600mm F4 FL
 Focal Length: 600mm | Gear: FG-02

GIMBAL VS. BALLHEAD (OR DO I NEED THEM BOTH?)

FG-02 Fluid Gimbal.

There is no doubt that when photographing birds and wildlife with long lenses, a gimbal style head is a good way to go. The RRS gimbal head allows you to safely and effortlessly balance and reposition even the heaviest of optics—such as my Nikkor 600mm F4 FL—in any direction, with one finger if needed. Because wildlife subjects are my primary focus, I find myself using RRS’s incredibly versatile FG-02 for as much as 80% of shooting scenarios.

Although this product is larger and more expensive than some other options, it offers a few

key features that make the tradeoffs worthwhile. Each axis (vertical and horizontal) is equipped with two fluid adjuster pins, a design that ultimately allows for nine different combinations of tension/damping across the axes. This gives me incredibly smooth tilts and pans that pay off big for tracking erratically moving subjects such as birds, capturing creative blurs and shooting quality video. If you’re a hybrid photographer, shooting both stills and video, this is the ideal product for you. If you are photographing birds and action with a telephoto lens, look no further.

So, with such an ideal product available in the gimbal, when would you ever look to a ballhead?



Scarlet Macaws, Costa Rica

Shutter Speed: 1/50 sec | F-Stop: f/5.6
 ISO: 250 | Camera: Nikon D5
 Lens: Nikkor 600mm F4 FL | Focal Length: 600mm
 Gear: FG-02



Bald Eagles in Skagit Valley, Washington State

Shutter Speed: 1/2000 sec | F-Stop: f/7.1
 ISO: 3200 | Camera: Nikon D4S
 Lens: Nikkor 600mm F4 FL | Focal Length: 600mm
 Gear: FG-02



Ross's Turaco, Botswana

Shutter Speed: 1/2500 sec | F-Stop: f/5.6
 ISO: 2500 | Camera: Nikon D5
 Lens: Nikkor 600mm F4 FL | Focal Length: 600mm
 Gear: FG-02



(LEFT) Red Eyed Tree Frog, Costa Rica

Shutter Speed: 1/40 sec | F-Stop: f/5.6
ISO: 200 | Camera: Nikon D5
Lens: Nikkor 80-400mm | Gear: BH-40

(RIGHT) Booted Racquet-tailed Hummingbird, Ecuador

Shutter Speed: 1/250 sec | F-Stop: f/13
ISO: 100 | Camera: Nikon D5
Lens: Nikkor 80-400mm | Gear: BH-40

PRO TIP

Buy the FG-02 with two configurations. The lever release clamp setup is lighter for travel and allows me to mount my camera both vertically and horizontally while attached to lenses without a collar, which is great for shooting landscapes too. This is a huge benefit you won't find with most gimbal style heads. The full gimbal with cradle clamp configuration is more robust and works in coordination with the RRS lens stabilizer.



The Ballhead.

I prefer to use a ballhead for serious landscape/animalscape work, with short lenses and for macro. Ballheads are much lighter and more compact than gimbals, so they are easier to haul on a long hike, and they help me to work more flexibly in tight shooting scenarios and low to the ground, especially with my 24-70mm and 15-30mm wide-angle lenses.

The RRS BH-40 is a mid-sized ballhead, 3.0 (76 mm) inches high and weighing just over a pound (486 g), with an 18 lb. load capacity. Not to be overlooked is their patented lever release clamp for easy and quick mounting.

For example, in the jungles of Costa Rica, thick vegetation often makes it difficult to navigate with a large-profile head such as the FG-02. A compact ballhead is the perfect solution for this scenario, and it also works exceptionally well with rail systems when shooting macro, and multi-flash hummingbird work.

The BH-40 has the lowest height profile in its class, and this means that I can position my camera at less than four inches off the ground (while the lowest I can get the FG-02 and comfortably maneuver my camera is around 16 inches). Although the BH-40 is stable enough to support my lenses up to 80-400mm, I typically hand-hold those lenses unless

I'm shooting video, in which case I use the FG-02 anyway.

Two other features I love about the BH-40 are its unsurpassed reliability, and the ease with which it operates. Whether shooting in the freezing temperature of the Arctic or on the sandy beaches of the Galapagos, this ballhead never fails to enable smooth pans and precise adjustments. Much of the credit here goes to the oversized tension knob, which allows me to maneuver my camera with one hand while my face stays glued to the viewfinder. If you are a landscape/animalscape photographer wandering into the backcountry in search of new and dynamic angles, this is the tripod head for you.

CONCLUSION

Before your next journey make sure that you are equipped with the Really Right Stuff gear that supports your lenses and shooting styles. Take a look at your current inventory of gear, and keep in mind any future purchases you have planned. If your lenses are wide-angle and light, and/or you love to shoot macro, you will be happiest with the BH-40. But, if your bag is packed with large, telephoto lenses and photographing birds and wildlife is your passion, then spend the extra money and purchase



Masai Giraffes, Kenya

Shutter Speed: 6 sec | F-Stop: f/2.8 | ISO: 3200
Camera: Nikon D810 | Lens: Nikkor 24-70mm
Gear: BH-40

the FG-02. You will thank yourself when you're in the field.

While tripod heads aren't nearly as glamorous as a new lens or camera bodies, they can make or break your chances of capturing those hard to come by, decisive moments. Do right by yourself and your camera gear, and get the tripod head that will best serve your photography. [↔](#)

We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.

BIO: AARON BAGGENSTOS



Aaron Baggenstos is an internationally-acclaimed, award-winning professional wildlife photographer/videographer, and author in nature and wildlife. His images tell stories that help protect, preserve and conserve biodiversity and habitats worldwide.

Along with guiding tours and instructing photography workshops over 100 days a year around the world, Aaron also enjoys public speaking and presenting slideshows. You can follow Aaron's travels through social media

streams on Instagram, Facebook, YouTube, and Flickr. www.aaronbaggenstos.com

WHAT'S IN AARON'S BAG?

Tripod Heads:

- FG-02 Fluid Gimbal
- BH-40 Ballhead
- BH-25 Ballhead
- RRS Safari Rig
- MH-02 Monopod Head

Accessories:

- Lens Support Pkg,
- Dual Quick Release
- 192 Duo Package
- BD5-L: L-Plate for D5
- MTX Multi-Tool

Sticks:

- TVC-34L Tripod with TA-3 LB
- TVC-24L Tripod with TA-U-LB
- MC-34 Monopod

BLACK AND WHITE PHOTOGRAPHY

STORY AND PHOTOGRAPHY BY
OLIVER KLINK

VISUALIZE IN B&W, POST PROCESS WITH GRANULARITY, PRINT LIKE A MASTER

Black and White (B&W) was once the only means we had to communicate photographically. It was a very romantic medium, eternalized by the likes of Alfred Stieglitz, Edward Weston, Minor White, Henri Cartier Bresson, Yousuf Karsh, Ansel Adams and many more. Today, even with the dominance of color images, especially on social media, monochromatic photography is making a strong resurgence. When properly composed, B&W photos look even more captivating and stunning than their color equivalent, enabling the viewer to focus on the subject, emotion and timelessness of the image.

B&W is easier and simpler to do than ever. Yet, for some, it's just as complicated and difficult as ever. So what do you need to understand in order to produce a great monochromatic image?

CONTINUED >>

Studio View, Santa Cruz Mountains, CA

Shutter Speed: 1/60 sec | F-Stop: f/13 | ISO: 50 | Camera: Hasselblad H4D-50



God's Rays, Myanmar

Shutter Speed: 1/40 sec | F-Stop: f/5.6
ISO: 800 | Camera: Nikon D810

LIGHTING, SHAPES, PATTERNS, AND TEXTURES

A B&W photo breaks these fundamentals down to their basics, and is not hindered by the distraction and complexity that color can sometimes contribute. Elements like trees, fences, roads, and people draw viewers into the photo and lead them to the subject matter. B&W photos are at their most interesting when distinct textures and patterns dominate the image.

BEWARE OF DEAD SPACES

Steer clear of large areas of white or black. Viewers often perceive these parts of the photo as dead spaces that are a distraction from the primary subject.

THE MORE COLORS, THE BETTER THE B&W PICTURE

This is one mistake first-time B&W photographers often make. The scarcity of colors seems like an obvious candidate for the perfect B&W picture. As a rule, scenes that have just two or three colors likely won't look good when converted to

a B&W picture. Dynamic and diverse colors create more depth in an image.

EXPERIMENT WITH FLAT LIGHT

Flat light is the antithesis of directional light. It produces little to no contrast between shadows and highlights and is often viewed as making pictures appear boring, lifeless and dull. Yet, flat light can make for a pretty impressive B&W photo, after adding contrast during post-processing.

TONAL RANGE: BLACK, WHITE, AND MID-GRAY

Having white and black in the image will add interest to a picture, but if other areas do not have a wide range of varying tones of gray, the photo will most likely look dull.

Gray rules. There's just one color in B&W photography that really is interesting: gray. You have one pure black tone and one pure white tone, but there are 253 shades of gray.

Mid-Gray magic. There are many theories why mid-gray tones play an important role in a good B&W photograph, but personally I think you need some neutral ground where the eye can "relax" inside of the frame, instead of looking for a refuge outside of the frame.

VISUALIZE IN B&W

One common mistake is to turn a color image into B&W if the image doesn't work in color. Instead for best result, you need to visualize in B&W. How do you go about it?

Setting up your camera: Picture style — Monochromatic

Squinting: Squinting your eyes minimizes the amount of color your brain processes

Filters: Use filters to emphasize contrast (Yellow filter: make sky darker; Orange filter: enhance contrast between blue sky and clouds; Red filter: produce dramatic images)

Study the Zone System: Formulated by Ansel Adams and Fred Archer back in the 1930's, it forces you to think about exposure and to properly capture high dynamic range scenes. To learn more about the zone system visit rrs.us/AL-Zone-System.

Equipment: B&W photography tends to put you in dramatic weather. Stabilizing your camera with a tripod such as the RRS TVC-34L, the TA-3-LC-HK Leveling Base, the multipurpose gimbal head (PG-02 Pano-Gimbal Head) and the cradle base (RRS PG-CC) enables you to create landscape, portrait, pano and wildlife images without compromises or weight concern.

Camera: If you become an "addict" to B&W, consider an achromatic camera. Camera such as Leica M monochrome or PhaseOne IQ3 Achromatic enhances ISO sensitivity and retain more details in low light.

POST PROCESSING: GRANULARITY IS THE KEY

Unless you have an achromatic sensor, you will need to convert your images to B&W. Adobe Camera Raw has powerful tools (HSL/B&W tab) that allow you to adjust the brightness of eight



PRO TIP

Darks Darker
This is a favorite trick of mine: making the darks darker so the lights appear brighter. By association — and nothing else — when we make darks go darker, the mind just assumes the other elements have to be brighter, even though in reality they are not.

Ancient Farming, China

Shutter Speed: 1/500 sec | F-Stop: f/7.1
ISO: 400 | Camera: Sony A7RII



Old Timers, Kenya

Shutter Speed: 1/100 sec | F-Stop: f/3.4
ISO: 50 | Camera: Hasselblad H4D-50

individual colors. Plug-ins such as Silver Efex (recently purchased by DXO from Google) offers advanced functionality and presets.

The key to producing effective B&W images is to process the image globally first and then keep adjusting locally to redirect the light, emphasize or deemphasize elements and separate tonal range.

Dodging and burning is a technique that comes from the traditional darkroom and is still used digitally. However, this technique is destructive. As an alternative, you can use various blending

BIO: OLIVER KLINK



Oliver Klink is a fine art photographer and educator who travels the world to capture our cultural changes, the environments we inhabit and the insights into our world and ourselves. He was selected as Critical Mass Top 50 Fine Art photographers (2016), "Best of the Best" emerging B&W photographer (2016) by *BWGallerist*, received People's Choice award from *Black and White Magazine* single image contest (2016), 2nd prize in the professional

category at the B&W International Spider Awards Contest (2017) and was published in the *LensWork Magazine* as Top 50 project "Seeing in Sixes" (2017). You can find more information about his workshops at www.incredibletravelphotos.com and view his images at www.oliverklinkphotography.com.

modes, such as Multiply, Screen, Color Dodge, Color Burn, Difference and Soft Light — to accomplish comparable results without harming pixels.

PRINTING: DON'T REST ON YOUR LAURELS

The first print is your "base" print. Hang the print on your wall and use a black pen to mark areas needing improvements. The idea is to get "clean" white and black, and tonal separation for the mid-grays.

Next step is to experiment with various papers, as manufacturers (Epson, Canson, Hahnemühle, Ilford, Museo) keep producing new papers with better Dmax (ability to print true blacks).

Finally, tune your printer. The software/driver used will tremendously improve your prints. Epson has an advanced B&W driver (Epson ABW), Canon released new printers (PRO series) with exquisite black and ColorByte ImagePrint (third party driver) offers a large set of paper profiles and produces excellent prints on a consistent basis.

To produce even "purer" blacks, you might consider replacing your color inks with gray scale inks. The technique, called Piezography, was invented by Jon Cone in the mid 1990's and is the most advanced B&W digital carbon ink printing system.

CONCLUSION

Visit museums, galleries and master B&W photographer studios to be inspired and study B&W techniques. Whether you are a professional photographer or a hobbyist, B&W images are artistic, therapeutic and take you to new depths beyond the decorative role of color. ♦

We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.

FOCUS STACKING

STORY AND PHOTOGRAPHY BY
HEATHER ANGEL

CAPTURING MACRO SHOTS can be exhilarating one moment and frustrating the next. When shooting around life size, details appear that I had not noticed. Other times, I have been disheartened by not being able to achieve the depth of field I wanted for highly three-dimensional flowers.

Everything changed in 2011, when I purchased the RRS B150-B Macro focusing rail to take my first focus stack for my book *Digital Outdoor Photography: 101 Top Tips*. After this, I was hooked and have taken hundreds of focus stacks of flowers as well as fruits, fossils and still life objects.

WHAT IS FOCUS STACKING?

Thanks to digital photography, focus stacking is one of many post-processing techniques now available. It is especially useful for extreme close-up/macro work when maximum depth of field (DOF) is required that cannot be gained simply by stopping down the lens. Focus stacking involves taking a sequence of images, each captured in a slightly different focus plane and blending the focused parts into a single sharply focused frame of an entire macro subject using specialist software. I use Zerene Stacker, but there are several others including Helicon Soft; both allow a 30-day free trial.

An additional bonus is gained as the DOF falls off sharply immediately behind the last frame in the stack — providing an aperture of F/8 or less is used — resulting in the subject popping from the background.



Mexican Cup and Saucer Plant

Shutter Speed: 1/50 sec
F-Stop: f/11 | ISO: 250
Camera: Nikon D4
Lens: Micro-Nikkor 105mm
Focal Length: 105mm
Lighting: Windowlight with reflector | Stack: 52

CONTINUED >>

HOW MANY IMAGES ARE NEEDED TO ACHIEVE A FOCUS STACK?

This will depend on the magnification used, the aperture selected and the depth of field required. Once I resorted to taking just three images outdoors between windy gusts, any more and the stack would have aligned incorrectly. Whereas, a deep Chilean bellflower required 72 images to get everything sharply focused from the top of the fluted bell to the dark lined nectaries in the base.

WHEN TO USE FOCUS STACKING

Focus stacking aids macro photography by enhancing depth of field — combining a sequence of so-called 'slices' by gradually moving the camera closer towards a subject in even increments along the same axis, akin to a CT scan. It is also useful for taking landscapes in low light to avoid motion blur of moving elements, by opening up the aperture and using a faster shutter speed. Focus stacks can be created indoors or outdoors, by day or night.

The essential criteria to create consistent tack sharp stacks are given below:

- › Static subject
- › Lighting level constant
- › Manual focus — initially on the part of the subject nearest to the camera
- › Focusing rail to move the camera forwards at equidistant intervals
- › Don't fill the initial frame — the subject might get cropped by the final shots
- › When using a focus rail, DO NOT REFOCUS THE CAMERA after the first exposure

GEAR FOR CLOSE-UP STACKS

- › Camera
- › RRS L-plate on the camera for speedily changing the format
- › Macro lens
- › Tripod
- › RRS BH-55 Pro with B2 Pro II Clamp

- › RRS B150-B: Macro Focusing Rail
 - › Plamp to steady a stem outdoors
 - › Remote shutter release (cable or wireless)
 - › Simple backdrop for inside photography
 - › Specialized software to stack the sequence such as Zerene Systems and HeliconSoft
- Over the years, I have accumulated a variety of backdrops including black velvet, slate tiles, colored glass, distressed wood, an oak table mat, a bamboo tray, sand and different colored artists' boards.



The focusing rail is clearly marked with a millimeter scale on top each side, but as I stand behind the camera, I find it quicker and easier to use two markers fixed to the black (now silver) advance knob. Self-adhesive tape wrapped around the knob, marked with a red line (visible) and a black line (180° below) for consistently advancing the rail 0.05inch / 1.25mm for a full turn (black to black or red to red) or a half turn (red to black, then black to red). Half turn increments are used when working with smaller subjects at higher magnifications. Once selected, a whole turn or half turn must be maintained throughout the stacks.

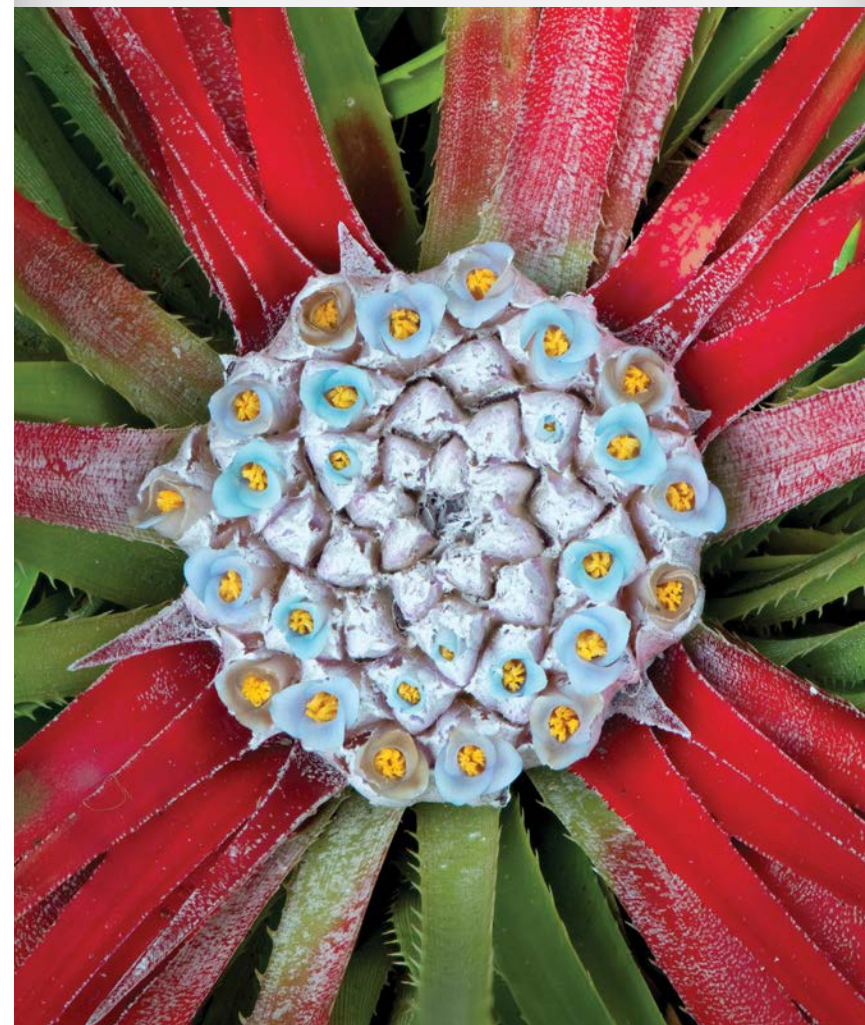
LIGHTING

The type of lighting is immaterial. It can be available light outside, window light inside, flash, LED lights, fiber optics or a lightbox, providing the direction and strength of the light remains constant.

Chilean Bromeliad

This Chilean bromeliad produces a cluster of pale blue flowers in the center of a rosette of leaves that turn red in autumn to attract hummingbird pollinators. Focus stacking is essential to get both the flowers and the red leaves in focus.

Shutter Speed: 1/25 sec | F-Stop: f/10
ISO: 250 | Camera: Nikon D4
Lens: Micro-Nikkor 105mm | Focal Length: 105mm
Lighting: Windowlight with reflector | Stack: 55



Pear Blossoms

Until I took this stack of pear blossom flowers offset by the intact green leaves, I had never appreciated their beauty. A cluster of small flowers may need more frames to complete a stack than a single larger flower.

Shutter Speed: 1/25 sec | F-Stop: f/10
ISO: 250 | Camera: Nikon D4
Lens: Micro-Nikkor 105mm | Focal Length: 105mm
Lighting: Windowlight with reflector | Stack: 70



Ornamental Cabbage

Ornamental cabbages are fun winter subjects. I was outside before the sun rose to capture focus stacks of impressive ice crystals formed by an aerial frost. Warmth from the sun's rays soon melted the ice.

Shutter Speed: 1/3 sec | F-Stop: f/11
ISO: 200 | Camera: Nikon D4
Lens: Micro-Nikkor 105mm | Focal Length: 105mm
Lighting: Available overcast light with reflector | Stack: 30

PRO TIP

It pays to spend time seeking a perfect specimen before investing time in taking a focus stack that may require as many as 50 to 70 frames; since any blemishes in a specimen will spoil a perfectly captured sequence and blended stack.

Sea fan lit by dark field illumination (DFI)

Shutter Speed: 1/320 sec | F-Stop: f/10
ISO: 100 Camera: Nikon D4
Lens: Micro-Nikkor 105mm
Focal Length: 105mm | Stack: 36
Lighting: Two SB-R200 Nikon speedlights



Subjects can be lit from above, the front, side or behind. The structure of a macro subject will guide your lighting. For instance, translucent petals or leaves look stunning when backlit. Even better, with transmitted dark field illumination (DFI) they glow against a black backdrop, while solid subjects are rimlit.

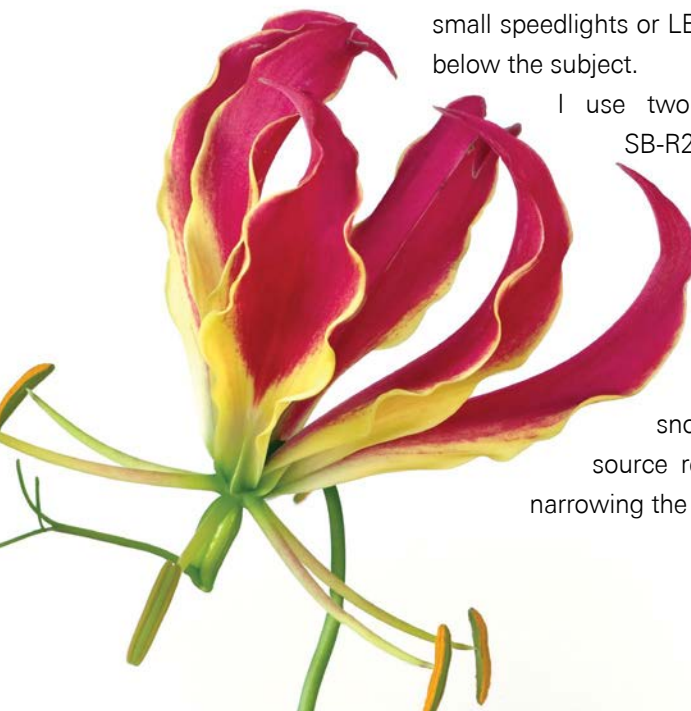
For DFI, the subject needs to be placed centrally on a rectangular piece of clean glass that is supported at each end by either wooden blocks or calculator paper rolls. This raises it above two small speedlights or LED lights. Black velvet is laid below the subject.

I use two small wireless triggered SB-R200 Nikon speedlights directed up towards the center of the subject.

A test shot is fired to check the exposure as well as no hint of flare on the lens. A black paper snoot fixed around each light source reduces the risk of flare by narrowing the beam.

Stunning Gloriosa lily from Africa

Shutter Speed: 1/50 sec | F-Stop: f/11
ISO: 250 | Camera: Nikon D4
Lens: Micro-Nikkor 105mm
Focal Length: 105mm | Stack: 57
Lighting: Windowlight with reflector



SHOOTING A STACK

Attach the focus rail to the tripod head before fixing the camera to the rail. Since all images need to be aligned on top of each other, it is vital there is no movement of the subject from wind or camera shake. Before starting a stack, check tripod legs as well as ball knobs are tight and preferably use a remote shutter release. Also check the camera battery is fully charged and there is plenty of room on your memory card, otherwise changing either may cause the camera to be moved mid sequence. Manual focus needs to be selected and after the camera is precisely focused on the element nearest to the camera no further focusing adjustments need to be made when a focusing rail is used to move the camera forwards. Some people prefer to use live view to check the focus of macro subjects or else shoot with the camera tethered to a computer.

A few times I have been caught out by a bract or some other part projecting forward nearest to the camera and appearing out of focus in the final image. Now I check this by moving from behind the camera to look at the subject from the side before taking one frame to check both the exposure and the focus. Any problems, I delete the shot and start again.

If I see the flower moving during the exposure or an insect crawls out of the flower, I abort the sequence and restart the stack. Electronically controlled macro rails are available, but if the subject moves during capture when you are not watching, it won't be apparent until after the stack has been combined and you will have to start again.

As the camera is moved closer to the subject, each shot is cropped slightly tighter than the previous one. The initial framing needs to include space inside all four sides of the frame, otherwise the subject may end up being clipped on one or more sides.

It is possible to take a stack without a focus rail. I have done this working up a mountain when I like to



Dark field illumination set-up with subject raised up from the table on a sheet of glass.

reduce my load. The camera is fixed to a tripod and the lens manually refocused for each successive shot. However, it is very tricky to precisely judge the distance advanced when refocusing by hand; but with practice it is possible to get a reasonable stack.

Since I have not used any cameras with an in-built focus stacking facility or those with focus bracketing, I cannot comment on them.

WORKFLOW

Captured images are downloaded into a folder with the subject name within a master FOCUS STACKS folder. Shooting RAW images enables me to adjust exposures of individual frames that are mismatched when lit by flash. Once I am happy with the exposures I save them as JPEG files. The more RAM your computer has, the quicker the stack will be completed.

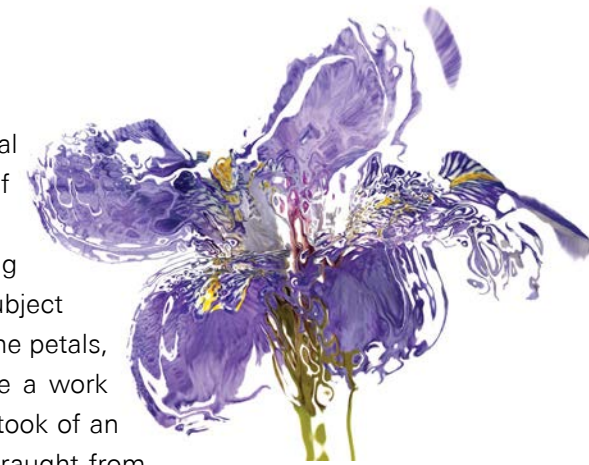
Select Add Files to transfer JPEG images to Zerene Stacker and select stacking program. Two images then appear side by side on the screen. On the left is the current frame being merged; on the right the stacked image gradually builds up from the back to the front of the image. When the stack is complete the image can be saved as a TIFF.

Each focus stack is given an alpha-numeric code; for example, FOCST_265_63 where the prefix denotes it is a focus stack, the first number is the next one available in the focus

stack succession list. The final figure conveys the number of frames in the stack.

Finally, it may be worth looking at stacks where you know the subject has moved or wind has blown the petals, because it might turn out to be a work of creative art! An early stack I took of an Algerian iris indoors, where a draught from an open window moved the delicate floppy petals in many of the 33 frames, resulted in mismatches. The white backdrop was perfect for this stack reminiscent of a glass blower's creation inside a paperweight, which I doubt I would be able to replicate! ❖

We would love to know what you thought of this article! To send us your thoughts, please visit rrs.us/LS3.



Algerian iris abstract created from mismatched images in a stack.

BIO: HEATHER ANGEL



Heather Angel is a British award-winning wildlife photographer, described as 'the doyenne of nature photography' by *Practical Photography*. As a child she developed a passion for nature, which led to a zoology degree. Heather had no ambition to be a photographer but whilst working as a marine biologist, she used a camera to document marine life and a few years later she became a peripatetic freelancer. She has a special interest in close-

up and macro photography and a great passion for China, which she has visited 32 times. Heather is also a prolific writer, with 60 published books and countless articles in wildlife and photography magazines. Solo exhibitions of her work have been staged in the UK, China, Egypt, India and Malaysia. She was President of the Royal Photographic Society from 1984-86 and Nottingham University made her a Professor in 1994. To see more of Heather's work, read her blog, discover her workshops and 1:1 tuition days see:

<http://heatherangelphotography.co.uk/>

Twitter: <http://www.twitter.com/angelantics>

Instagram: <http://www.intstagram.com/heatherangelphotography>

THE CHANGING FIELD OF PHOTOGRAPHY

STORY AND PHOTOGRAPHY BY
ELIA LOCARDI

FROM THE VERY BEGINNING of my career, I've always felt that photography isn't just something you see with your eyes, it's something you feel with your heart. For many years, I have applied this to my photography by approaching the craft with passion while always following my heart. This led me to believe in a symbiotic relationship between what I feel while capturing an image and what someone has the potential to feel when viewing the final result. With every single photograph, this emotional connection with the viewer is something I have strived to achieve in my work.

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The Future is Now, Dubai, UAE

Shutter Speed: 1/8 sec | F-Stop: 1/5.6 | ISO: 200 | Camera: Nikon D700 | Focal Length: 21mm

WHEN A PHOTOGRAPHER BECOMES HIS OWN AUDIENCE

Recently this concept of an emotional connection came full circle when I was standing among 21 large format prints in my first fine art gallery exposition in Sharjah, UAE. When I considered that seven years of my life and some of my most cherished memories were all represented in this one single place I got a bit teary-eyed. Like being engulfed by a wave, emotions started to wash over me as dozens of memories flooded my mind. I began thinking about how much I've changed over the past seven years, how much my experiences as a photographer have made me grow. Shortly after the wave of emotion passed, the technical side of my brain kicked in and I

realized that it wasn't just me that had evolved over the past seven years; the photography industry had also changed dramatically around me.

I looked around my gallery and did a quick count. Out of 21 photos shot over a seven year period, I used eight different cameras along the way to capture them. Printing at 1.5 meters is unforgiving indeed, but as I started to walk around the gallery and really assess the individual image quality, no matter the camera—whether it was a 12mp image from a Nikon D700 or a 50mp image from a Fujifilm GFX 50s—they all had one thing in common. They were nearly all captured using my Really Right Stuff TVC-33S Tripod and BH-55 Ballhead.

Admittedly, this isn't the first time this occurred to me but seeing all of the images hanging together really reminded me how much I've grown to count on the reliability and stability of my tripod. And even as the cameras have improved and my post-processing techniques have evolved over the years, the main reason for the tack sharp images literally rests upon the rigidity of my tripod.

BEGINNING OUR TRAVEL PHOTOGRAPHY ADVENTURE

In 2009, when my wife and I first began traveling full-time for photography, we didn't have any savings or any safety net in place to catch us if we failed. We just followed our dreams of traveling the world and building a sustainable business in the photography industry. Though there was never any guarantee of success, I truly believe that when your passion and dedication to something is strong enough, you can overcome any obstacle in your path.

In March of 2012, we decided to go all-in on our dreams of traveling the world. We sold nearly all of our possessions and became 100% location independent, traveling from place to place and country to country without any home base. It's a lifestyle that we knew would be difficult at times but we decided to embrace both the challenges and rewards as we dove head first into a world of perpetual travel. With no safety net and no backup plan, once again we decided to follow our hearts and trust in our determination to make this lifestyle succeed.

Having a home base has many conveniences. One such convenience is having the ability to



Antelope Canyon

Shutter Speed: 0.6 sec | F-Stop: f/11
ISO: 100 | Camera: Fuji GFX 50s
Focal Length: 23mm

travel home to replace or repair something if it malfunctions, becomes damaged, or worst case, breaks. But flying around 200,000 miles and spanning 20 or more countries per year makes coordinating repairs, shipments, and well, anything else for that matter, extremely difficult and in some countries, impossible. If something we relied on broke, it could literally be months before we could find an opportunity to fix or replace it. That's why we knew that before we hit the road, we'd need to invest in the best and most reliable gear on the planet. Our cameras, bags and tripods would

Shrouded in Mystery, Tiger's Nest, Bhutan

Shutter Speed: 1/300 sec | F-Stop: f/8.0
ISO: 200 | Camera: Nikon D810
Focal Length: 19.1mm | Gear: TVC-3x
Series Tripod and a BH-55 Ballhead





New York Pylons

Shutter Speed: 30 sec | F-Stop: f/11
ISO: 100 | Camera: Fuji GFX 50s
Focal Length: 23mm

need to hold up to the rigorous demands of full-time travel.

I've always felt that when you make an investment in photography products, you're also making an investment in the people who create them and in a sense, you're also placing your trust in their commitment to both their own products and the photography community itself. For this reason, Really Right Stuff immediately stood out to me. Not only do they use the best possible materials from end-to-end, from design to manufacturing, every single piece is created and machined in the USA. This gives an ultimate level of quality control. After some research into which tripods would serve us best, we knew that these products would stand the test of time and we chose a TVC-33S and a TVC-24 four section tripod.

THE EVOLUTION OF MIRRORLESS AND TRIPODS

I remember having a conversation with Joe Johnson Jr. at Really Right Stuff when they were in the middle of designing a travel clamp solution and he said something that has always stuck with me. When talking about the current design and where they would like to take it, he said "there is room for excellence here," and

that's what they are always striving to achieve. It made me understand that they don't only want to design good products, they want to design the best possible products. That's a tremendous commitment to the photography community, and as mirrorless cameras began to hit the market, I was delighted to consult with them on some exciting new gear.

My photography style has a strong emphasis on blending multiple exposures and different moments in time together into a single photograph. Before I switched to compact mirrorless cameras—back when my primary camera body was a full-size DSLR—the combination of weight, vibration and mirror shock, paired with the necessity of zero motion or vibration between shots and exposures for seamless post-processing and blending, perpetuated the need for the most stable tripod I could find. In this case, the answer was the TVC-33S.

Don't get me wrong, I love my full-size Really Right Stuff TVC-33S, but since cameras have become more compact and since mirrorless systems have no mirror shock, I now only need it for certain situations. For 95% of my shooting these days, I've been able to substitute it for the ultra compact TQC-14. In tandem—since I save quite a bit of weight with the ultra compact tripod—I also carry a portable PG-01 that allows me to capture panoramic images that always stitch together perfectly in post.

With the new lightweight tools available, the possibilities for shooting in different environments—even some that may not allow tripods—increases dramatically. And one of my favorite tools I use is the TFA-01 Ultra pocket tripod that works incredibly well on any flat or semi-level surface. Believe it or not, this compact tripod is even stable enough to support my Fujifilm GFX 50s Medium Format camera.



Frozen in Time

Shutter Speed: 15 sec | F-Stop: f/8.0
ISO: 64 | Camera: Nikon D810
Focal Length: 14mm | Gear: TVC-3x Series Tripod and a BH-55 Ballhead

My other favorite and must-have piece of Really Right Stuff gear is the Multi-Clamp. Essentially, it allows me to shoot in locations where tripods are either forbidden, or there is no possible way for a tripod to be set up at all. This has become my go-to device for rooftops, railings, and balconies. A combination of a Multi-Clamp and a TFA-01 Ultra never leaves my camera bag as I find it extremely useful almost everywhere I go.

A GREAT NEW WORLD OF POSSIBILITIES AHEAD

With the ongoing evolution of both the cameras and tools that support them, I can't think of a more exciting time to be a photographer. It's refreshing to know that there are companies like Really Right Stuff who continue to shape and improve our ability to capture any type of location, with any camera system, and give us the potential to come away with the sharpest images possible.

With how much the industry has changed in the relatively short time since I began my journey as a photographer, I can only imagine how much more evolution we're going to see in the years to come. My goals remain constant—always

put my passion for photography first, follow my heart, and embrace the exciting times ahead. [↔](#)

We would love to know what you thought of this article! To send us your thoughts, please visit [rrs.us/LS3](https://www.reallyrightstuff.com/rrs-us/LS3).

BIO: ELIA LOCARDI



Elia Locardi is an internationally acclaimed professional travel photographer, videographer, writer, public speaker and highly skilled educator who spends his life shooting some of the most beautiful locations in the world. Since he began traveling full-time in 2009, he has visited more than 55 countries, flown over one million miles, and collaborated with major companies, brands, countries, and tourism agencies all over the world. In addition, many of

his photos have been used in some of the most widely circulated publications in the world including National Geographic.

As featured by *Professional Photographer Magazine*, CNet Australia, Wacom USA, SmugMug Films and Fstoppers, Elia has built an engaged social media following of nearly 3 million people. And throughout the journey, he shares the Art of Photography on many different websites including his own, elialocardi.com, teaches post-processing workshops worldwide, speaks at major international photography conventions and is one of the founders of Dream Photo Tours. elialocardi.com



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