

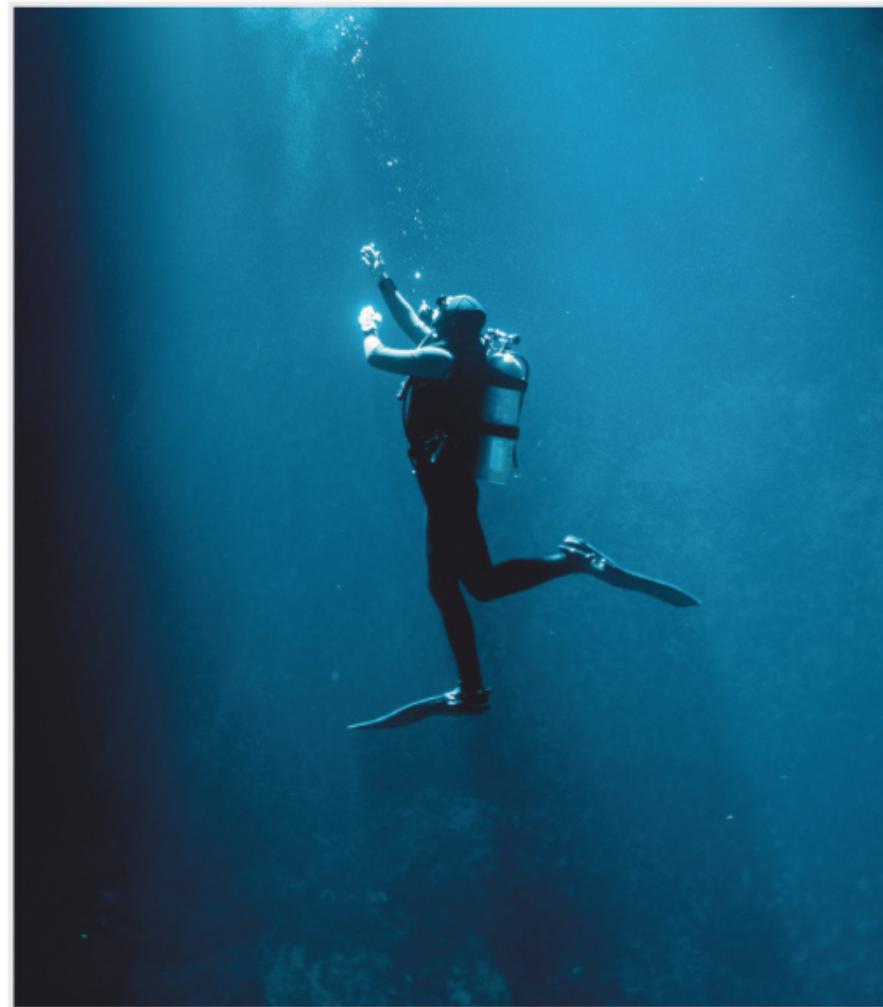


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## FALL COLOR FUNDAMENTALS

10 WAYS TO  
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*like a PRO*

MASTER *the*  
ART *of* LIGHT

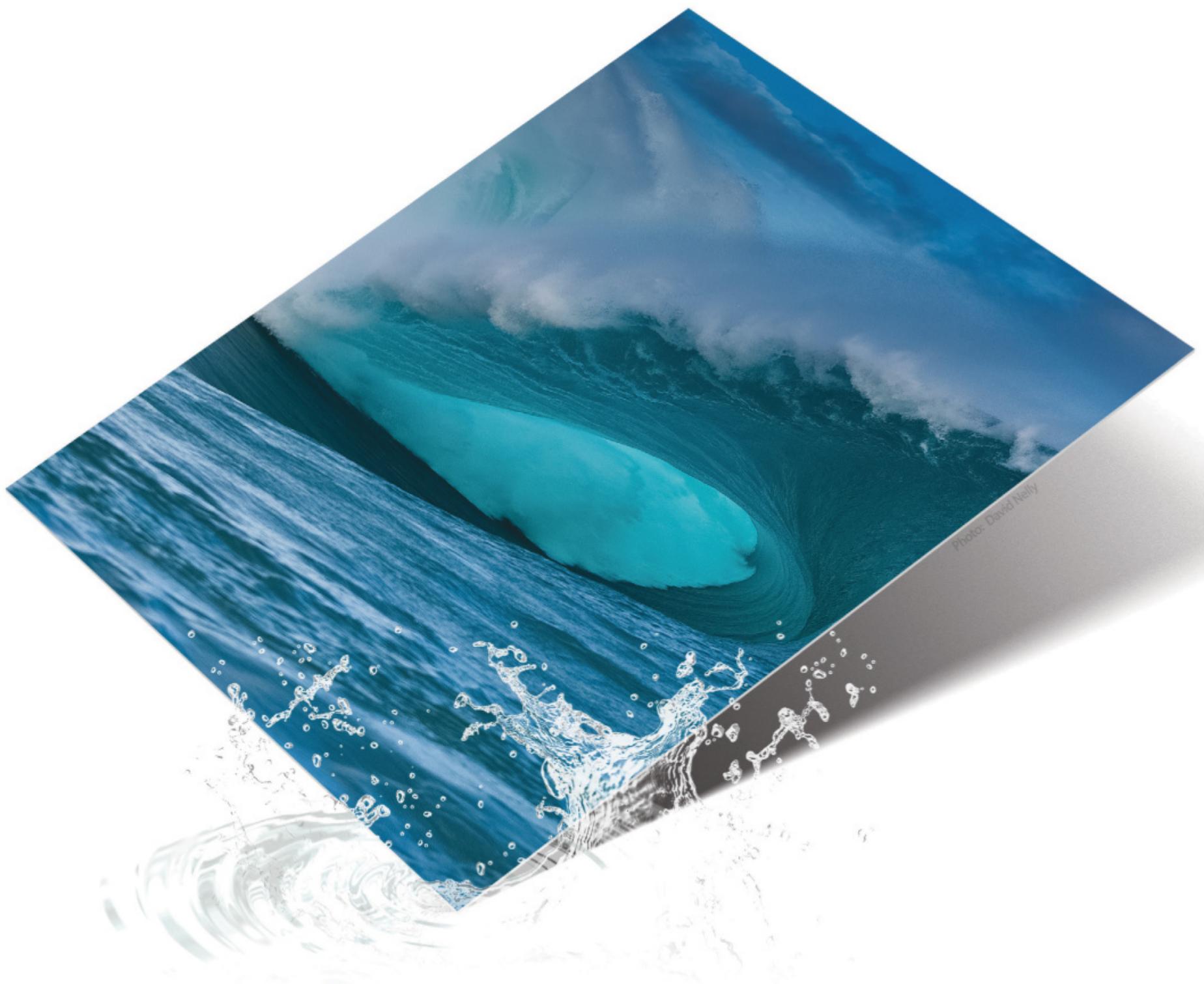


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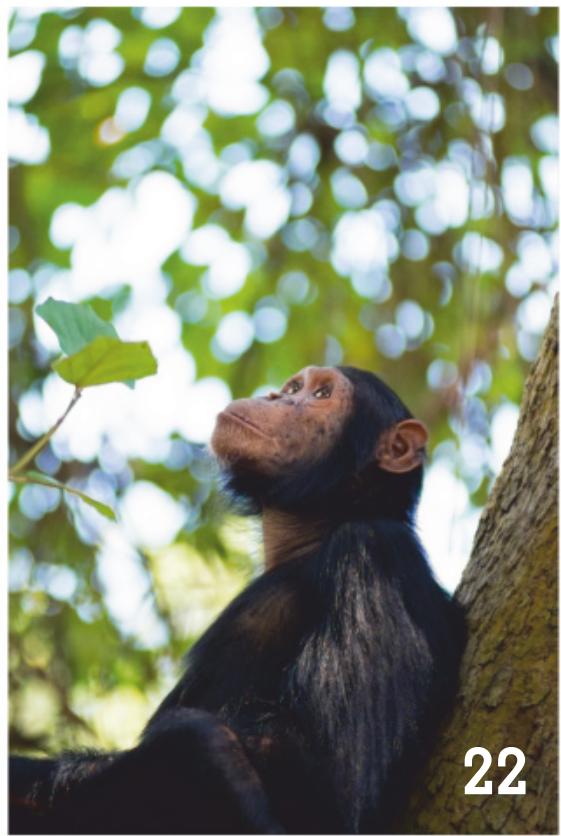
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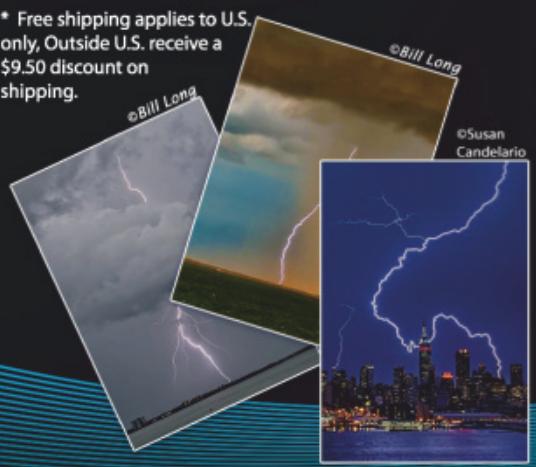
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## cover shot



**Photographer:** Kevin McNeal

**Location:** Denali National Park & Preserve, Alaska

**Equipment:** Canon EOS 5D, Canon EF 17-40mm f/4L USM

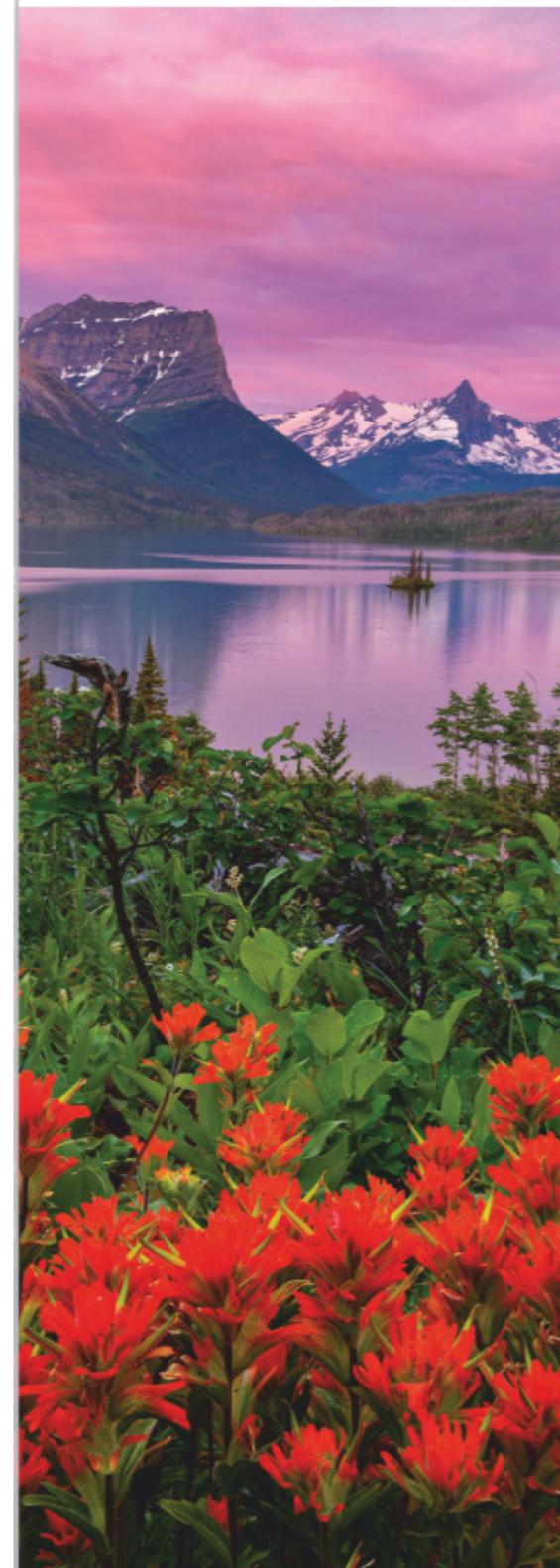
**Situation:** I had always dreamt of photographing Alaska and, more specifically, Denali National Park in autumn. As a child, I had seen images of the larger-than-life mountain. I realized from research on Denali that the peak didn't always make an appearance. It wasn't unusual to not see the mountain for several weeks. Armed with this knowledge, I promised not to get my hopes too high.

As I entered the Wonder Lake campground, the outdoor enthusiasts I met were disenchanted, as the mountain had not been out in weeks. Early that next morning, I woke to the sounds of joyous shouts that the mountain had emerged. I joined the lucky few other photographers as we made our way to the ridge above Wonder Lake. As first light appeared, I saw the first glimpses of the elusive Denali Peak and the dazzling display of red autumn tundra at my feet. The warm bearberry carpeted the valley as far as the eye could see.

I positioned myself at the top of the ridge and framed the view to include Wonder Lake leading into Denali mountain. Having a colorful foreground brought the image together. The icing on the cake was the captivating clouds that balanced the overall scene. It was an autumn morning I shall not forget.

— Kevin McNeal

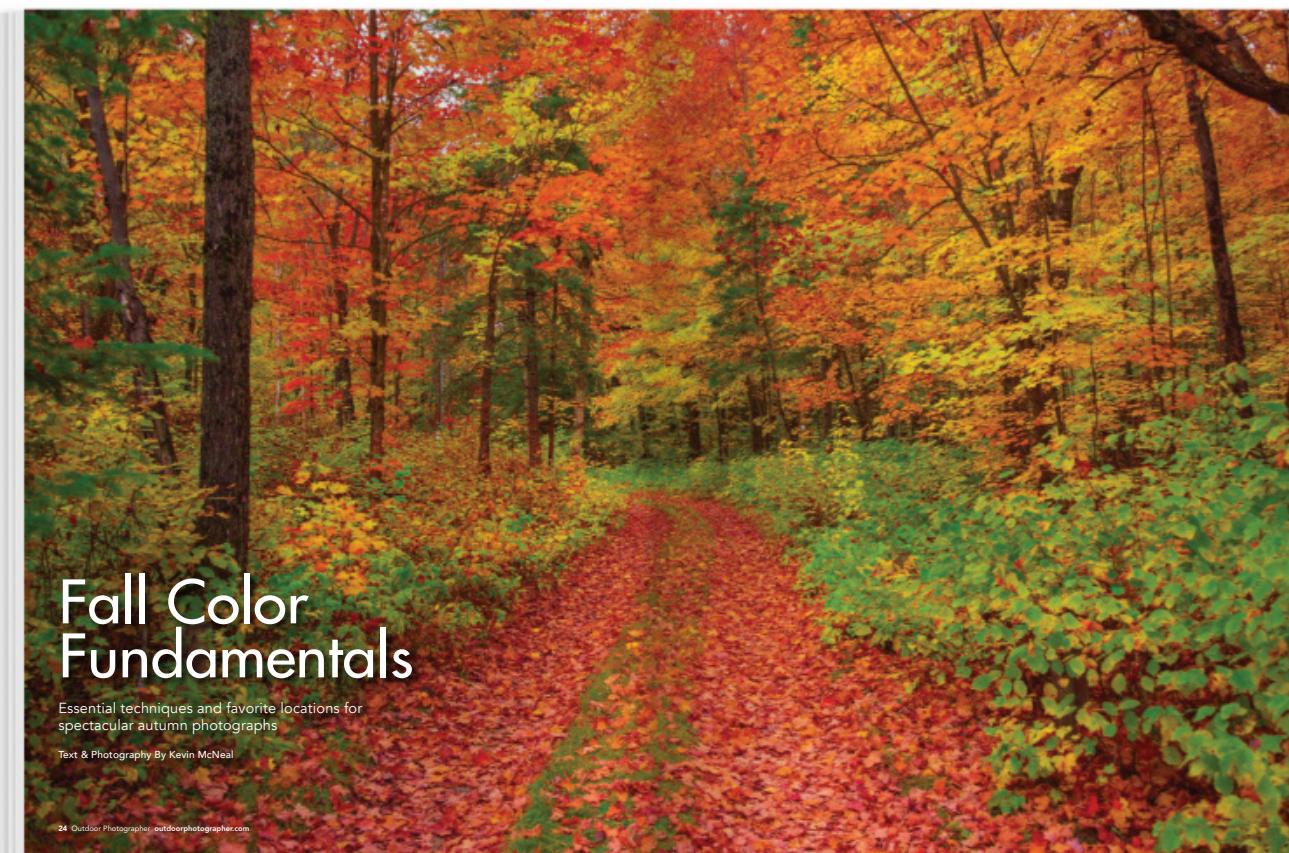
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Image by John Weatherby



## Fall Color Fundamentals

Essential techniques and favorite locations for spectacular autumn photographs

Text & Photography By Kevin McNeal

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Throughout what has been a difficult year for all of us, one thing that has brought me comfort is the reliability of nature. The birds singing in the trees are blissfully unaware of worrisome headlines in the news. A soft breeze on a calm, cool morning is quite literally the breath of fresh air that can reorient us to our place in the natural world and remind us to be present in the moment.

By the time this issue arrives in your hands, fall will be upon us with its shorter days, moody weather and stunning foliage color, changes that remind us of nature's clockwork and that make this a favorite time of year for photographers. In "Fall Color Fundamentals," **Kevin McNeal** shares his top tips to capture the bold hues and atmosphere of the season, as well as recommended destinations for autumn photography. His list of locations

includes places you might not immediately think of, including Denali National Park in Alaska, where McNeal made the image featured on this issue's cover (see "Cover Shot" for the story).

Once you've mastered the fundamentals, creating fall color photographs that move beyond the "I was there" stock photo takes a certain mindset and patience. To make a deeper study of your subject, **Jonathan Irish** introduces us to the idea of "Dancing Around The Teacup," a concept he picked up while working as a photographer for *National Geographic*. We'll let Irish explain, but the core idea is to explore a variety of creative approaches to a subject or scene and not simply settle for a photograph of your first observations. In his article, Irish illustrates 10 techniques you can use to push through the obvious compositions

to arrive at a portfolio of fall color photographs with a variety of perspectives on the season. And while the focus of the article is on autumn foliage, the strategies Irish explains apply to photographing any season or subject.

At the foundation of every successful photograph is an awareness of light. Most of us have an instinctive appreciation for the qualities of light that will make a visually striking image. We recognize good light when we see it—but translating what's in front of our lenses to a final image that faithfully records the spectacle is where a technical understanding of the medium

is very important. In the first article of a three-part series titled "The Art Of Luminosity," **Marc Muench** begins by recounting the origins of digital photography as we know it and the basic components of a digital image. He explains grayscale, histograms and dynamic range, the limitations of digital camera sensors and methods for overcoming those limitations. In subsequent issues, Muench will continue with a discussion of pre-visualization and post-processing practices to help you create images that better express what inspired you to take them in the first place.

Whether you're planning a colorful photo adventure or remaining close to home this fall, we hope you'll experience some time in nature to reset—and find some remarkable light.

—Wes Pitts, Editor

## contributors



Based in Washington state, **Kevin McNeal** focuses on grand, colorful landscapes that reflect the most unique places on Earth. His award-winning images can be seen in galleries and showings across the United States. See more of his work at [kevinmcnealphotography.com](http://kevinmcnealphotography.com).



**Jonathan Irish** specializes in documenting adventure, landscapes and cultures at home and abroad with a keen eye on highlighting important conservation issues. Irish has photographed on assignment on all seven continents and in over 80 countries. See more of his work at [www.jonathanirish.com](http://www.jonathanirish.com).



**Marc Muench** is a renowned landscape photographer, following in the tradition of his grandfather Josef Muench and father, David Muench, with numerous book titles and publication credits to his name. He also runs photography workshops around the world. See more of his work at [marcmuench.com](http://marcmuench.com).



## Autumn Heron By Jody Partin

"Not far from the bustle and traffic of Northern Virginia sits a quiet haven of nature among the backwater of the Potomac River. Crow's Nest Natural Area Preserve occupies a small peninsula just east of the town of Stafford. As a new resident to the area, I was excited to explore this region's waterways by kayak. "On this cloudy morning, I discovered a great blue heron surveying its surroundings. I maneuvered so the bird was backdropped by autumn foliage and snapped the photo while the camera was balanced on my knee. I felt blessed that this beautiful creature was undisturbed by my presence, allowing me to capture such a peaceful moment."

► Nikon D810, AF-S NIKKOR 200-500mm f/5.6E ED VR at 500mm. Exposure: 1/1000 sec., f/5.6, ISO 800.

See more of Jody Partin's work at [jody-partin.pixels.com](http://jody-partin.pixels.com).



## Teton Fire Light By Harry Lichtman

"The Snake River in Grand Teton National Park provides many compositional opportunities to capture the grandeur of the iconic peaks with reflections and vibrant fall foliage. I waded into the shallows numerous times as sunset approached during a week in the park, waiting to see what light might develop. After several attempts, I caught some rosy light bouncing off the clouds that was strong enough to tint the landscape as well—special light to match one of America's national treasures. A single RAW image was processed twice, optimizing highlights and shadows, then merged in post-processing."

► Nikon D810, AF-S NIKKOR 16-35mm f/4G ED VR at 21mm, Gitzo Traveler Series 2 tripod, Really Right Stuff ballhead. Exposure: 1/10th sec., f/16, ISO 200.

See more of Harry Lichtman's work at [harrylichtman.com](http://harrylichtman.com).

## Norway Lights

### By Harry Lichtman

"Norway is known for its wild camping policy and concept of 'Allemannsretten' (freedom to roam). I found this Lofoten ridge in the early fall with dramatic views toward the western mountains of Moskenesøya. A 20-second self-timer was used to trigger the base exposure, then a shorter exposure to retain the brightest details of the sky. A final exposure using the thin profile of my lens cap eliminated lens flare that degraded the two previous exposures. I manually layered and merged the three images in post-processing. The late-afternoon light coupled with the openness and wild views that the ridge provided made for an unforgettable evening."

► Nikon D810, Tamron SP 15-30mm F/2.8 Di VC USD G2 at 15mm, Gitzo Traveler Series 2 tripod, Really Right Stuff ballhead. Exposures: 1/15 sec. and 1/60th sec., f/13, ISO 64.





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## new gear & tech

### CANON EOS R SYSTEM EXPANDS, PLUS NEW PRO PRINTER

Canon has introduced several new products since our last issue, starting with two new EOS R full-frame mirrorless cameras, the **EOS R5** and **EOS R6**. The 45-megapixel EOS R5 becomes the new flagship of the EOS R lineup and offers impressive still and video capabilities. The 20.1-megapixel EOS R6 includes many of the technology features of the EOS R5 in a similar body design, with the primary differences being still and video resolution.

Both cameras have speedy continuous shooting capabilities. They can capture 12 fps using their mechanical shutters or up to 20 fps with the silent electronic shutter, ample for fast-moving sports and wildlife subjects. They're also the first cameras to include Canon's Dual Pixel CMOS AF II, which covers approximately 100 percent of the AF area with 1,053 automatically selected AF Zones. New AF algorithms, "deep learning" technology and advanced subject tracking enable the cameras to follow humans, dogs, cats and even bird eyes—a bonus for wildlife photographers who enjoy the challenge of photographing birds in flight.

Also included in both cameras is a 5-axis In-Body Image Stabilizer system that can coordinate with the Optical Image Stabilizer in compatible Canon RF lenses, enabling up to 8 stops of correction depending on the lens used.

One difference between the two models is the resolution of their viewfinders and LCD displays. The EOS R5 has a 3.2-inch, 2.1-million-dot LCD and a 0.5-inch OLED EVF with 5.76-million-dot resolution. The EOS R6 has a slightly smaller LCD at 3.0 inches with 1.62 million dots and a 0.5-inch OLED EVF with 3.69-million-dot resolution. Though there's a difference in resolution, both EVFs have a refresh rate of 119.88 fps, and both LCDs are "vari-angle" design and have touch-screen capability.

Another difference is found in the cameras' recording media options. The EOS R5 has dual slots, one CFexpress and one UHS-II SD, while the EOS R6 has dual UHS-II SD. The inclusion of the CFexpress card slot in the EOS R5 is needed to support the camera's uncropped 8K RAW internal video recording capabilities at frame rates up to 29.97 fps. The EOS R6 offers 4K video at up to 59.94 fps.



**EOS R6**



**EOS R5**



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| 11-18mm F4.5-5.6-439.95 | 11-18mm F4.5-5.6-439.95                   | 10-24mm F3.5-4.5-49.95               | 17-50mm F2.8 .....               |
| 16mm F1.4 .....         | 849.00                                    | 18-200mm F3.5-6.3-159.95             | 18-250mm F3.5-6.3-414.95         |
| 16mm F1.4 .....         | 399.00                                    | 18-270mm.....                        | 398.95                           |
| 30mm f1.4 .....         | 289.00                                    | 18-250mm F3.5-6.3-414.95             | 19-35mm F3.5-4.5-159.95          |
| TOKINA                  | 16-28mm F2.8 .....                        | 748.00                               | 20-40mm F2.7-3.5-298.95          |
|                         | 300mm F6.3 .....                          | 299.95                               | 24-135mm F3.5-6.6-398.95         |
|                         | 10-17mm F3.5-4.5-444.95                   | 17-35mm F4 .....                     | 28-105mm F2.8 .....              |
| KENKO TELECONVERTER     | 11-16mm F2.8 .....                        | 564.95                               | 28-75mm F2.8 .....               |
| SAMYANG/ROKINON/BOWER   | 12-24mm F4.0 .....                        | 424.95                               | 28-80mm F3.5-6.6-294.95          |
|                         | 16-50mm F2.8 .....                        | 594.95                               | 30-300mm F3.8-5.6-584.95         |
|                         | 1.4x-99.95 1.5x-84.95 2X-129.95 3X-219.95 | 50-135mm F2.8 .....                  | 70-300mm F4.5-6.6-329.95         |
|                         | 3.5mm F3.5-299.00                         | 58-100mm F4.0 .....                  | 55-200mm F4.5-6.6-128.95         |
|                         | 35mm F1.4-499.00                          | 80-400mm F4.5-6.6-638.95             | 75-300mm F4.5-6.6-128.95         |
|                         | 500mm mirror...119.95                     | 120mm F2 Macro .....                 | 70-200mm F2.8 .....              |
|                         | 24mm F1.4-6699.00                         | 10-24mm F3.5-4.5-458.99              | 664.95 200-500mm F6.3-7.5-789.95 |
|                         | 650-1300mm F8-16 Zoom Lens...279.99       | 1.4X Converter...124.95              | 10-24mm F3.5-4.5-458.99          |
| CINE LENSES             | 8mm T3.8-329.00                           | 28-Tele Converter...138.95           | 2X Tele Converter...138.95       |
|                         | 14mm T3.1-449.00                          | 1.4X SP Converter...178.95           | 2X SP Converter...208.95         |
|                         | 24mm T1.5-549.00                          | 150-600mm F5.6 for \$999.99          |                                  |
|                         | 3.5mm T1.5-549.00                         | 50-2.8 HM Super Angulon.....         |                                  |
|                         | 35mm T1.4-499.00                          | 90-4.0 HM Makro-Symmar.....          |                                  |
|                         | 500mm mirror...119.95                     | 120-5.6 HM Aspheric Apo-Digitar..... |                                  |
|                         | 24mm F1.4-6699.00                         | 349.99                               |                                  |
|                         | 35mm T1.5-549.00                          | 349.99                               |                                  |
|                         | 8mm T3.8-329.00                           | 349.99                               |                                  |
|                         | 14mm T3.1-449.00                          | 349.99                               |                                  |
|                         | 24mm T1.5-549.00                          | 349.99                               |                                  |
|                         | 3.5mm T1.5-549.00                         | 349.99                               |                                  |

## TOP SECRET

1.4x-99.95 1.5x-84.95 2X-129.95 3X-219.95

500mm mirror...119.95

24mm F1.4-6699.00

3.5mm T1.5-549.00

35mm T1.4-499.00

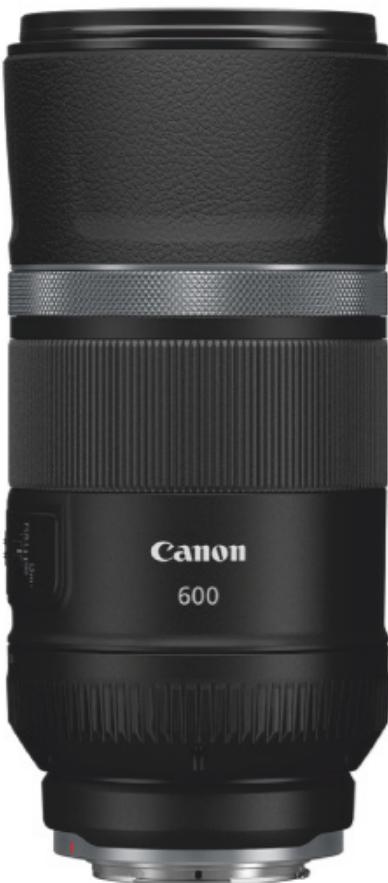
500mm mirror...119.95



**RF800mm F11 IS STM**



**RF85mm F2 MACRO IS STM**



**RF600mm F11 IS STM**



**Extender RF 2x**



**Extender RF 1.4x**



**imagePROGRAF PRO-300**

The EOS R5 is priced at \$3,899 for the body only or in a kit with the RF 24-105mm F4 L IS USM lens for \$4,999. The EOS R6 is priced at \$2,499 for the body only. Two kits are also offered: the EOS R6 and RF 24-105mm F4-7.1 IS STM lens kit for \$2,899, and the EOS R6 and RF 24-105mm F4 L IS USM lens kit for \$3,599.

Along with the introduction of the Canon EOS R5 and EOS R6 cameras, Canon also announced four new lenses and two teleconverters for the EOS R full-frame mirrorless system. Three of these new lenses will be of particular interest to wildlife and sports photographers.

First up is the **RF100-500mm F4.5-7.1 L IS USM**, a tele zoom that's likely to be a very popular model because of its versatile range. Paired with the RF24-105mm F4 L IS USM or RF24-105mm F4-7.1 IS STM, you can cover a focal length range from 24mm to 500mm with just two lenses. As an L-series lens, the RF100-500mm F4.5-7.1 L IS USM features extensive weather sealing, and the Optical Image Stabilizer provides up to 5 stops of correction. The lens can focus as close as 3 feet. It's also compatible with two new teleconverters for EOS R, the **Extender RF 1.4x** and **Extender RF 2x**.

The RF100-500mm F4.5-7.1 L IS USM is expected in September with a list price of \$2,699. The Extender RF 1.4x and Extender RF 2x are priced at \$499 and \$599, respectively.

Arguably the most interesting new

lenses are the **RF600mm F11 IS STM** and **RF800mm F11 IS STM**. They're fixed-aperture, Diffractive Optics models, and while the single *f*/11 aperture is a limitation, the trade-off gets you incredibly lightweight, compact and affordable super-tele lenses. Both feature a collapsible design that shrinks their length considerably for packing and extends when shooting.

The RF600mm weighs just 2 pounds and is 7.85 inches in length when retracted. The RF800mm weighs 2.8 pounds and is 11.1 inches in length when retracted. Compare that to Canon's EF 600mm (6.7 pounds and 17.6 inches in length) and EF 800mm (18.1 inches, 9.9 pounds) primes—both of which are priced at \$12,999—and the benefits of RF600mm and RF800mm, priced at just \$699 and \$899, are very intriguing, despite the fixed aperture. For wildlife photographers who are priced out of typical super-tele primes, this is a potential game changer.

Rounding out Canon's lens introductions is the **RF85mm F2 MACRO IS STM**. With a popular focal length for macro work due to the working distance afforded, the lens isn't a true 1:1 macro but does provide 0.5x magnification and a minimum focusing distance of 1.15 feet. It also has Optical Image Stabilization for up to 5 stops of correction and a Hybrid IS function that anticipates the correction needed for close-up work. It will be available in October for \$599.

In addition to the EOS R system releases, Canon also debuted a new professional desktop photo printer, the **imagePROGRAF PRO-300**. It's very similar to the PRO-1000 introduced a few years ago in terms of design and print head technology. This is a slightly smaller 13-inch printer compared to the 17-inch PRO-1000 and can produce standard print sizes up to 13x19 inches, including borderless prints and a 13x39-inch panorama. In standard print mode, a bordered 13x19-inch print can be had in just over four minutes (though at the

highest print quality setting, times can be much longer).

The printer has a pigment-based LUCIA PRO 9-color plus Chroma Optimizer ink set and, like the PRO-1000, features dedicated channels for each ink color, so there's no hassle or waste of ink when switching between matte and photo black inks to match your

selected paper. The ink set includes a newly formulated matte black ink, which Canon states is capable of greater black density. It also has the smart nozzle technology of the PRO-1000, which automatically detects clogged nozzles and compensates by adjusting the flow of nearby nozzles. List price: \$899. **Contact:** Canon, usa.canon.com.

Thomas Chu, China

**Haida**

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## new gear & tech



### FAST ULTRA-WIDE ZOOM

The **Sony FE 12-24mm F2.8 GM** is the world's widest zoom, with a constant *f*/2.8 maximum aperture. It includes several noteworthy advances in optical design and is an ideal choice for landscape and astrophotography work.

The FE 12-24mm F2.8 GM is the 11th in Sony's G Master premium lens range, which now covers focal lengths from 12mm to 600mm. To achieve a zoom as wide as 12mm with a constant *f*/2.8 maximum aperture, the lens incorporates three XA lens elements, one of which is the largest ever made for a Sony Alpha lens. The size and curvature of that element required Sony to develop a new lens coating, Nano AR Coating II, to control internal reflections, flare and ghosting.

The optical design features two independent focusing groups that make it possible to focus on objects as close as 11 inches throughout the zoom range. The lens also incorporates extensive weather sealing. List price: \$2,999. **Contact:** Sony, sony.com.

### ALL-IN-ONE ZOOM FOR SONY

Tamron has been a leader in the all-in-one zoom category for many years, with several models released for Canon and Nikon DSLRs. More recently, with the growing popularity of Sony's mirrorless system, Tamron has been expanding its Di III series lens offerings for Sony full-frame, which now includes four zooms and three primes. The latest is the **28-200mm F/2.8-5.6 Di III RXD** (Model A071). This is the first all-in-one zoom in the Di III series for full-frame Sony E-mount, and it can also be used with APS-sensor Sony cameras, providing an equivalent range of 42-300mm. All-in-one zooms are a great choice when you want to carry a single lens that can handle most photo opportunities, making them ideal travel and "walk-about" lenses. List price: \$729. **Contact:** Tamron, tamron-usa.com.



**100-400mm F5-6.3  
DG DN OS**

### TELE ZOOM & TELECONVERTERS FOR L-MOUNT

Sigma's fifth "DG DN" lens in its growing lineup for full-frame mirrorless cameras is the **100-400mm F5-6.3 DG DN OS**. It's available in both L-Mount (developed jointly by Sigma, Leica and Panasonic) and Sony E-Mount. The third zoom in Sigma's DG DN series, it joins the 14-24mm F2.8 DG DN Art and 24-70mm F2.8 DG DN Art. Together, these lenses cover a range that will accommodate most outdoor photographers' needs, but for wildlife and sports shooters who want more telephoto reach, Sigma has also introduced two teleconverters for the system, the **1.4x TC-1411** and **2x TC-2011**.

The 100-400mm F5-6.3 DG DN OS is priced at \$949. The 1.4x and 2x teleconverters are priced at \$399 and \$429, respectively. Along with the new lens and converters, Sigma also introduced the **USB Dock UD-11** for Sigma L-Mount and Canon EF-M Mount Sigma lenses, an accessory that allows you to update lens firmware and customize lens settings easily. List price: \$59. **Contact:** Sigma, sigmaphoto.com.



**1.4x TC-1411**



**2x TC-2011**



**SureColor P700**

#### **NEXT-GENERATION SURECOLOR**

Epson's two new desktop photo printers, the **SureColor P700** and **P900**, are aimed primarily at serious photo hobbyists but are sophisticated enough to be an option for pros as well. The key difference between the two models is their maximum print sizes. The SureColor P700 can make prints up to 13 inches wide, and the SureColor P900 increases that to up to 17 inches wide. These models replace the SureColor P600 and P800, released in 2015. Both can accommodate cut-sheet and roll papers.

One of the noteworthy upgrades of these models is a 10-channel print head that includes dedicated channels for Photo (glossy) and Matte Black inks. Previously, switching between Photo Black and Matte Black required physically swapping the cartridges, a process that was somewhat time consuming and wasted ink. The new Epson 10-color UltraChrome PRO10 pigment ink set adds a violet ink, and though testing is still ongoing, Epson expects that the longevity ratings will be similar to that of its UltraChrome PRO12 inks used in large-format professional printers.

Another improvement of the P700 and P900 compared to their predecessors is a 30 percent reduction in the size of the printers, a nice benefit if you have limited space in your home studio or office. They're priced at \$799 for the SureColor P700 and \$1,295 for the SureColor P900. **Contact:** Epson, [epson.com](http://epson.com).



**SureColor P900**

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## Owl Creek Pass

Uncompahgre National Forest, Colorado

Text & Photography By Peter Coskun

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### Location

Owl Creek Pass is located in the Uncompahgre National Forest of southwestern Colorado. Surrounded by the Cimarron Range, which towers above groves of aspen, spruce, firs and scrub oak, this area is surely one of the most scenic in Colorado. Travelers passing through Ridgway can access this area by taking County Road 8, which is adjacent to the Ridgway Reservoir, all the way to the pass. Those coming from the north can access the area through Cimarron Road off of U.S. Route 50. Those accessing from Cimarron Road should note that it turns into County Road 858. Take this past Silver Jack Reservoir until you come to County Road 861, which will split to the right. Take this as you cross over the East Fork of the Cimarron River and come to a "Y" intersection. Keep right to veer onto County Road 860 as it twists and turns around Turret Ridge, taking you high up to Owl Creek Pass itself. Both routes are well-maintained gravel roads suitable for any vehicle in good weather. Use caution and high-clearance four-wheel drive if there's inclement weather in this area.

### Weather

Due to the high elevation of this mountain pass, the road to Owl Creek Pass is closed during the winter months by heavy snow. From late spring to fall, you can experience almost any weather conditions. Snow, hail, thunderstorms, rain and thick fog can occur any time of the year here. Temperatures can vary from the 90s in the summer months to the low teens in the fall and winter. During fall, temperatures average in the mid to low 60s during the day, making it comfortable for hiking around the forests. At night, expect the temperatures to drop to near freezing. Always be prepared for any kind of weather here, as with any mountainous area. Conditions can change at a moment's notice.

### Photo Experience

One might expect this area to be crowded with large groups of photographers; however, compared to many other areas of southwest Colorado, it's possible to find plenty of places to photograph by yourself. Roadside shooting offers many options for those who prefer not to hike.

Lenses ranging from 16mm all the way to 600mm focal lengths can be useful to photograph grand vistas, intimate forest scenes and even the occasional wildlife like elk and bears. My preferred lens while exploring this area was my 70-200mm. Even at 70mm, I was able to photograph some grand vistas and the colorful swaths of autumn foliage on the mountainsides.

Getting off the beaten path is easy as well with trails to take you up into the mountains and wilderness areas. There's certainly no shortage of options for outdoor photographers in this area.

OP

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See more of Peter Coskun's work at [pjcpotography.com](http://pjcpotography.com).



► Canon EOS 6D, Canon EF 70-200mm f/4L USM at 70mm. Exposure: 1/250 sec., f/6.3, ISO 400.



COLORADO



### Best Times

While late spring and summer can provide lush green forests and beautiful wildflower blooms, fall certainly seems like the best time to photograph and explore this area. With a rainbow of colors changing in early October and the mountains rising high above it all, it really is a picture-perfect time to be here. Aspen colors can range from lime green to red in some areas and create beautiful contrasts with those cloudy blue skies or, if you're lucky, a vibrant sunrise or sunset. The scrub oak on their own provide a pretty spectacular show as well with orange, yellow, red and green intertwined with groves of aspens and even cottonwoods. With comfortable afternoon temperatures and the crisp autumn evenings, fall is my favorite time to be there.

**Contact:** U.S. Forest Service, [fs.usda.gov/detail/gmug](http://fs.usda.gov/detail/gmug).



# Nature First

It's more important than ever for photographers to approach wild places with a sense of responsibility and stewardship

Text & Photography By William Neill

**T**he world is spinning out of kilter all around us lately, and my favorite survival strategy to keep my life in balance is to seek out the beauty of nature. What better time to balance out the craziness by taking a walk in the woods or strolling along a quiet stretch of shoreline by a lake or the sea.

Hopefully you have a bit of nature that is accessible nearby, and if not, perhaps bring home some flowers from the grocery store. Don't worry about making photographs, but maybe have your camera nearby, just in case inspiration hits. The key to getting into the creative flow is to absorb the experience without the pressure to perform, to click the shutter. But if you find a photograph to make, do it for your soul, not "likes." I have two windows in my dining room that provide excellent soft light for still life imagery.

One major "out of kilter" issue for planet Earth right now is our environment. As I've mentioned here before, my college degree is in environmental conservation from the University of Colorado way back in 1976. The issues I studied back then, such as climate change, species extinction, overpopulation and habit preservation, are more critical than ever. What can we do as individuals?

First and foremost, we can take care of our impact on the Earth. In my family, we try to minimize our carbon footprint by buying locally grown foods. We drive hybrid cars. When we built our home here in the foothills of the Sierra Nevada, we used nontoxic paints and installed evaporative coolers instead of a high-impact air conditioner. We have solar panels as well. We certainly are

not perfect, but we try hard.

For nature photographers, we have the responsibility to behave in ways that protect the environments where we photograph. Popular locations for landscape photography have become sites for overuse and abuse with the prevalence of people using social media, especially Instagram. Many years ago, the North American Nature Photography Association developed a recommended set of ethical standards to educate its members and nature photographers in general. Its web site provides a strong set of advocacy statements that are well worth reading: [nanpa.org/advocacy/ethics](http://nanpa.org/advocacy/ethics).

More recently, a new organization, Nature First, has started an international campaign to educate nature photographers so that all of us can enjoy and photograph our favorite locations. One of the founders and gifted nature photographer Sarah Marino shared an article with me that she wrote on the issue and Nature First's goals.

"Historically, nature photography has been a force for good," Marino writes. "Conservation photographers have promoted the preservation of many ecologically sensitive and magnificently beautiful places." Marino goes on to observe, however, "In recent years, this positive legacy has been upended. It is now easy to make the case that pursuing and sharing photographs of nature has much darker consequences. Nature photography has undergone a dramatic transformation in the last five years with the rise of platforms like Instagram, easy access to detailed location information online, and technology advancements that make photo-taking much easier. These trends are leading to

the irreparable destruction of some special natural locations, overcrowding in places that can't handle the volume of visitors, and a sharp increase in injuries and deaths from people seeking to 'get the shot' or see the view they saw featured in a super-popular Instagram post."

In practice, no nature photographer is perfect. We need to police ourselves, to pass on valuable guidelines like the principles above to other photographers, and to be educated about the resources we photograph to better preserve them for future generations. I suggest supporting groups like Nature First and NANPA and becoming active if you're so inclined. Most importantly, whether you belong to an organization or not, don't be one of those photographers who are trampling wild landscapes, ignoring regulations, damaging sensitive areas, disturbing wildlife and implicitly or explicitly inviting the public to do the same.

The world is in great need of a sanctuary from the chaos of current events. Our images, and the places we cherish and share, can be a valuable source for healing and solace. We can control how we see the world, and all too easily, we can choose to see the darkness more than the beauty. My photography has grown out of the need to counterbalance the dark, the negative. I prefer to focus on nature's beauty in my art, to give me visual respite, the sanctuary we all need.

And we can choose how we treat those sources of beauty, how we respect our environment. Leave no trace. **OP**

To sign up for newsletter updates and to see more of William Neill's work, visit [WilliamNeill.com](http://WilliamNeill.com).



Yosemite has the blessing and curse of being a small mountain valley surrounded by massive cliffs. The popularity and commercial development, begun many decades back, make it a prime destination for domestic and international tourism. It's a mecca for landscape photographers, and our impact has damaged meadows and riverbanks in the great valley. The National Park Service has begun to close off popular meadows to protect them from severe overuse and implemented restoration projects designed to restore natural vegetation while still providing easy access to thousands of visitors.



# The New Big 5

Raising awareness for wildlife through photography

Text & Photography By Amy Gulick

**W**hen I was a child, I wanted to be Jane Goodall. My bedroom was overflowing with cuddly stuffed animals, most of them primates, including a life-size purple chimpanzee holding a banana. Living like Goodall in Africa surrounded by chimps was the best life my young mind could possibly imagine. Fast forward to today. Thanks, in part, to Dr. Goodall showing my generation that girls could grow up to be whatever we wanted, I've made a life photographing and writing about wildlife and wild lands.

Early in my career, when deciding which stories to pursue, I asked myself, "What do I want to see?" The more time I spent in wild lands viewing wildlife, the more I became aware of the threats to species and their habitats. It didn't take long for me to amend my original question to, "What do I want to see before it's gone?" But the second question seems almost defeatist, and both are a bit selfish. So I try to focus my work around another inquiry: "What can I do to call attention to threatened wildlife and shrinking habitats?"

With this mission in mind, I'm always on the lookout to highlight photographers and storytellers who are using their work to conserve nature. One such person is Graeme Green, a British wildlife photographer and journalist who has launched an international initiative called the New Big 5. He's asking people to vote for their top five favorite land animals they like to photograph or see in wildlife photographs. Voting is done through the project's website, [newbig5.com](http://newbig5.com), and the results will be

announced by the end of 2020. The New Big 5 celebrates wildlife and wildlife photography—the original "Big 5" term was coined by trophy hunters to list the five African mammal species deemed the most difficult and dangerous to kill: lion, leopard, rhinoceros, elephant and Cape buffalo. Green says that the New Big 5 is a positive way to engage people, and it's also a way to shine a light on conservation issues.

"A lot of people who care about wildlife may not be aware of just how serious the threats are," says Green. "We're at a crisis point, and the New Big 5 is a fun and lively way to get people talking and thinking about wildlife."

According to a comprehensive 2019 report published by the International Union for the Conservation of Nature, 1 million species may be pushed to extinction in the next few years. It's hard to imagine our world without elephants, polar bears or lions, but it's a distinct possibility in our lifetime.

"The world is a far better place with these animals than without," says Green. "I hope the New Big 5 can bring attention and action for all the world's wildlife, large and small."

In addition to providing a forum for people to vote for their favorite animals, the New Big 5 website offers a platform of ideas, strategies, actions to take and conservation organizations to support. There are also interviews with some of the top names in wildlife photography and conservation, including Dr. Goodall, Ami Vitale, Brent Stirton, Art Wolfe and many others who support the project.

Perusing the list of candidates on the website, I was immediately struck by the difficulty of choosing just five. Many of these species I've photographed. Those that I haven't, I'd like to someday. But more importantly, I can't imagine the world without a single one of them. How to choose? After much deliberation, I'm endorsing the following species: 1) Chimpanzee—the animal that ignited my passion for wildlife as a child, and the species that we're most closely related to. 2) Polar bear—the Arctic's top predator that has become a symbol for habitat and species loss due to climate change. 3) Pangolin—one of the world's most heavily trafficked species. 4) Grizzly bear—the symbol of wilderness in North America. 5) Elephant—one of the most endearing and social animals with the females living in matriarchal societies. And there's just something weird and wonderful about a trunk.

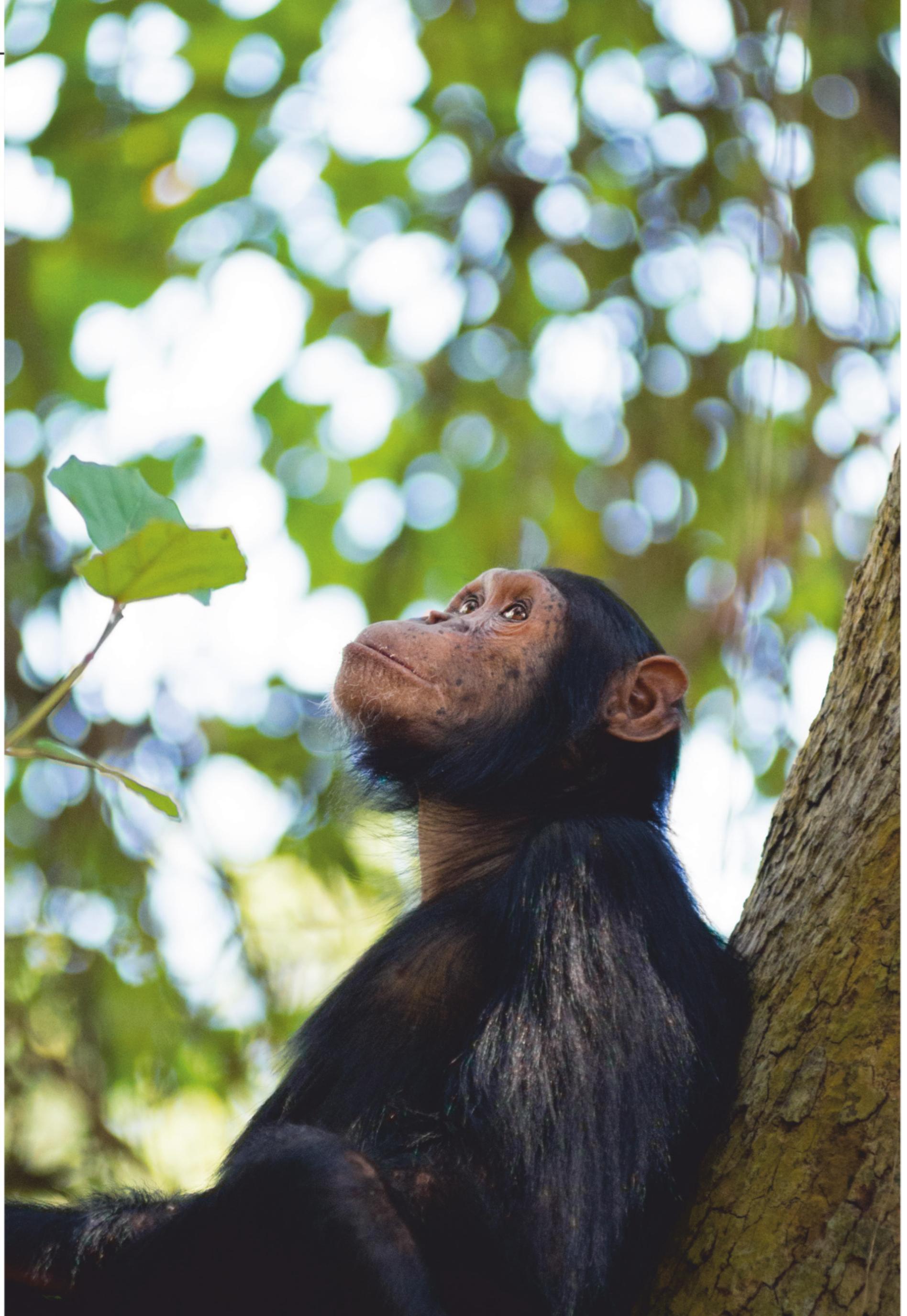
Who will you vote for?

OP

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Amy Gulick is a founding fellow of the International League of Conservation Photographers. Her book, *The Salmon Way: An Alaska State of Mind*, is the winner of a Nautilus Book Award and has been named a Best Indie Book by Kirkus Reviews. Visit [amygulick.com](http://amygulick.com).

Chimpanzee, Gombe National Park, Tanzania.





# Fall Color Fundamentals

Essential techniques and favorite locations for spectacular autumn photographs

Text & Photography By Kevin McNeal





**T**here's nothing quite like the change of seasons from summer to fall.

The days become shorter, the nights grow longer and there's a nip in the air. It's the start of a special time for photographers—the arrival of autumn colors.

Cooler temperatures and shifts in atmospheric conditions are what prompt foliage to present brilliant hues of red, orange and yellow across the landscape. The flood of vivid colors is an opportunity for bold photographs—but can also be an overwhelming and challenging subject. Let's consider some creative ways to bring out the best in your fall images, as well as some of my favorite locations to try these techniques.

### Planning Your Trip

First, it's essential to do some research. Before you head out on location, look for autumn images that you connect with visually and emotionally on the internet and in books. Once I know what moves me in a picture, I can then identify that concept in the scenes I encounter. Research allows me to find locations that I want to photograph.

Knowing where to go is the first piece of the puzzle, but equally important is timing. Research timing for past peak fall colors in the area you want to visit. Although it changes from year to year, looking at previous years can be very helpful in narrowing the timeline.

The peak of colors varies from state

to state dramatically, and it can also be very different from town to town. Checking the forecast for temperatures and weather several weeks before can help predict better outcomes for color timing. It's helpful to know the elevations of the locations where you plan to shoot, as fall colors arrive earlier at higher elevations due to the cooler temperatures.

### Use A Polarizer

One of the most critical pieces of equipment for capturing fall color images is a circular polarizer. Use of a circular polarizer applies to any scene and is an excellent way to maximize color saturation. Circular polarizers can accentuate



**Above:** Mount Assiniboine Provincial Park, Canada. A short hike to the top of Nub Peak overlooks Mount Assiniboine and the yellow larches in September. From a creative perspective, I choose a panorama view to capture the vastness and all the elements in the scene. I used the partially blocked sunstar to provide some illumination and warmth on the right side of the frame to balance the cooler tones on the left side. The placement of the yellow larches provides a nice contrast in the overall color harmony.

**Previous page:** Algonquin Provincial Park, Ontario, Canada. The converging lines of the foreground path lead the viewer through the image. This type of composition works well for autumn images as it gives the viewer the sense they are walking right into the scene.

contrast and allow the colors to “pop.”

Polarizers can be especially effective with blue skies on clear days, making the fall foliage stand out against the deep blue skies. On cloudy and overcast days, a circular polarizer is a must-have for removing unwanted glare that reflects off foliage—which can be difficult or impossible to fix in post-processing.

One often-overlooked reason for using a circular polarizer is to achieve slower shutter speeds when photographing scenes with water. These filters reduce light transmission by about two stops, allowing longer exposure times to render moving water with a silky, moody effect.

While a standard circular polarizer

is useful year-round, a warming polarizer is an option to consider this time of year for a nice boost to the warmer-tone colors in a scene, accentuating autumn hues.

### Include Water Elements

When it comes to subjects for your fall color photos, the list can be endless. It's vital to choose a handful of those subjects and focus on how to photograph those creatively. Think “outside the box” for unusual ways to present your fall color story.

My favorite theme when it comes to fall color photography is water. When I explore locations, I look for bodies of water, especially lakes. Lakes in the

early morning can be great for reflections and rising mist. Because of the cooler temperatures, morning mist is relatively common and can add an atmospheric element to your images that contrasts with the bold colors.

When photographing lakes, look for reflections. Inlets and coves protect from the wind and allow the water to remain still. The mirroring of color on a lake's surface adds to the overall impact of the image.

Another favorite subject when it comes to photographing the element of water is water in motion: streams, creeks, rivers and waterfalls. These are especially photogenic after the peak of fall color when the leaves have fallen on the ground and alongside the water.



To achieve the smooth look of longer exposures, it's helpful to have a neutral-density filter to reduce the light and permit slower shutter speeds of perhaps several seconds. This effect gives the water a smooth, silky look that adds a surreal detail to your autumn images. Areas with leaves floating on top of the water can create swirling patterns during long exposures to add foreground interest to your image.

### Angle Of Light

Capturing the right angle of light is imperative to boost colors, and this depends on where and how illumination is falling in your scene. It's the tool that gives shape and texture to your subject.

I highly recommend backlighting for a unique effect. The transparency of fall foliage is on full display when light shines through the leaves and provides illumination around its edges. Shooting fall color scenes that are backlit can be challenging but is an effective way to capture bold, vibrant color in the landscape.

Sidelighting can also be very useful for showcasing your subject. For this technique, position yourself so that light comes from an angle of roughly 90 degrees to the camera. Sidelighting is very good for conveying shape and form and gives dimension to your compositions with a sense of depth.

My favorite technique, although perhaps the most difficult to use successfully, is shooting directly into the sun during sunrise or sunset. It's critical to use the elements in the scene to partially block or diffract the light when photographing into the sun. I try to frame the sun so that only the sun's rays are in the image. This gives a warm, cinematic appearance to the image and reveals something magical on the horizon. To create a nice "sunstar" effect, use a small aperture like f/22.

### Use Exposure Bracketing

Whenever I photograph fall colors, I find I can get the best colors and detail from a scene when I bracket my

exposures, especially near the golden hour when the light can be very harsh in terms of contrast. I take a minimum of three exposures on a tripod. One exposure is two stops underexposed, the next is a "correct" exposure and the last is two stops overexposed. When processing these files, I combine them into one final image that contains all the information from the three images. The benefit of doing exposure bracketing is the flexibility it allows you when editing to open up shadows without noise, avoid blown highlights from overexposure, and enhance colors without posterization.

### Golden Hour

The magical hours of sunrise and sunset are some of the best times to photograph autumn scenes. Due to the low light and position of the sun, the light is warm and diffused and provides a soft glow to the landscape.

Look for compositions that include cloud patterns in the sky at this time



of day. The combination of color in the clouds can add harmony to your composition and make a more cohesive image. Watch for cloud formations that mimic or complement the other shapes in your scene.

So, does this mean you shouldn't photograph on an overcast day? Not at all! Often with overcast skies comes changes in weather and temperature that can lead to atmospheric conditions like rising mist from a water source, fog in a forest or occasionally rays of sun breaking through the mist—all of which, as we've already discussed, can add interest to a fall color scene.

## Composition

The goal of every photographer is to tell a story that connects with your viewer. One of the ways to achieve this is through thoughtful composition. Shoot fall colors from unusual angles to give the scene a different perspective.

Most autumn images are taken from eye level. Don't be afraid to change

that. Trying shooting fall foliage from the ground level, for example. I describe the concept as seeing the world as a bug would. The landscape takes on a completely different look from the ground. Combine this perspective with a wide-angle lens to accentuate the size of objects and add depth to the image. The wide angle exaggerates foreground elements, bringing the viewer closer to details. Use elements in the foreground to lead into or frame the scene. Fallen leaves at the edge of the frame can make for great leading lines.

Wide angles are an obvious choice but also try photographing the scene from a distance with a telephoto lens. This is an excellent method for isolating objects, allowing for simple but effective arrangements of color and form.

Another option for a change of viewpoint is to find higher ground above your subject and shoot looking down. Or, if you have access to a drone, its elevated view allows you to isolate patterns that

**Above:** Letchworth State Park, upstate New York. A rush of water makes its way down Genesee River in Letchworth State Park, where fall color lines the banks of the river and frames the falls in the background. From a composition perspective, the s-curve arrangement leads the viewer through the image from front to back.

**Opposite:** Laurentian Mountains, Quebec, Canada. The colorful forests of the Laurentian Mountains in the higher elevations of Quebec are an idyllic autumn destination. In this composition, the cooler tones of the trees anchor the warmer tones of the fall foliage, and the repeating vertical lines provide a sense of organization.



can only be viewed from the air.

Macro lenses are also an excellent choice. A single leaf has a world of textures and patterns to discover. A macro lens enables you to explore these and create abstract compositions that present the subject from yet another perspective.

Use a combination of these lens types and approaches to composition, and you'll come away with a portfolio of images that tell the story of fall color from many angles.

### Color Harmony

Fall color images are predominantly warm-tone colors. A carefully composed image presents those colors arranged in a harmonious way. Each color has weight, and when composing a scene, I look for complementary colors to balance the bright autumn hues. Blue skies and evergreen foliage are a pleasing counterweight to warm tones of red, yellow and brown. Composing your frame so that these contrasting colors are dispersed evenly through

your frame allows the viewer's eye to move through the photograph without getting stuck in one part of the image.

### Favorite Places To Photograph For Fall Color

#### The Canadian Rockies

The Canadian Rockies in the provinces of British Columbia and Alberta encompass some of the most scenic locations in the world. Icefields Parkway is a highway that makes for an ideal place to start. Between the towns of Banff and Jasper lie photo opportunities around every corner. In the fall season, the turquoise lakes are surrounded by golden yellow aspens in the valleys. Beautiful larches can be found higher in the subalpine meadows.

The combination of these colors with the larger-than-life mountains in the background make for stunning autumn images. Make sure to include more days to explore the less-visited locations such as Yoho and the Kananaskis

Country for fall color aspens. Bring a telephoto lens for all the wildlife such as the elk that can be photographed along the main highways.

The fall season in the Canadian Rockies typically begins in the first weeks of September and can extend into the beginning of October when the first snow usually arrives.

#### Atlantic Canada

The provinces of Quebec and Nova Scotia are some of the most picturesque locations for autumn colors, with an abundance of golden yellows and fire reds. A favorite spot is the Cape Breton Highlands in Nova Scotia. Known for vibrant reds and oranges, it boasts viewpoints that can be seen of the forest canopies from one of the many paths and roadways that lead through the middle of this national park. Cape Breton hosts several reflecting lakes, winding rivers and tucked-away waterfalls. There's plenty to see and do here. With a variety of hiking trails, this



favorite autumn spot is the place to be.

Another gorgeous area within one day of travel from Cape Breton Highlands is the Laurentian Mountains in the province of Quebec. The vibrancy of red colors comes from the well-known sugar maple trees. Located in southern Quebec, fall foliage in the area showcases some of the best color variety anywhere. The fall color palette displays dazzling colors in dense forests of yellow birch and American beech. Consider a visit to the town of Mont Tremblant during the middle of September for its annual color festival.

### Upstate New York

With so many photogenic locations so close in proximity to one another, it's hard not to have this region as a favorite. Upstate New York is known for its red and oranges that dominate the fall foliage across the state. What makes upstate New York unique when it comes to autumn is the variety of driving routes available. The winding

roads through the mountains offer a range of scenic vistas—around every corner lie stunning views. If you enjoy hiking and walking in nature, there are over 900 different waterfalls, as well as various kinds of cascades and gorges.

The unique geology immersed among the fall foliage makes this different than other locations. Granite formations provide juxtaposition with the fall foliage. My favorite areas are the Finger Lakes region, Catskills, Adirondacks and Letchworth State Park. The best time to visit for fall colors is mid-September to the beginning of October.

### North Cascades National Park

Located in the upper north region of Washington state along the U.S./Canadian border, this stunning, majestic mountain range is a paradise for photographers. Most of the locations are only accessible by hiking trails. Although hiking adventures can be challenging, the rewards are worth it. Along the trails, you can expect to see

**Above:** Wonder Lake area, Denali National Park, Alaska. In late August, Denali National Park starts autumn early in the year. In this image, the valley floor is carpeted in red bearberry as the first light shines on the fall foliage. The warm tone colors of red and yellow in the foreground balance with the deep blues of the sky. This color harmony works in this image because of the balance of complementary colors.

**Opposite:** Yellow Aster Butte Trail, North Cascades National Park, Washington. This trail is one of the many beautiful fall color hikes in the North Cascades. The inclusion of the blue lake in this photograph creates the color harmony. The foreground red colors lead through the image and into the cooler tones of the background. This helps establish depth in the composition by using colors to lead the viewer into the frame.



Yosemite National Park. The hanging fall foliage frames Half Dome in the distance as the sun peeks through. It was important when framing this shot not to block Half Dome. I positioned the sun to be partially blocked by the fall foliage to capture a sunstar at f/22.

turquoise-colored lakes, tucked-away ponds and some of the most vibrant red foliage anywhere. In addition to the fall colors, the mountaintop views allow you to see many of the other cascade peaks from specific vantage points.

### Denali National Park

When it comes to photographing both landscapes and wildlife in the autumn season, it's hard to beat Denali National Park, covering 6 million acres in interior Alaska and home to over 200 species of animals. It's one of the earliest locations to change color in late summer around the last week of August. Generally, the fall season lasts about two to three weeks. Autumn colors arrive sooner in this subarctic region due to early-season cold temperatures.

Expect lush greens to change to yellows and reds in the foliage of birch and aspen trees, but the magic of this national park is the mountain bearberry that carpets the meadow valley floor in stunning reds. Near the end of the

park at Wonder Lake, there are plenty of photogenic opportunities to get reflection shots of the majestic Mount Denali. Early snow in the park during the autumn season can be exhilarating.

### **Yosemite National Park**

My favorite national park to photograph fall colors is Yosemite. In terms of photo opportunities within short distances, nothing beats Yosemite, with the surrounding granite monoliths and the Merced River making its way through the middle of the valley floor. The Merced River highlights reflecting views around every bend. Fall foliage lines the banks of Merced River with reflections of golden-hour light on the towering rock walls. Early mornings are met with frosted morning dew and rising mist. The thunder-crashing sound of waterfalls can be heard from the valley floor.

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See more of Kevin McNeal's work at [kevinmcnealphotography.com](http://kevinmcnealphotography.com).

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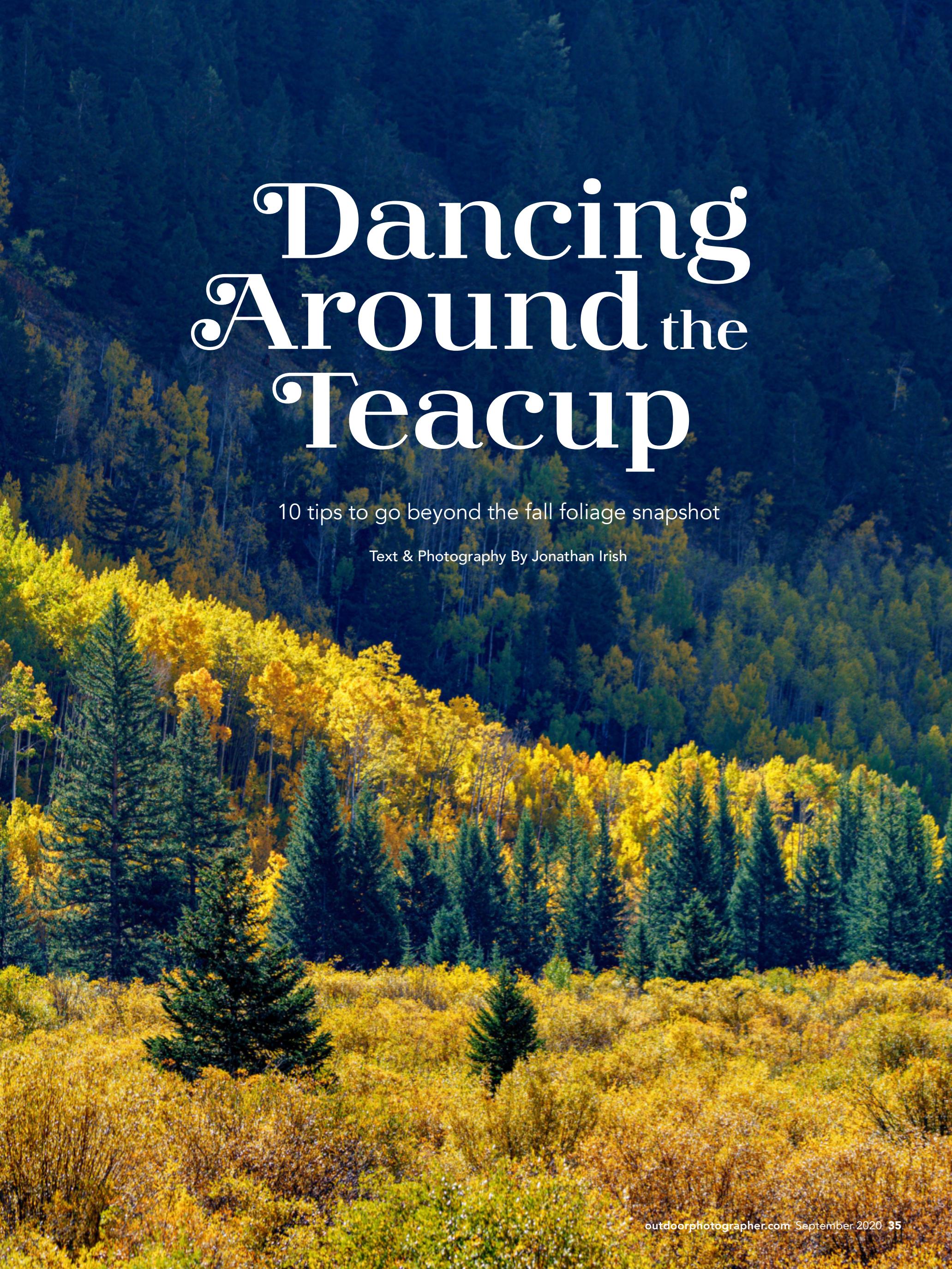
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# Dancing Around the Teacup



10 tips to go beyond the fall foliage snapshot

Text & Photography By Jonathan Irish

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One of the most intimidating things you can do as a photographer is to provide every frame of a photoshoot to a photo editor at a respected organization like *National Geographic*. Photographers are so used to sharing only our best images with the world. After all, we're magicians with the camera and never make mistakes, right?

Nothing could be further from the truth. I may shoot 10,000 frames (or more) on an assignment to have only eight or 10 run in a story, and there's no part of me that wants the world to have access to the 9,990 frames that didn't make the cut.

Providing every frame you shot while on assignment is akin to standing completely naked outdoors in front of a large crowd whose acceptance you most desperately want. There's simply no hiding the bare (pun intended) truth—and that's a very unnerving feeling.

Why do editors require photographers to provide every frame shot on assignment? One reason is because we're so close to our work that it's often difficult for us to choose the best frames. An unbiased eye can provide invaluable insight in the selection process.

Another reason we have to provide every frame is because editors want to see how we approach subjects. They want to know how we think as photographers. Did we explore the subject in depth to reveal the best angle, light and composition? Or did we miss the shot they were looking for?

There's an old *National Geographic* expression about photography that's used to describe this kind of depth of exploration: "Dancing around the teacup." If the subject of the assignment is a teacup, then most people will take a snapshot of that teacup and be happy with that. Amateur photographers will go a bit deeper and explore the teacup from a few different angles, thinking they got a good shot. But if you were to look at a pro photographer's photo library of that same teacup, they'll have shot it from every angle—above, below, every side and underneath. They'll have come back during different times of the day to see how the light changes, they'll have experimented with natural and flash lighting, and they'll have even taken risks that rarely pay off, like attempting long handheld shutter speeds.

In other words, they get to the heart of how to best represent that teacup and express their personal view through deep and continual exploration.

When I'm teaching photography workshops, the single biggest lesson



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that always makes the most improvement for the students is to simply slow down and “dance around the teacup.” It always amazes me what results from that single idea. The wiser I become and the more experienced I get in the photo community, the more important this concept has become to my work.

So how do you approach photographing fall foliage in a place like Aspen, Colorado, where one is surrounded by, well, groves of aspen trees? The process is the same: By going deeper, looking for light and shadow, by scouting when the light is poor and by returning to those subjects to see how the light changes. Dance, dance, dance around that teacup...err, aspen grove.

Here are my top 10 tips for ways to go beyond the snapshot for a deeper exploration into photographing fall foliage.

## 1. Combine Light & Shadow For Layers Of Depth

This is a scene that I passed many times on my way up and back out the valley

roads but didn’t stop because lighting was never right. The light was either too low, putting everything in shadow, or too overhead, washing out the entire scene. To create depth and layers, I waited until the sun was at a point just behind the mountains in the background to light up only a portion of the trees in the foreground. The difference is subtle, but the effect is a much more pleasing image. Pay attention to how light is falling on the subject and watch for the natural contours of the land to shape the light to your advantage.

## 2. Don’t Get Stuck On One Idea

Another common mistake is the tendency to get stuck on a single concept of how to photograph a subject. Editors want to see you use your creative way of viewing the world to depict a subject. If that subject is fall foliage, including wildlife is a great way to create a more interesting frame.

This image is also an example of employing some basic color theory. Although this is a deeper topic for another article, understanding color

theory (which colors complement each other) will help you find even more great images. In this example, the yellow leaves provide a beautiful complement to the blue of the jay.

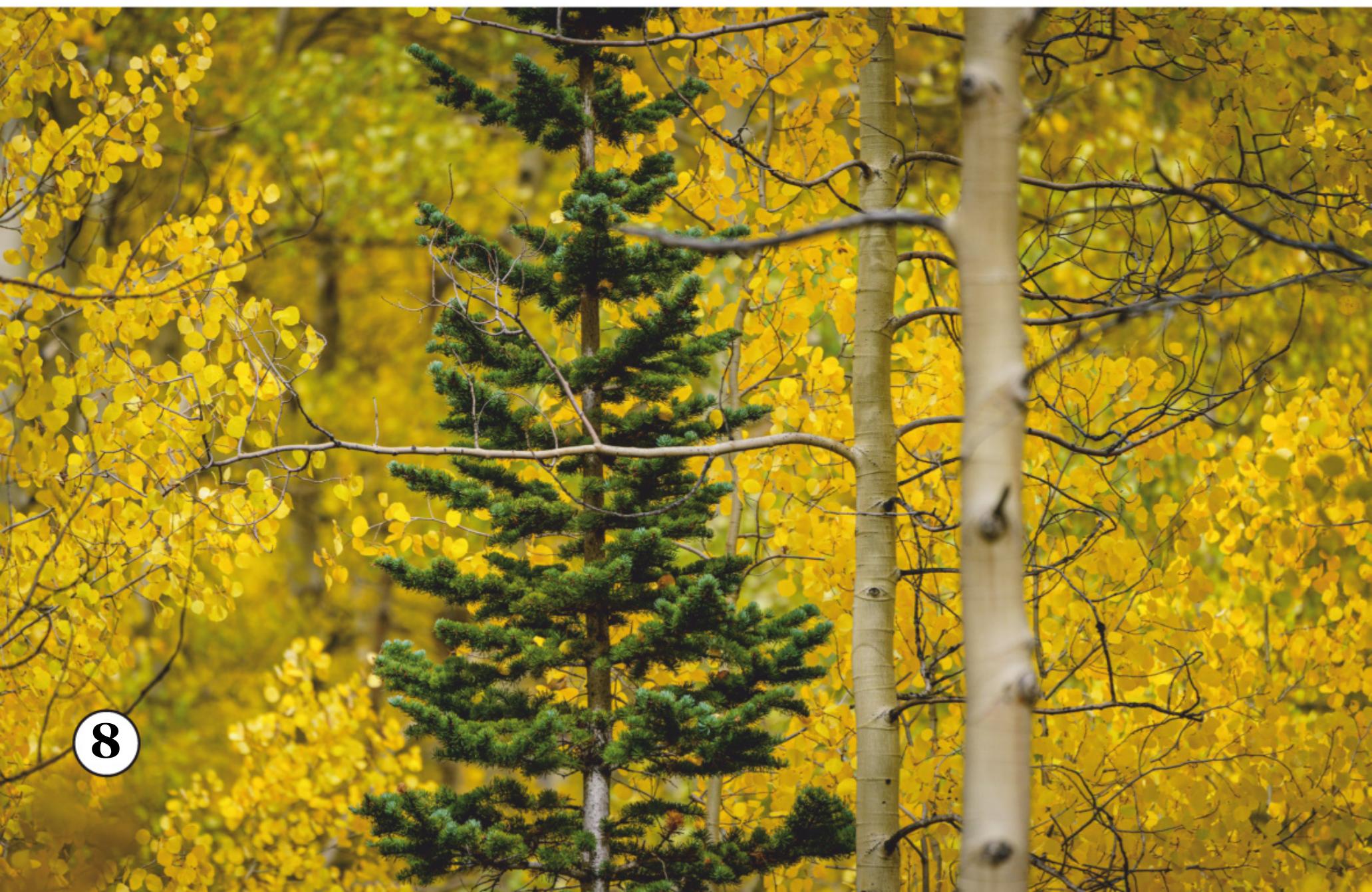
## 3. Try Vertical Compositions, Not Just Horizontals

**Question:** When is the best time to shoot a vertical photo? **Answer:** After you’ve shot a horizontal one. Believe it or not, I get asked this question quite a lot in workshops, and it’s always hard for me not to give a silly response. Though horizontal compositions are typically the default for landscape photography, the truth is, it really depends on the scene, and you should try verticals, horizontals—heck, even tilted shots—to see what works for you and your vision. I have about 20 frames of this same shot in horizontal orientation (and even more in vertical), but it took a bit to get to the framing that I liked. If you’re dancing around the teacup, shooting a variety of compositions is simply part of your workflow.

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#### 4. Find Bold Lines & Patterns

Lines and patterns are hugely important in photography. So much so, in fact, that sometimes you can squint (effectively blurring your vision) and take photographs just based on seeing vague lines and patterns and probably get some really nice shots. The reason is that lines and repeating patterns give the viewer's eyes a sort of visual map to follow around the image, which creates more interest.

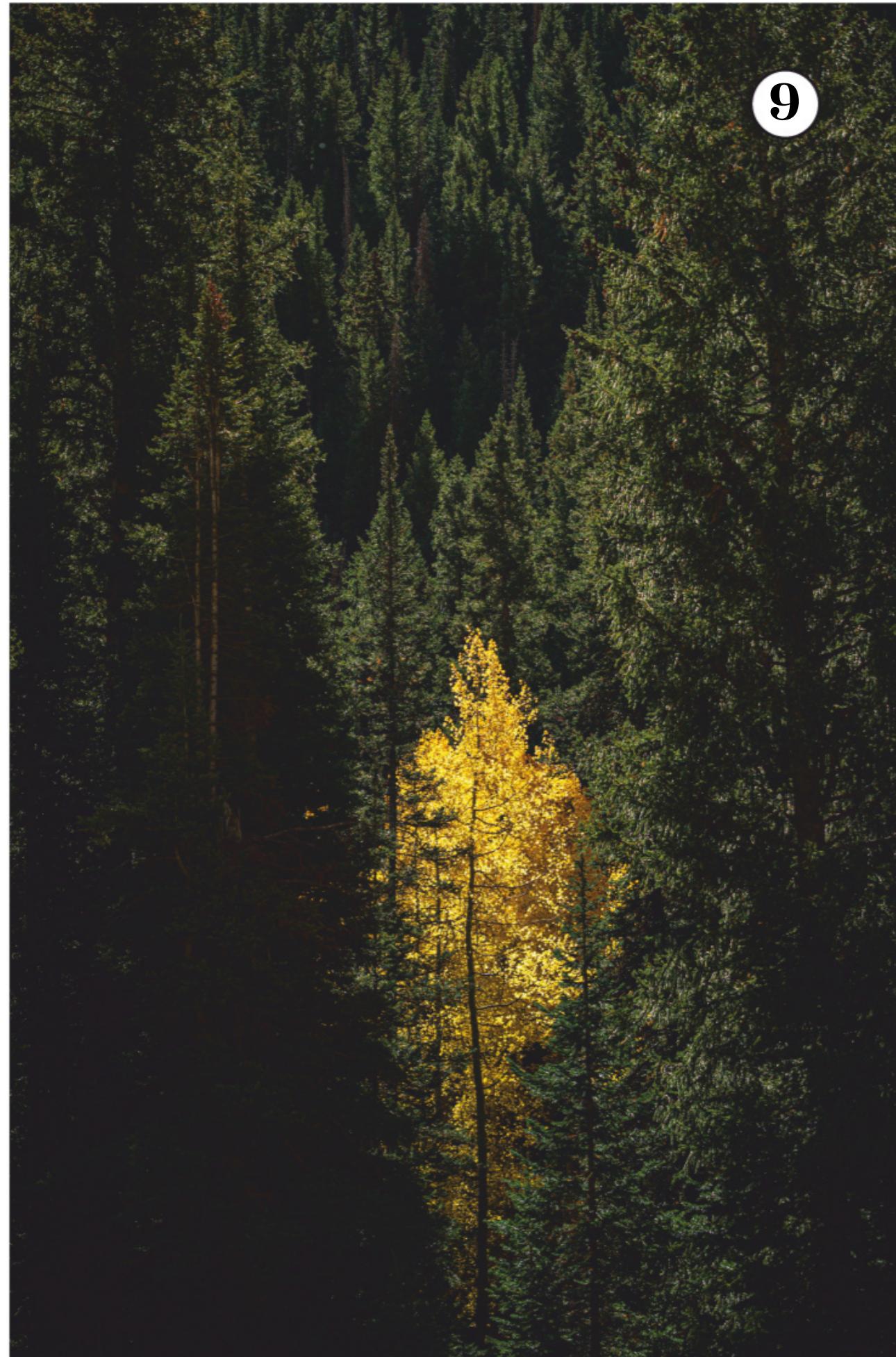
In the case of this image, it's the light that creates the strong horizontal lines across the treetops. Seeing patterns is something you train your eye to see. A good way to do that is to take your camera out and practice shooting only lines and patterns with different self-assessments each day: Day 1, find only s-curves; Day 2, photograph parallel lines; Day 3, shoot only horizontal lines in series of three, etc. Before you know it, you'll see patterns where others don't, and that will make a big difference in your photography.

#### 5. Use Foreground, Middle Ground & Sky

Early on in my photography career, I once had a teacher who told me that light was everything. I now know that light is incredibly important—but it's not everything. Creating strong compositional images in union with interesting lighting is the secret sauce. I had kept an eye on this very scene for days on end but never photographed it. I loved the dramatic peaks in the background and the strong autumn colors on the foreground trees. But until I saw the juxtaposition of the mountains clouded over and the foreground lit up, it didn't make me want to take a photo. Needless to say, when I saw this scene, I went into furious dancing around the teacup mode to try and find the best composition on the quickly changing light. When the magic happens, be ready.

#### 6. Get Closer With Intimate Scenes

Dancing around the teacup doesn't just mean you move around the subject. It also means that you move toward and away from the subject—with both your feet and your zoom. Varying your



distance and your lens focal length will result in vastly different photographs. Shot further away, longer lenses provide a compression to the scene that can be a useful tool to express a certain feeling in a photograph. However, more intimate photographs, like this one shot at 35mm, can make you feel like you're standing in the woods listening to the crinkle of

leaves underfoot. You can almost reach out and touch the tree, right?

Explore how different focal lengths and subject distances affect the “feeling” of a scene and use that to create the shot you want. These feelings happen on a subconscious level for the viewer, but for you, the photographer, it very much needs to be at the forefront of your mind.



## 7. Look Up & Down For A Different Perspective

Whether you're in the woods, in the city or in your backyard, don't forget to look up—or down, for that matter. I'm always amazed at how many people tend only to see what's in front of them and forget to look around. I guess it's human nature to be focused on what's ahead all the time, but as a photographer, you must train your brain to look in all directions for good images.

One way to do that is to slow down. By slowing down, you'll take time to see all around you and notice so much more. As a young photographer, I used to run around like a chicken with its head cut off trying to capture every shot—and likely missing some really great ones. The best photographers I know move slowly and with intention. Be more like a snail than a rabbit and take in the scene from all directions.

## 8. Shoot Telephoto To Simplify

I shot this photo at 400mm, even though I could have easily walked up to the trees and took the photo with a shorter lens. Why? Because I wanted to simplify and

isolate the green evergreen among the yellow aspens. Longer lenses can be a great tool for breaking a scene down, revealing only that which is most important to the photograph. I always carry two camera bodies on me, one with a longer lens and one with a shorter lens attached, so I'm prepared to fully dance around the teacup in any way I see fit at a moment's notice. Yeah, it means carrying more weight, but that's already the plight of the photographer, right? I know that's not possible for everyone, but I highly recommend having both wide and telephoto lenses available to see which works best for your vision of the scene.

## 9. Isolate Color For Graphic Effect

As photographers, we walk around looking for drama. I don't mean that we walk around looking for drama with other people—I mean we're always looking for dramatic light and compositions. Isolating a single color (in camera, not in Photoshop) can make for a dramatic photograph. I remember first seeing this scene, and it stopped me right in my tracks. I thought, "What must it be like to be that tiny aspen glowing among the giant

evergreens surrounding it?" Something about its bright and shining brilliance among the tall dark monsters around it made me smile. Shine on, little guy.

## 10. Seek Out Dramatic Light

Once I realized that I could shape the light by simply returning to different groves at different times of day, I started really focusing on how I could make the best use of the light. My very favorite images from the shoot came from the few moments where the sun was about to dip behind the mountains, and I could isolate the light gracing the very tops of the trees. The effect gave an almost painterly look to the image that would make Bob Ross proud. I like this image so much that I have it printed and framed in my home.

It took a while to get to the point where I found the right composition under the right lighting conditions to elicit the right mood I was seeking for photographing fall foliage on a deeper level, but good things happen when you take the time to dance around the teacup.

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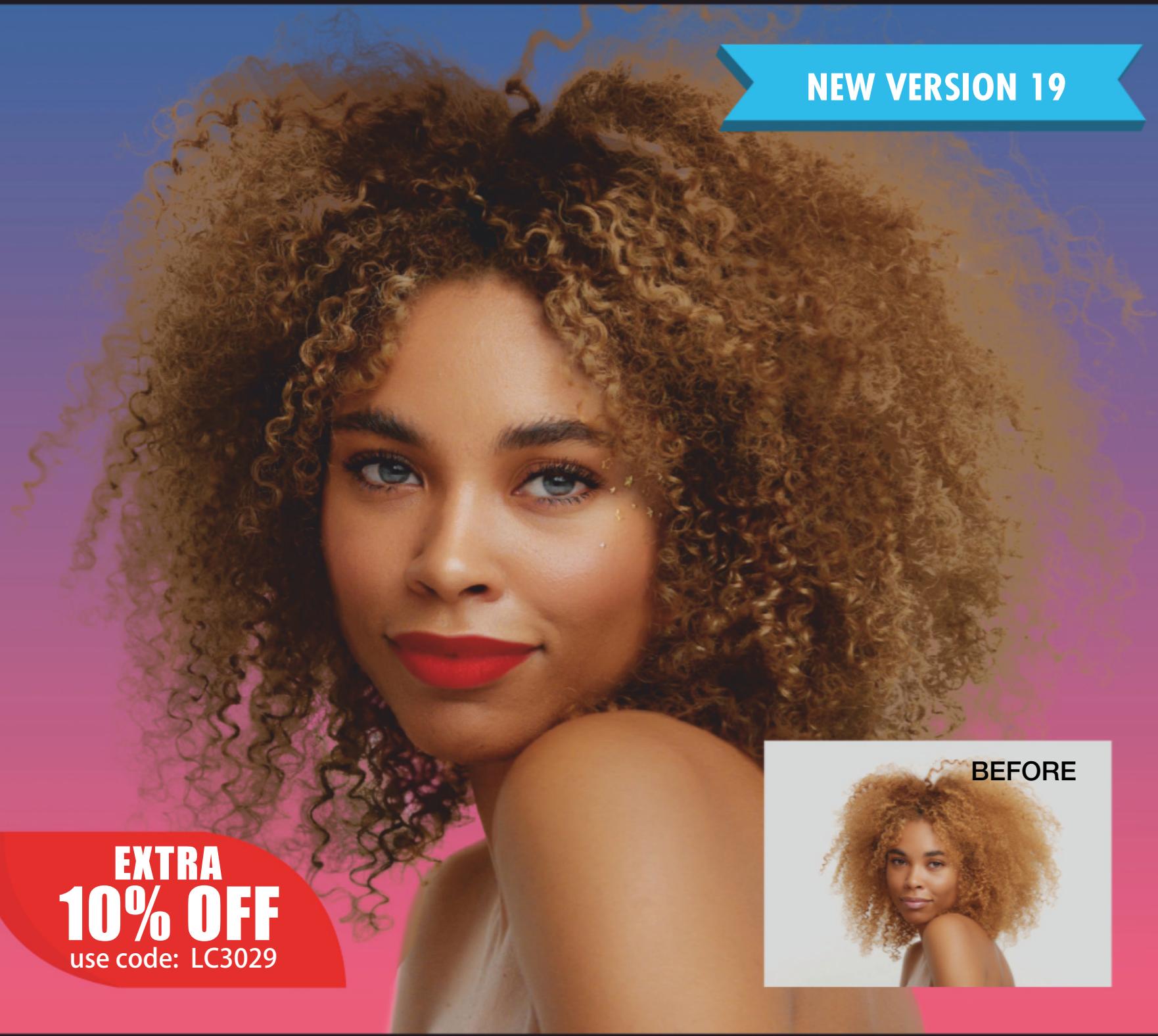
See more of Jonathan Irish's work at [www.jonathanirish.com](http://www.jonathanirish.com).



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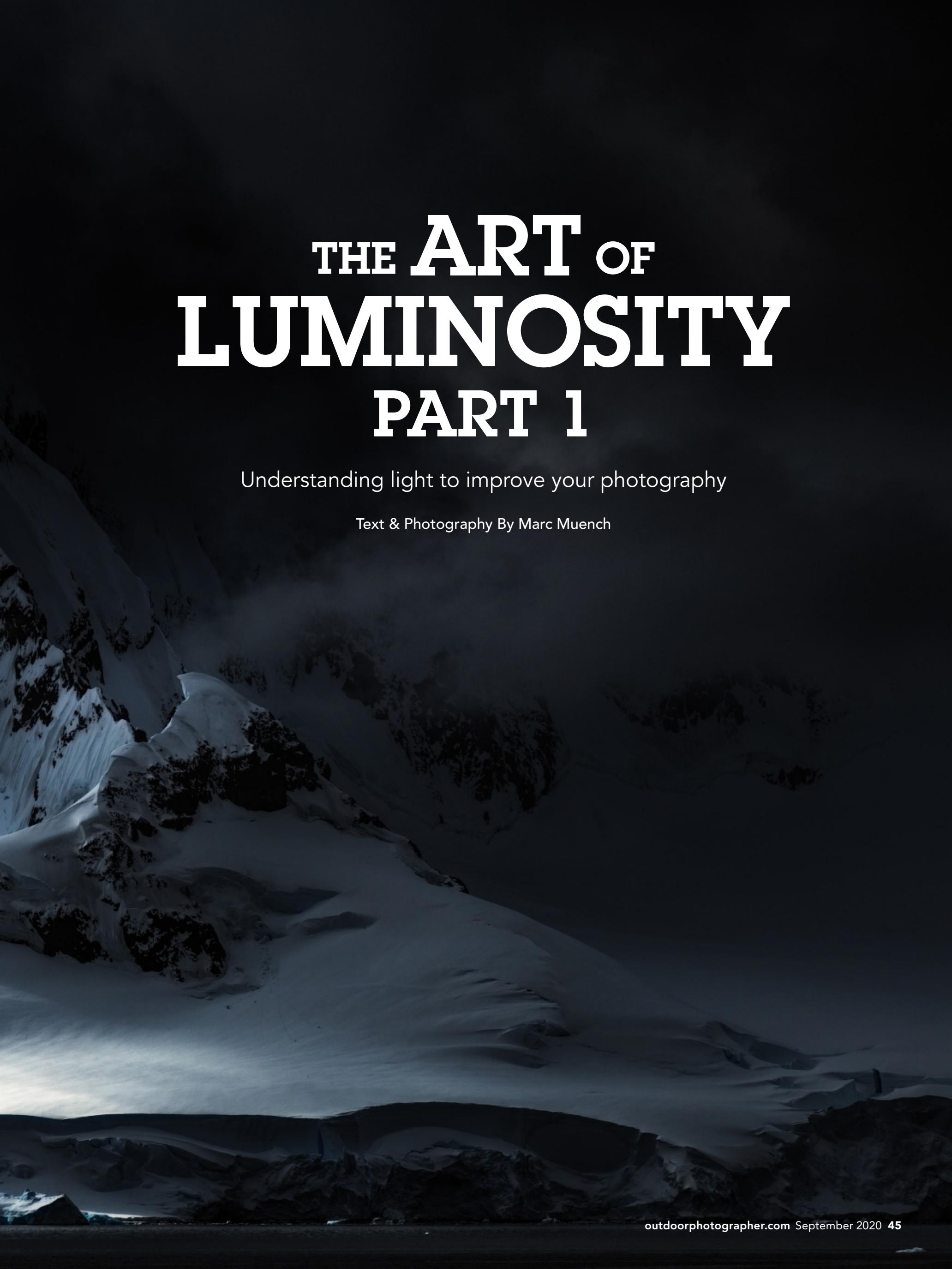
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Most of us can recognize good light. The question is, what makes the light so magical?



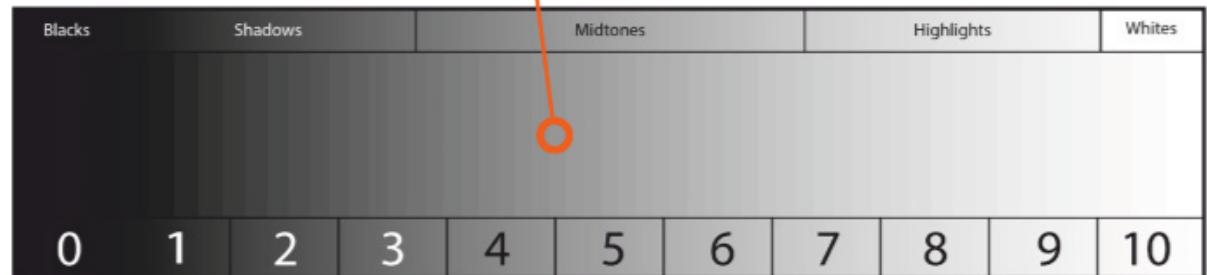
# THE ART OF LUMINOSITY PART 1

Understanding light to improve your photography

Text & Photography By Marc Muench



In this image, I selected a point with a density of 50 percent. This density is a midtone and in Lightroom is controlled by using the Exposure slider. This spot in the image is a snowfield in Tibet lit by the full moon at midnight on a very clear evening. I marked it on the grayscale at right to illustrate how it applies to the density in this image. If you practice viewing these numbers in your images and plotting them to a grayscale chart, you have a powerful method to begin understanding how that density will be displayed, in print and on digital displays.



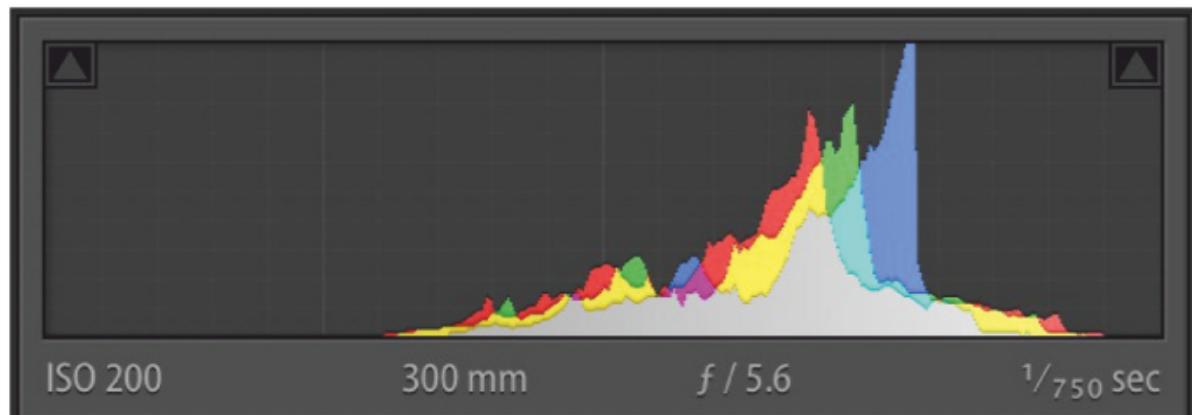
**I**n nature, magical light is fleeting. It can transform a scene from ordinary to unforgettable, only to vanish into thin air. Will you be ready for it?

Most of us can recognize good light when we're paying attention. What can be more difficult to recognize is how light in a photograph can be properly exposed and later adjusted to enhance a particular scene, something that requires post-processing skills.

We all have a natural sensitivity to light and the quality of it. Bright light lifts our spirits, and low light can do the opposite. Contrast pulls our attention,

while pastel colors make us contemplative, and the list goes on. Photographers have the opportunity to use these aspects of light as a powerful tool when creating images to tell stories or simply command attention.

What makes light especially challenging to photographers is when it's not what we had hoped. The shadows are too dark or in the wrong place. The color is wrong or the contrast is too high. When things finally get a little better and shadows form in just the right location and the highlights are striking the subject, but it's too dark, what will your camera



Not all the scenes will push the dynamic range limits of our cameras, and there are many that will fall well within several stops of the available contrast ratio. This scene of Mount Everest was shot from 20+ miles away when the atmospheric haze combined with the distance softened the light and made it fit well within the dynamic range of a full-frame sensor camera, as shown in the histogram of the image.

settings be?

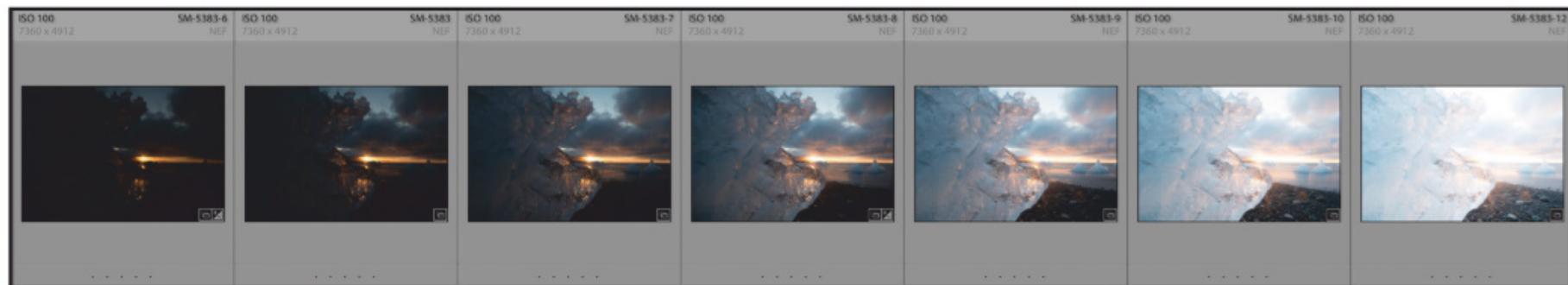
In these situations, you may struggle to select the correct camera settings, and, as a result, your image may not match what you envisioned. To help you improve your images through a better understanding of the effects and use of light, I want to share my knowledge and experience in this three-part article series. I'll begin with the technical and end with the creative and fun.

Part one will cover the technical aspects of light and your camera's ability to record it. I introduce you to the grayscale and histograms, important

topics to review even if you've studied them previously.

In next month's issue, part two will help you with one of the most challenging aspects of photography: seeing the picture before you capture it. I will also describe how to previsualize the dynamic range of the scene so you can capture lighting conditions. In part three in the following issue, we'll cover processing your photographs to make the most of the light.

I have learned over the years that one must dive into the deep end to truly master the art of luminosity, and that's what



This bracketed set of images was shot with varying shutter speeds. Exposure times ranged from 1/8 sec. to 8 sec. at f/19. Above the set is the final image after merging in Adobe Lightroom. The seven bracketed exposures offered plenty of data to create a file with detail in every region of the image and with a wide dynamic range.

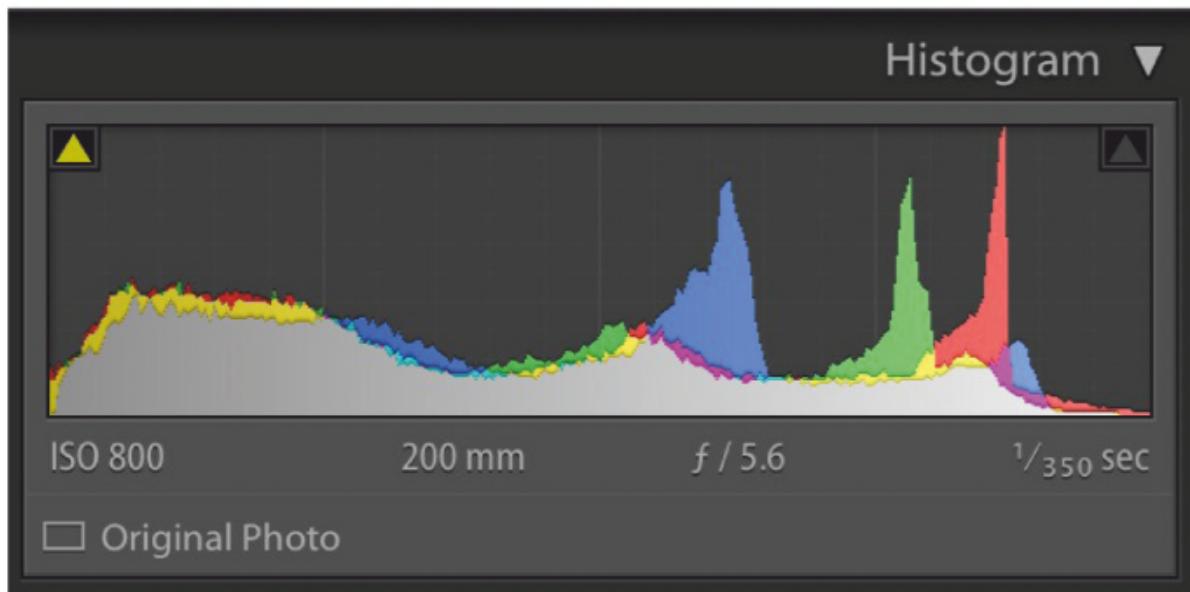
we're going to do together. But before we get into all that, I want to share a story with you.

### Where It All Began

I had been using digital technology for years without having any idea how or when the very first digital image was created. I first read a fictional account of what I thought might be the inception of digital imaging in the book *Space* by James Michener. He told of a young scientist working at the Jet Propulsion Laboratory who created an image from small printouts of ticker tape. Later, I had a chance meeting with the marketing director of the JPL and asked him about the scientist from Michener's book. Did

such a character and process exist? The director's eyes lit up, and I knew he understood what I was referring to.

The first digital image was made in the late '60s for NASA, as a way to record images of Mars. A scientist at JPL had invented a device that could scan a scene by recording it in tiny square segments. Each square was represented by three numbers, corresponding to the varying color densities of red, green and blue, each on a scale of 0 to 255. Those numbers were mapped to specific coordinates in the image. Because the squares were simply a mix of numbers, they could be transmitted back to Earth and reassembled. This eliminated the need to ship the film



This scene of a killer whale breaching was captured at 1/350 sec., f/5.6, ISO 800. The exposure was a compromise of settings to achieve a shutter speed that was fast enough to stop action while keeping the ISO low enough to obtain as much of the natural early-morning color as possible.

back to Earth, which would have been a nearly impossible feat. This process was highly classified at the time, and, as a result, that young scientist's name has still not been released. However, his invention was the start of modern digital imaging technology.

### The Range Of Light

Current digital sensor technology works on a similar principle to those early

attempts captured in the '60s while exploring Mars. A pixel is the smallest point on a digital imaging sensor, also known as a sensor element. Firmware built into your camera combines data from every pixel to create the final image. Every pixel in an image file contains three numbers called density values. Each density value describes the density of the primary colors: red, green and blue (RGB). The density value for



each color is a number between 0 and 255, where 0 is absolute black, and 255 is absolute white.

Dynamic Range is defined as the number of stops of light—from pure white to pure black—that a digital camera can record without creating digital noise. Each stop halves or doubles the amount of light in the exposure. When you increase the exposure by one stop, you double the amount of light in

that exposure.

When you point your camera at a scene, a specific contrast ratio must be captured. If your camera doesn't have the dynamic range to capture the required contrast ratio, it won't reproduce the scene as well as you had hoped.

To get beyond the dynamic range limitations of your sensor, you can take a bracketed set of exposures and combine them. Bracketing means that you vary

the shutter speed with each shot until the entire dynamic range is captured—use a fast shutter speed for the highlights and a longer shutter speed for the shadows. This method is often referred to as high dynamic range (HDR) photography. The HDR method increases the amount of signal each pixel in the blacks and shadows receives, so it decreases the amount of digital noise.

## Perfecting Your Exposure

Recording a perfect exposure for any scene is quick and easy using the histogram built into your digital camera.

The histogram is simple to understand. The left side of the histogram represents the darker values, and the right is the lighter values. The center of the histogram shows the midtones. The height of the graph indicates the number of pixels with values in that tonal range.

If your image is dark, then the majority of the data appears on the left (dark) side of the histogram. If your image is very light, then the majority of the data appears on the right side.

There are no “ideal” histogram shapes because many different-looking histograms can represent perfect exposures. To determine if your histogram indicates a correct exposure, you must understand three terms:

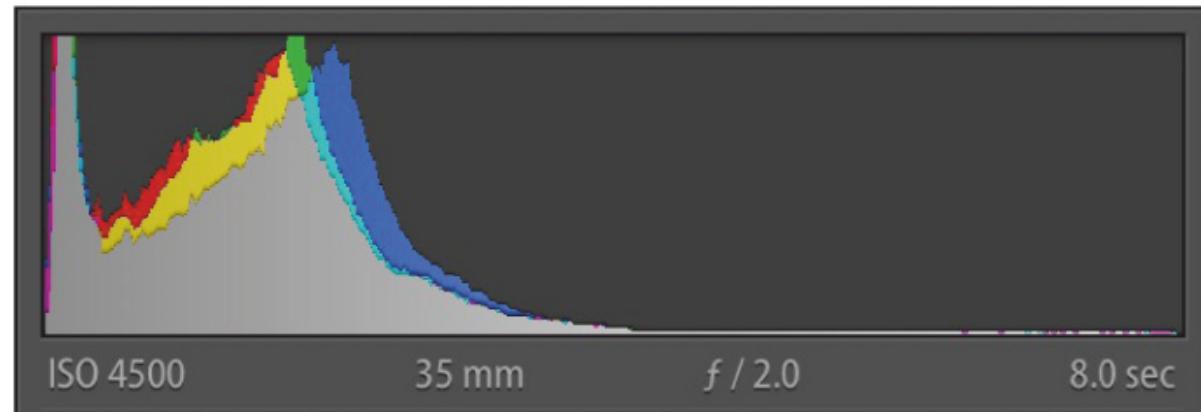
**Clipping:** This is when data “climbs” either edge of the histogram. Clipping indicates that you have exceeded the dynamic range of the sensor, and some detail is lost.

**Overexposed:** When data is clipped on the right side of the histogram, the image is overexposed, and detail is lost in the whites.

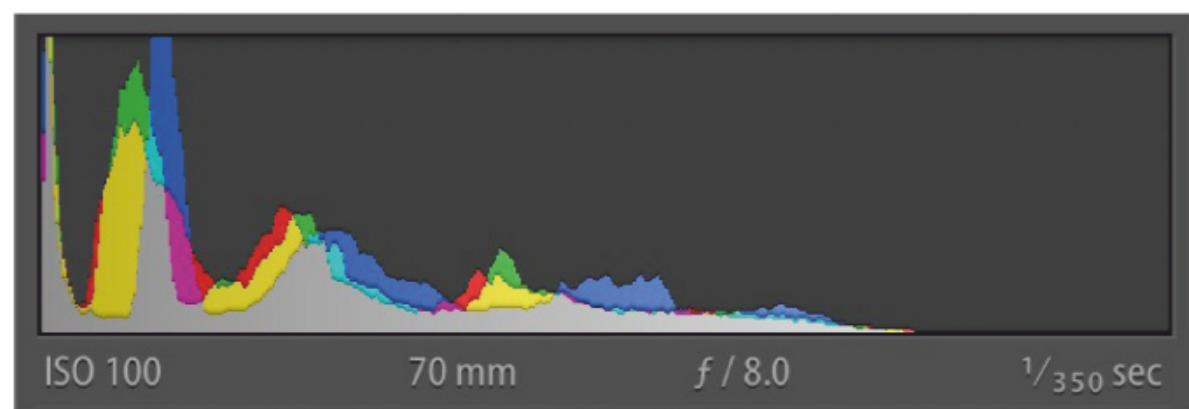
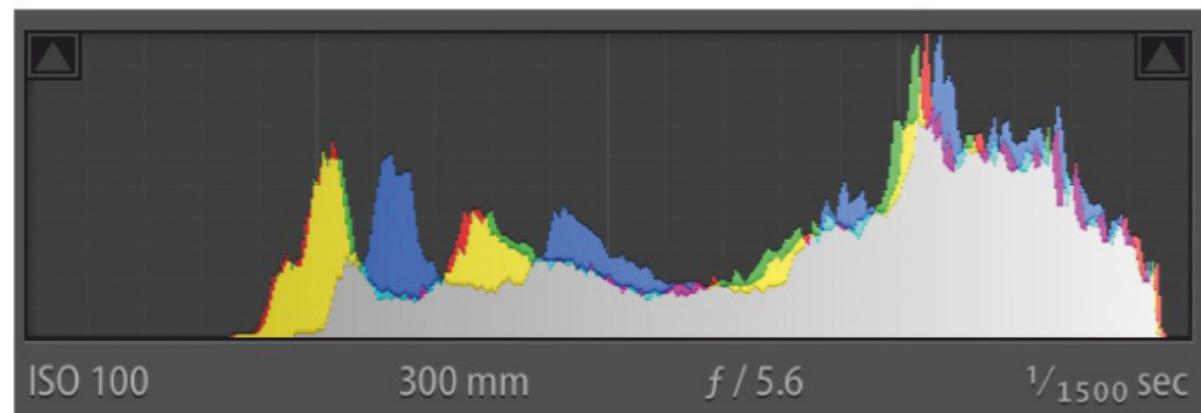
**Underexposed:** When data is clipped on the left side of the histogram, the image is underexposed, and detail is lost in the darks.

While clipping should be avoided as much as possible, the good news is that today's modern sensors allow a little bit of clipped data to be recovered. Capturing the original file in RAW format simplifies the recovery of data in post-processing software such as Adobe Lightroom.

Expose To The Right (ETTR) is a technique used by photographers to



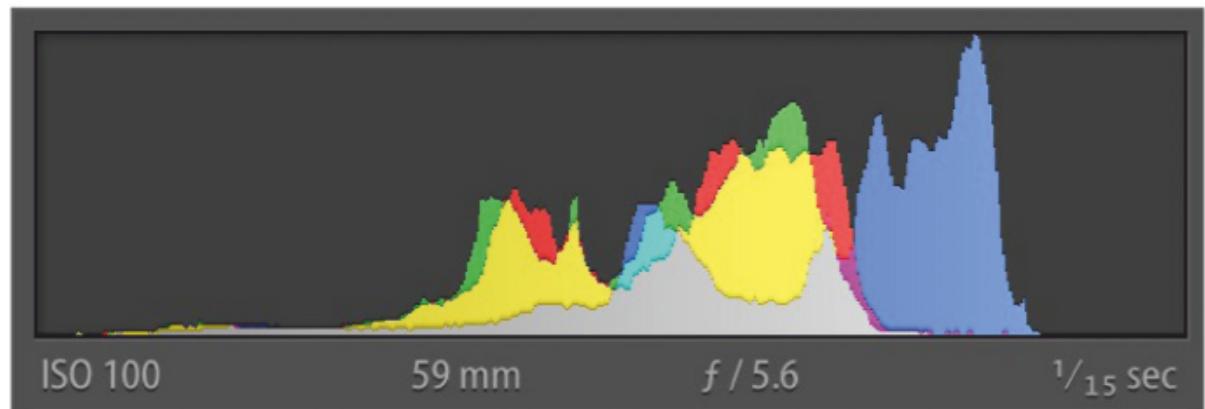
Notice in the histograms above and below of the images at left that both exposures are using the ETTR technique. The night scene is counter-intuitive as the data is on the left side of the histogram, but if you look closely, you can see that the exposure follows the basic rule of ETTR: The brightest data is pushed as far right as possible without clipping.



This histogram is clipped on the left side, indicating that the blacks are missing data. You can also see that the right side of the histogram is closer to the center or midtones. The highlights region of the histogram contains more potential information than the shadows or midtones.



Low Dynamic Range. This scene was captured in low light, before sunrise. Without direct sunlight, the only contrast in this scene is being created by the reflected light from the atmosphere.

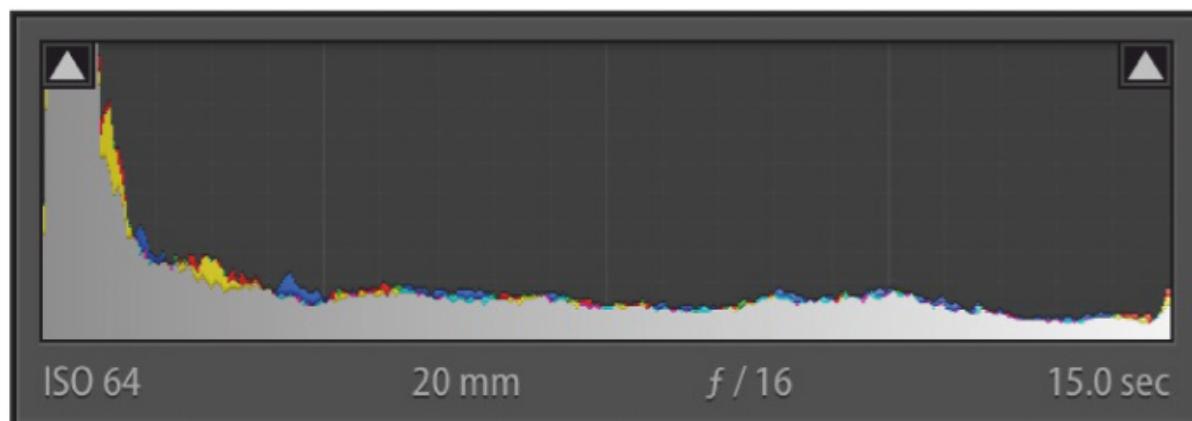


maximize the amount of data captured in an exposure. The right side of the histogram contains more data, and the more data you capture in an exposure, the better the end result will be. If your exposure is on the right side of the histogram without clipping highlights, then you have successfully exposed to the right. This will make your image look too bright most of the time, creating the necessity to post-process it to your intended luminosity. In addition, you don't want to simply increase your ISO or open up your aperture. Increasing the ISO creates additional digital noise, while changing your aperture affects

depth of field and diffraction, making your image less sharp.

ETTR allows for several improvements in the final RAW file: greater signal-to-noise ratio, fuller-color gamut, and more latitude during post-production.

The best way to understand the benefits of ETTR is to look at the bit depth of various areas of brightness in an image. The bit depth of the brightest value is 4,096. If you reduce the exposure to one *f*-stop darker, then the brightest value in the image is reduced to 2,048, or one-half of the previous exposure. Move another *f*-stop darker, and the



High Dynamic Range. Most sunrise/sunset scenes looking into or toward the sun have more dynamic range than a single exposure can record, as you can see in the image histogram at left. In these situations, it's best to use bracketing to capture the scene in more than one RAW image file, then combine them in post-processing.

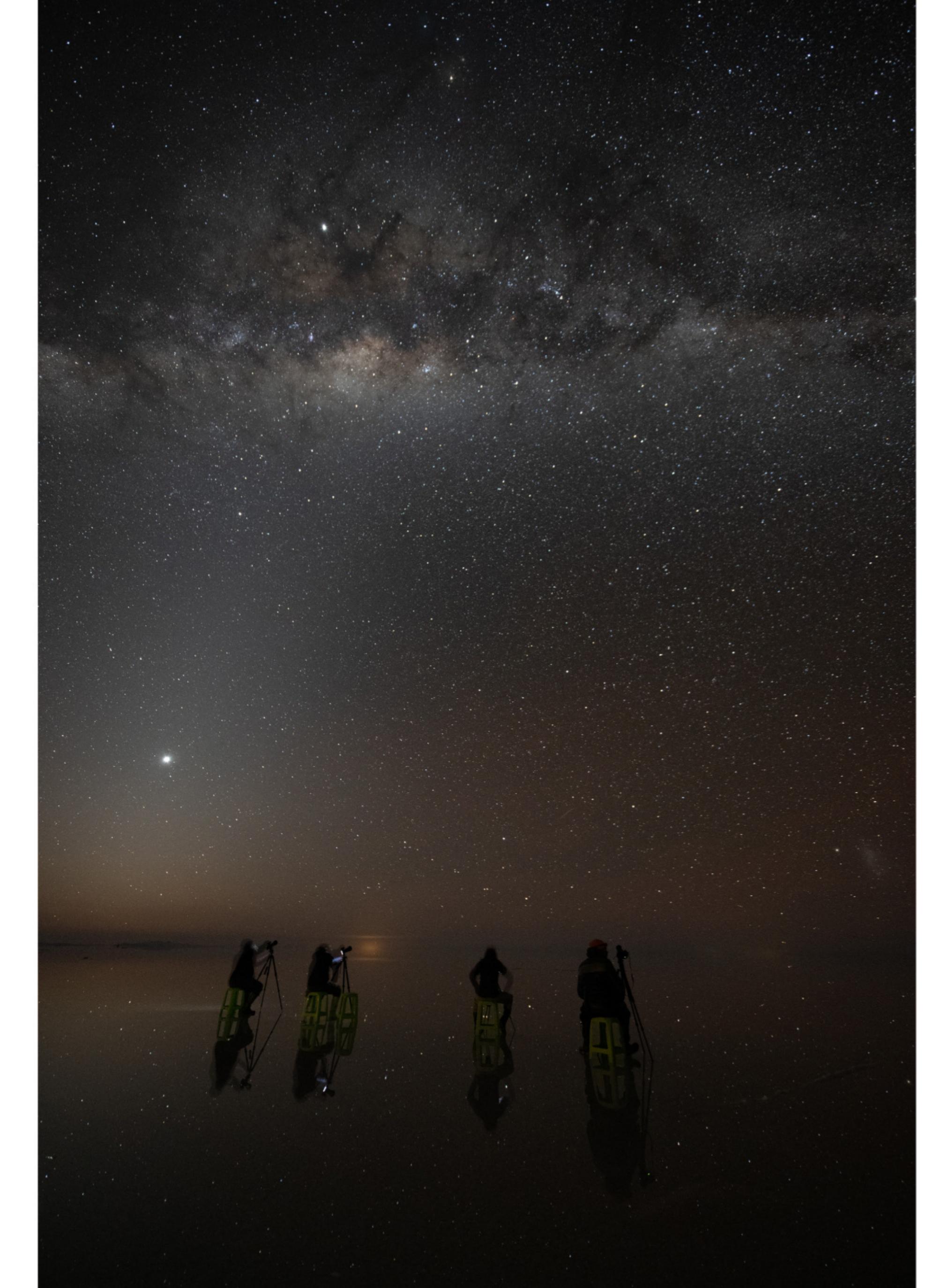
brightest value is reduced by another one-half to 1,024.

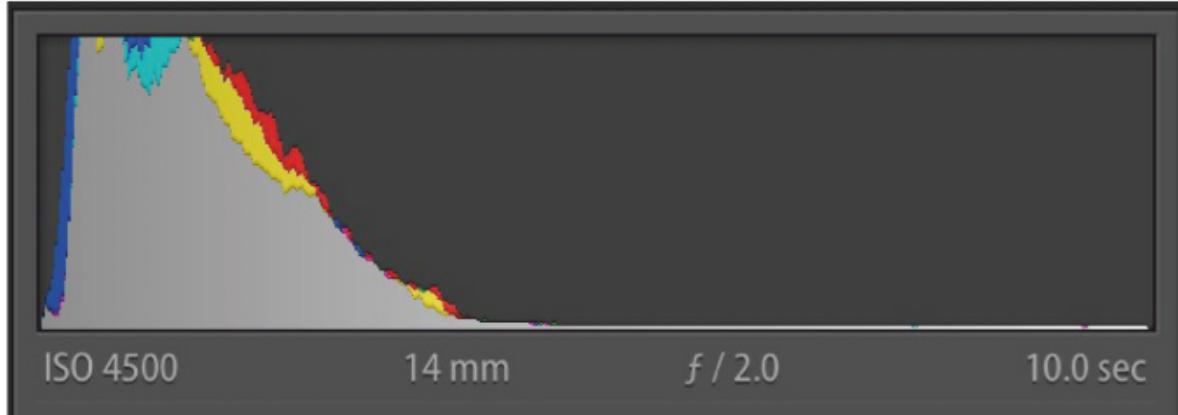
While there is no perceivable difference between 4,096 and 2,048 bits, reducing the bit depth by 50 percent increases the potential for digital noise and banding, narrowing the editing options. The issue is with shadows, where a difference between 64 to 32 bits is a significant decrease in data. When you lighten dark areas in post-processing, you also significantly increase digital noise. Dealing with shadows is what creates a balancing act between keeping your exposure to the right while maintaining a fast-enough shutter speed

to capture action. By exposing as far to the right or as brightly as possible (without clipping the highlights), your image—especially in the shadows—is the best result from the camera.

A handy camera tool when practicing ETTR is the highlight clipping warning function (commonly called “blinkies”). When activated, the camera LCD flashes a color or pattern over areas where data is clipped. It's a great reminder to adjust exposure.

There are two ways to achieve optimal exposure in your digital camera: using a histogram preview in your live view or digital viewfinder, or taking an





**Low Light.** When it comes to dynamic range, night or low-light photography presents a unique challenge. There's actually plenty of dynamic range in most nighttime scenes, but our eyes aren't capable of seeing it. A digital camera, fitted with a large aperture lens, is capable of capturing the entire dynamic range. This is also a great time to view the histogram on the back of your camera. This will reveal how dark the file will appear at home on your computer since the back of your camera isn't an accurate preview of the image, especially when viewed in the dark.

### Glacier National Park

Below, this page: 10 sec., f/2.8, ISO 1600

Next page: 1/180 sec., f/8, ISO 400

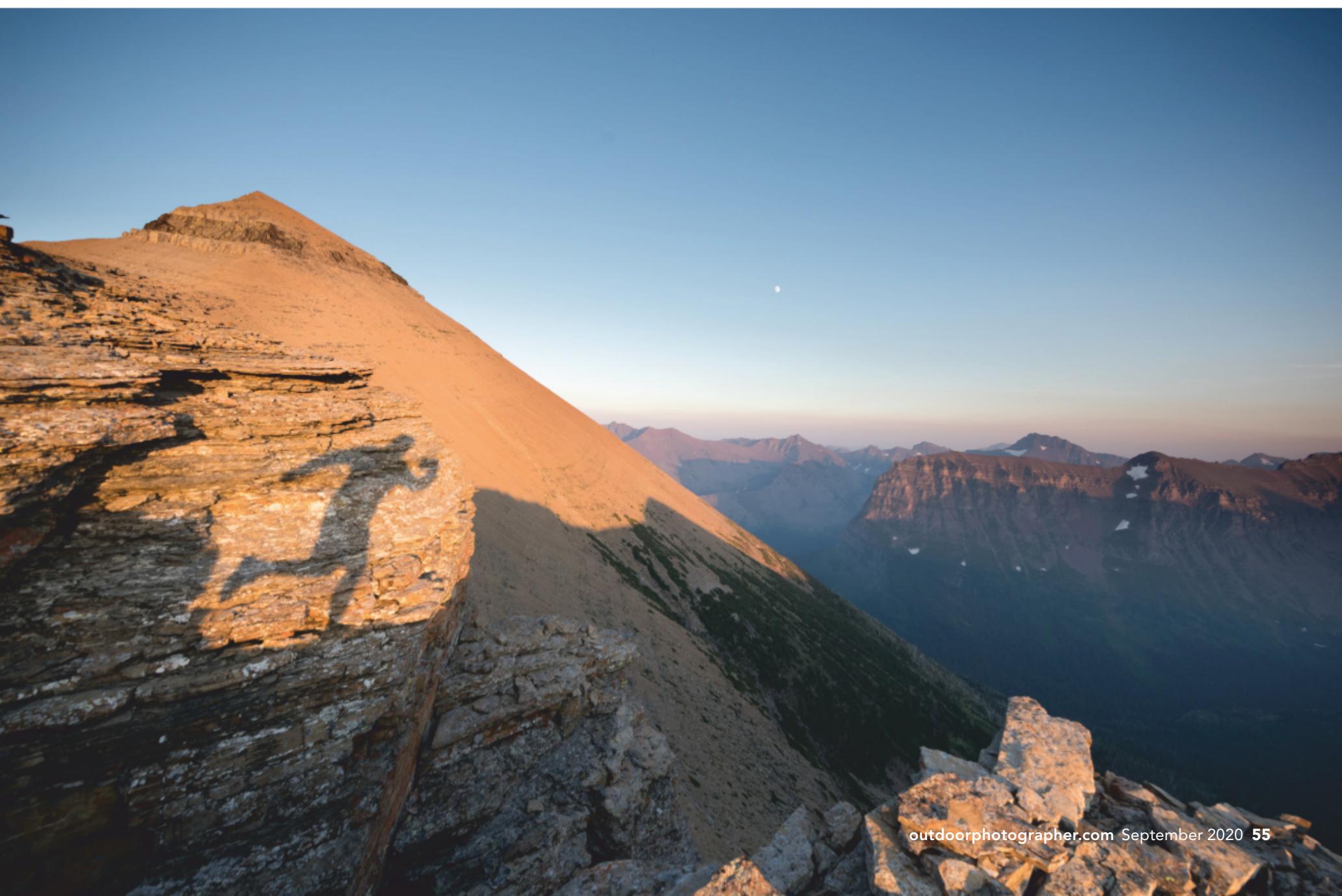
Here are two examples of how many stops of light are present in recognizable scenes. Direct daylight is one stop brighter than the light in the shadow of a cloud. The light in a night scene recorded during a full moon with no manmade light is 15 stops darker than daylight.

exposure and previewing the file with the histogram displayed. I prefer the second option, as I don't like the histogram showing in my viewfinder while I'm composing because it overlaps important subject matter. When I have the time to do so, I prefer to record a file and then adjust for the second image.

Most digital cameras can present the histogram in two formats, either as a single graph representing all three colors or as three separate graphs, one for each color (red, green and blue). For the best results, use the three-color display, which is more precise, especially if only one color is clipped. Typically, the red channel will clip while photographing the sunrise or sunset, and the blue channel will clip when photographing during blue hour.

#### Remember:

- Keep the data from clipping at either end.
- Keep the data as close to the right/bright side of the histogram as possible (except for low-light exposure).
- View your histogram in red, green





and blue (RGB) to know when specific colors are clipping.

Exposing to the right is very helpful when optimizing your exposure for the scene, especially when you don't want to use the HDR technique.

### How It Measures Up

To understand dynamic range, let's compare digital imaging with film. The average dynamic range of a sheet of film is between 5 to 6 stops. In today's digital cameras, the typical dynamic range is between 8 to 12 stops, with some sensors capturing up to 14 stops. The greater the number of stops between dark and light, the greater the dynamic range.

We often hear phrases such as "that photographer has an eye" or "that photographer can see a picture." These phrases refer to one's ability to previsualize the final picture before it's taken. First, you must be able to see the subject. Then you must be able to see the light. Then you must be able to see the composition. And, finally, you must know exactly what you plan to do in post-production. Only then are you able to turn that golden nugget into a beautiful work of art. As I mentioned previously, making good light into a great image requires three skills:

- Recognizing the quality of the light in any scene, especially the contrast ratio.
- Capturing the light for your camera with the optimal settings for the light

in the scene.

• Post-processing the file to achieve the artistic vision you set out to achieve when you took the picture. Acquiring these three skills takes years of experience observing light in the natural world and then reproducing it into a printed or displayed image. No matter how your work is displayed, your understanding of the light, your camera and post-processing will improve over time—but only if you work at it! OP

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This three-part article series is excerpted from *The Art of Luminosity* by Marc Muench, available as a free download at [muenchworkshops.com/ebook](http://muenchworkshops.com/ebook).



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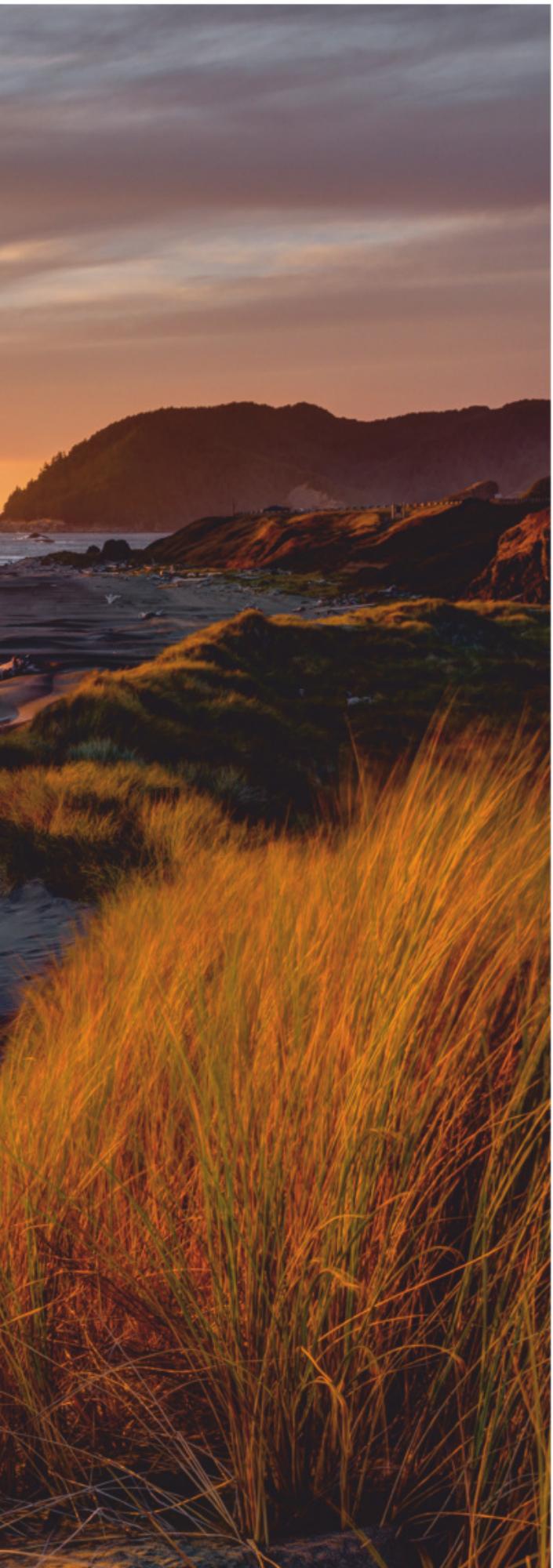
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## behind the shot

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► Canon EOS 5D Mark IV, Canon EF 24-70mm f/2.8L II USM. Main exposure: 1/8 sec., f/16, ISO 200, with one darker exposure and three brighter ones.



# Golden Hour On The Oregon Coast

Myers Creek Beach, Oregon

Text & Photography By Jeff Sullivan

The Oregon Coast contains varied seascapes of sandy beaches, bluffs and “sea stack” rocks separated from the rugged shoreline by wave erosion. Much attention is focused on the iconic Haystack Rock at Cannon Beach and the picturesque rocks on the beaches at Bandon, Oregon, but there are countless gems to be found with further exploration.

One particularly target-rich segment of the coast is the 12-mile Samuel H. Boardman Scenic Corridor between the towns of Brookings and Gold Beach on the Southern Oregon Coast. Just to the north lies Pistol River State Scenic Viewpoint and the Myers Creek Beach access, with low dunes and grasses, many sea stacks and a natural bridge.

The area is popular with windsurfers and kiteboarders on windy days, sightseers in the busy summer months and photographers at sunrise and sunset. On this mid-September evening, we had it to ourselves. With a light breeze and the sun shooting golden-hour light under thin clouds, I came across this scene with a curving ridge of sand providing a high contrast s-curve of sand and light, leading to an imposing sea stack and the additional sea stacks and undulating low dunes of the beach beyond.

The range of light from the haze-scattered sunlight to the shaded black sea stack was going to be too much for a single exposure, so I set my camera for automatic exposure bracketing to capture

five shots one stop apart from each other. Shooting in aperture priority at  $f/16$ , I estimated the hyperfocal distance at about 12 feet, providing a depth of field of 6 feet to infinity. My camera was over 4 feet off the ground, so everything from a few feet in front of the tripod to infinity should be sharp. The grass would be abstracted by movement in the wind anyway, and that would help direct attention to the warm, sharp sand dune ridge and sea stacks. I had a circular polarizing filter rotated to help cut atmospheric glare and increase contrast and detail in the clouds. That would cut two stops of light as well, helping with the beneficial grass movement.

The bracketed images were adjusted in Adobe Lightroom. The four darkest exposures adequately covered the range of light, so those were sent through Photomatix 6.1 to produce a TIFF file with higher dynamic range than a single exposure. The Photomatix result was then given a final adjustment in Lightroom prior to conversion to JPEG.

The Pacific Coast can be cool and cloudy or foggy on many summer mornings, but September can offer warmer, clearer weather before fall storms bring the rains that enable the fall salmon and steelhead runs in smaller streams. Like the salmon, I hope to return to the Oregon Coast each fall when the conditions are just right. **OP**

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See more of Jeff Sullivan's work at [jeffsullivanphotography.com](http://jeffsullivanphotography.com).

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## Crab Confrontation

"I was with my photography buddies at Sarasota's Lido Beach," says photographer David Bornmann. "We were there for one of our seasonal trips to photograph the terns and skimmers that nest on the beach each year. They nest in different colonies on the same beach south of my home in Oldsmar, Florida. We make a few trips each year to follow the growth of the baby birds. It's interesting to watch

the baby birds as they develop from a ball of fluff to the point where they fly away until the next year.

"I happened to spot two terns who seemed to be having an animated discussion with a crab about whose beach it was. There was a lot of posturing on the part of the terns. The crab just sat and listened, like I'm sure he had done many times before. The crab lives there year-round, and the

birds are just there to nest. After a lot of posturing and chirping, the crab retreated, and the terns went back to tending their babies."

► Olympus OM-D E-M1 Mark II,  
M.Zuiko Pro 40-150mm F2.8 with 1.4x  
teleconverter. Exposure: 1/320 sec.,  
f/4.5, ISO 200.

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See more of David Bornmann's work at [DavidBornmann.smugmug.com](http://DavidBornmann.smugmug.com).

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