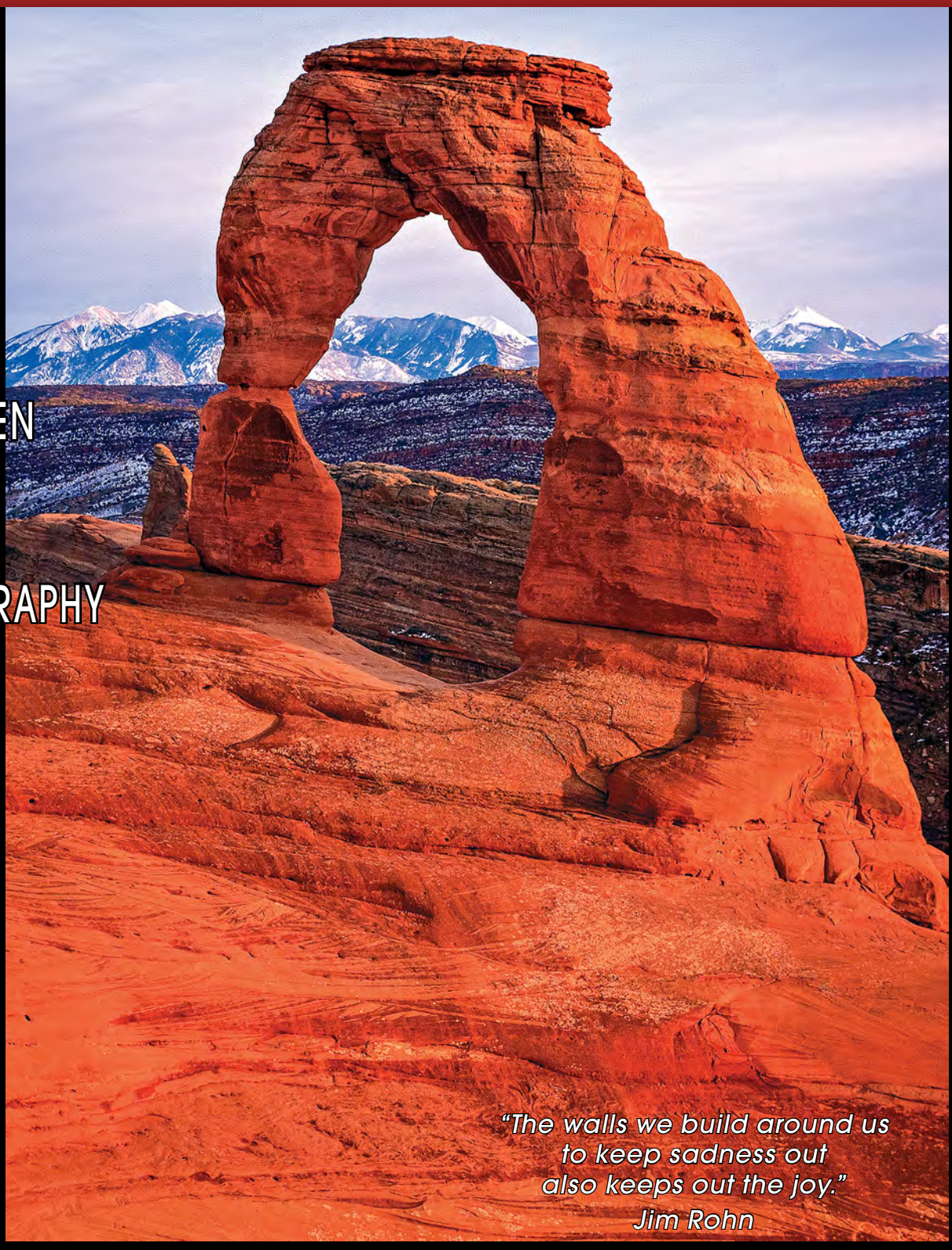
NATURE PHOTOGRAPHER

LOVE OF ICE

PATH LESS TAKEN

STAR PHOTOGRAPHY



DELUXE EDITION

FALL/WINTER 2014/2015

WELCOME TO NATURE PHOTOGRAPHER MAGAZINE

This magazine is the product of photographers around the world, both Editors and Field Contributors. Some of the people whose work appears in *Nature Photographer* are full-time working professionals while others photograph and write because of their passion for nature. We thank each contributor and also you, the reader. You bring us joy!

NATURE PHOTOGRAPHER MAGAZINE

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"As a single footstep will not make a path on the earth,
so a single thought will not make a pathway in the mind.
To make a deep physical path, we walk again and again.
To make a deep mental path,
we must think over and over the kind of thoughts
we wish to dominate our lives."
Henry David Thoreau

Cover: Delicate Arch, Arches National Park, Utah, by Thomas S. Parry, Field Contributor. Canon EOS 40D, Canon EF24-70mm F2.8L II USM lens, focal length 39mm, f/9 at 1/80 second, evaluative metering mode, auto exposure mode, ISO equivalent 400.

Thomas's web site: http://www.thomasparryphotography.com (Click for Live Link)

NATURE'S MAGNIFICENT BEAUTY

Sunrise along the Blue Ridge Parkway at the Looking Glass Overlook in North Carolina.

By
Jay OBrien,
Field Contributor.

Nikon D7100, Nikkor 18-250mm F3.5-6.3 lens, f/16 at 1/320 second, ISO equivalent 200.

Front Cover: Delicate Arch, Arches National Park, Utah
Thomas S. Parry, Field Contributor

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Jay OBrien, Field Contributor

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Sunset at Indian Beach on the Pacific Ocean, Ecola State Park, Oregon, by Bob Watson, Field Contributor. Nikon D800, Nikkor 16-35mm F4 lens, focal length 27mm, f/16 at 1/6 second, matrix metering mode, manual exposure mode, ISO equivalent 100.

NATURE PHOTOGRAPHER

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In memory of the pets who have shared each person's life. Since love is the basis of life, by cherishing and remembering their unconditional love we can heal when they cross over.

Jungle 4/6/1996-11/5/2007
Helen's and Marty's companion
Forever with us in love.

A Wild Horse on Assateague Island seen in marsh during mid winter, by Mark Hendricks. Canon EOS REBEL T3, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 365mm, f/8 at 1/320 second, evaluative metering mode, auto exposure mode, ISO equivalent 800.

Autumn has arrived in all her glory with the quiet beauty of winter to follow. Which of the seasons—winter, spring, summer, autumn—is my favorite? Yes. What? I said, "Yes, all are my favorite." I love living along the coast of Maine where summer is not excessively hot and winter is not too severe due to us being on the coast, plus spring is wonderful and autumn glorious. Wow, how blessed are we? Very blessed.

Marty has the opportunity to photograph the rugged coast in all seasons, and Phyllis (our precious little dog) and I enjoy the outdoors year-round.

During my free time I visit with horses and help with barn chores. Since I choose not to ride, my pleasures are as great on a cold snowy winter day as on a beautiful summer one. And, I am in love with a horse named Fern. Her photo with her coat shining like a new copper penny is at the right. She and I get to spend some pretty special times together after I finish my barn chores at First Light Farm Equine Rescue (FLFES) in nearby Perry. When I arrive Fern comes to welcome me and sometimes she even "nickers" (a horse hello). As a result she holds a portion of my heart in her "hoof" just like Phyllis holds part of it in her "paw." Fern loves when I massage and brush her. She follows me without any lead rope just to my right and slightly behind me in the perfect safe spot for a horse to follow. And better yet, she stops when I stop and waits patiently.

It is indeed a pleasure to volunteer at FLFES. The mission of First Light Farm Equine Shelter, a licensed, 501(c)(3) nonprofit shelter, is to provide a safe haven for horses and other equine species that have become victims of neglect, abuse or abandonment, or whose owners are no longer able to care for them. The main goal of FLFES is to rehabilitate and, if possible, rehome these animals through a comprehensive adoption process. If you are interested in information, please check out the FLFES public service advertisement on page 33.

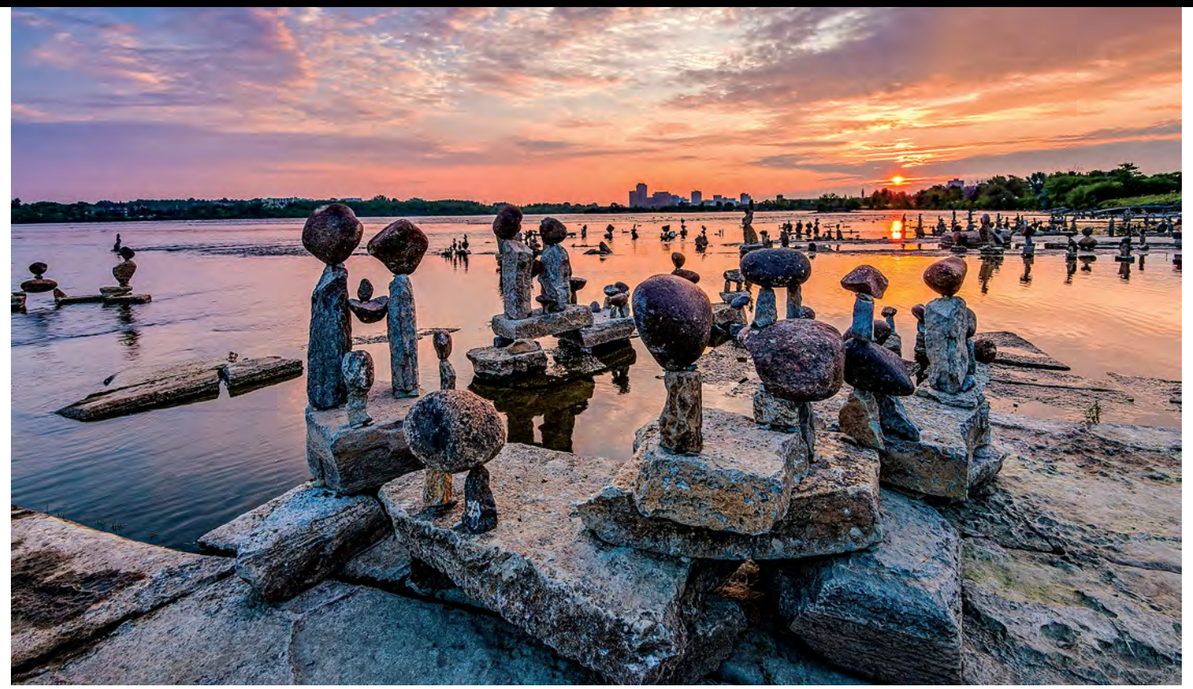
Thank you so much for your support of *Nature Photographer* and for reading it. Each of you is the reason this magazine exists.

Fern, First Light Farm Equine Rescue, Perry, Maine, by Helen Longest-Saccone.

Our wish for you is that nature's beauty brings smiles to your face, laughter to your lips, and peace and happiness to your life. Merry Christmas and a blessed 2015 with superb photography opportunities!

Love, Helen

Images by Marty Saccone.
Top: Desi and Helen.
Bottom: Phyllis and Helen.



River sculptures, Ottawa River, Ottawa, Canada, by Mike Bachman. Nikon D800E, Nikkor 16-35mm F4 lens, focal length 16mm, f/22 at 1/8 second, spot metering mode, manual exposure mode, ISO equivalent 100.

River Sculptures

Article and Photography by Mike Bachman, Field Contributor

Mike's web site: http://www.mikebachman.com (Click for Live Link)

In the stillness of the predawn, standing on the edge of the Ottawa River at Remic Rapids, I can almost hear the Voyageurs' chansons as they paddle up the Ottawa River. It is as if I am transported back in time sitting in the canoe with them. Sometimes you can literally feel history running through you and for me, this is one of those precious moments.

The Ottawa River is the oldest trans-Canada thruway. It was the canoe route to Lake Athabaska via the French River, Lake Nipissing, Lake Superior, Lake Winnipeg and the Churchill River. Up the mighty Ottawa travelled many explorers from Brule, Champlain and la Verendrye to Mackenzie, Thompson and Fraser. The Recollet and Jesuit missionaries went this way to and from Huronia in their attempts to convert the native people to Christianity. The fur traders, from the early *coureurs de bois* to the later brigades in big Montreal freighter canoes, paddled to and from the *"pays d'en haut,"* making this river their highway.

Now, this morning, as I stand by the edge of the water, all is silent! Only the river sculptures, myself and the geese and ducks are here to observe the comings and goings along this famous thoroughfare.

On any day from June to October many people gather to witness the annual construction of these sculptures. The area, just a few kilometers west of the Parliament buildings and downtown Ottawa, is readily accessible from the Ottawa River Parkway and a bike path that, for many kilometers, parallels the river. Bikers, joggers, hikers and now tourists gather to view the sculptures and watch as they are rebuilt each summer.

They were first created in 1986 by John Felice Ceprano. John came to Ottawa from Providence, Rhode Island, in 1978 to complete his degree in Fine Arts and so loved Ottawa that he stayed and became a Canadian citizen. From the early simple structures they grew into figures and then communi-

(Cont'd on page 10)

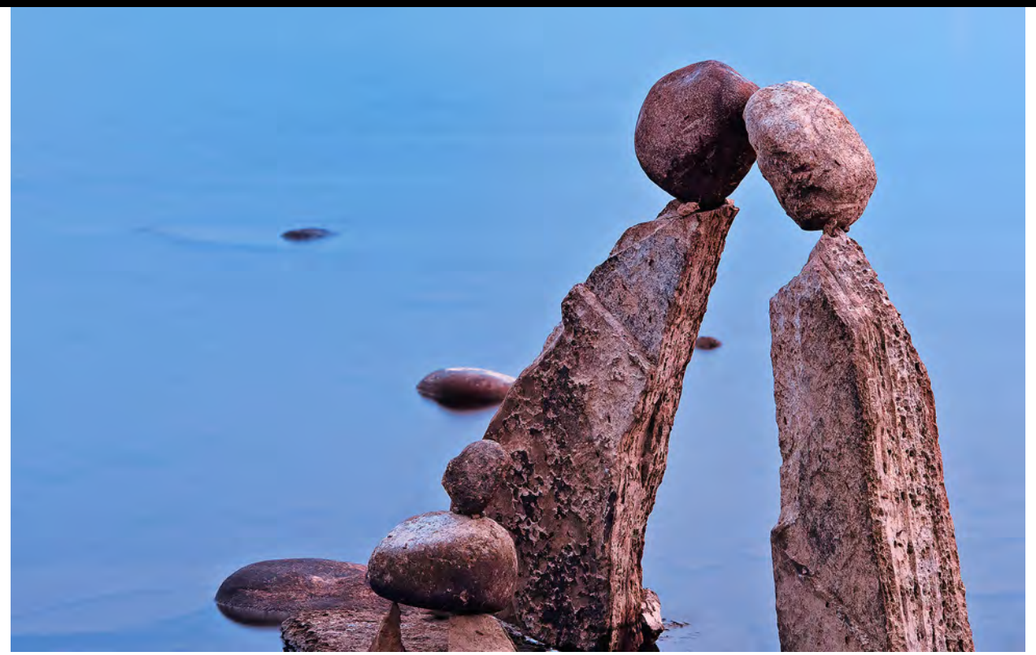
Digital capture by Mike Bachman

River sculptures, Ottawa River, Ottawa, Canada, by Mike Bachman.
Above: Nikon D800, Nikkor 16-35mm F4 lens, focal length 27mm, f/16 at 1/30 second, matrix metering mode, auto exposure mode, ISO equivalent 100.
Below: Nikon D700, Nikkor 14-24mm F2.8 lens, focal length 18mm, f/16 at 1 second, matrix metering mode, auto exposure mode, ISO equivalent 400.

River sculptures, Ottawa River, Ottawa, Canada, by Mike Bachman.
Above: Nikon D810, Nikkor 70-200mm F2.8 lens, focal length 98mm, f/22 at 2 seconds, matrix metering mode, manual exposure mode, ISO equivalent 62.
Below: Nikon D810, Nikkor 70-200mm F2.8 lens, focal length 135mm, f/22 at 0.7 second, matrix metering mode, manual exposure mode, ISO equivalent 62.

River sculptures, Ottawa River, Ottawa, Canada, by Mike Bachman.
Above: Nikon D810, Nikkor 70-200mm F2.8 lens, focal length 150mm, f/22 at 0.7 second, matrix metering mode, manual exposure mode, ISO equivalent 62.
Below: Nikon D800E, Nikkor 70-200mm F2.8 lens, focal length 130mm, f/5.6 at 1/60 second, matrix metering mode, manual exposure mode, ISO equivalent 100.

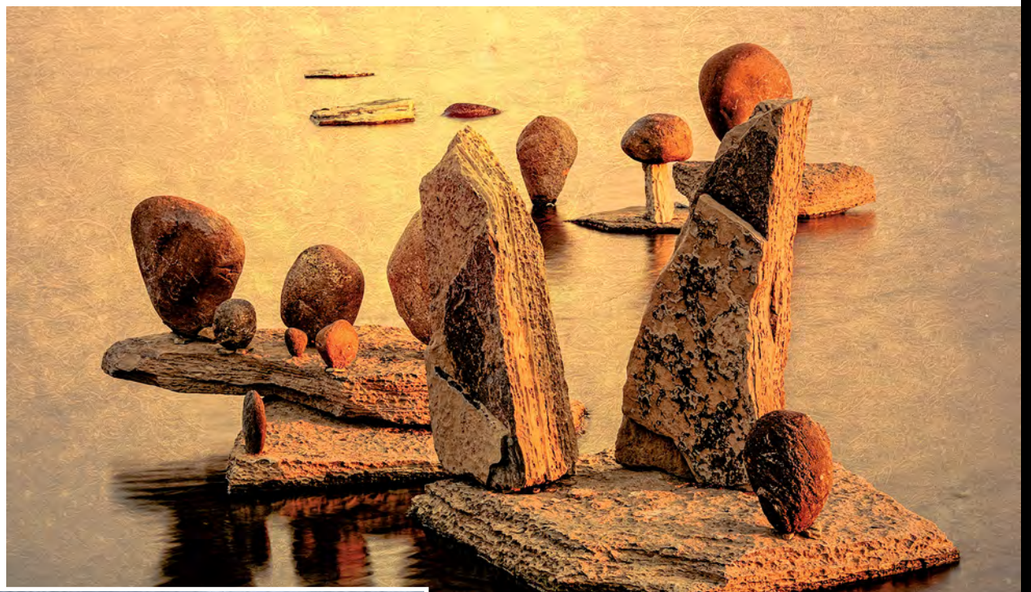
(Cont'd on page 12)



River sculptures, Ottawa River, Ottawa, Canada, by Mike Bachman.
Above: Nikon D700, Nikkor 70-200mm F2.8 lens, focal length 125mm, f/6 at 15 seconds, matrix metering mode, manual exposure mode, ISO equivalent 200.
Below: Nikon D700, Nikkor 80-400mm F4.5-5.6 lens, focal length 240mm, f/22 at 10 seconds, matrix metering mode, auto exposure mode, ISO equivalent 200.

(Cont'd on page 14)

ties of figures. They are assembled entirely by hand, using rocks found exclusively at this location. These rocks are heavily fossilized and have a rich variety of colors, textures and forms unique to this region. The structures are delicately and naturally balanced. Every year John returns to rebuild and the project continues until the beginning of winter when the ice and snow causes them to collapse. In recent years this project has grown in leaps and bounds, becoming a major summer tourist attraction in the National Capital Region. Now John is no longer the only artist as rock sculptors from North America, Latin America and Europe have come to participate in this annual festival in Ottawa. NP



River sculptures, Ottawa River, Ottawa, Canada, by Mike Bachman.

Above: Nikon D800, Nikkor 70-200mm F2.8 lens, focal length 116mm, f/22 at 1.5 second, matrix metering mode, manual exposure mode, ISO equivalent 140.

Left: Nikon D810, Nikkor 70-200mm F2.8 lens, focal length 135mm, f/22 at 2 seconds, matrix metering mode, manual exposure mode, ISO equivalent 14.

Valley of Fire

Article and Photography by Michel Hersen, Field Contributor

Michel's web site: Photographybymichel.net (Click for Live Link)

I have no trouble with the iconic photographic spots in America. I have taken pictures in these marvelous venues and undoubtedly will return many times. I do believe that it still is possible to make innovative photos (in the spirit of Ansel Adams) in the Grand Canyon, Yellowstone, and Yosemite. However, we are blessed to live in a very large country that is replete with wonderful scenic opportunities that have not been tapped to their fullest potential photographically.

Do you wish to avoid wall-to-wall photographers as is the case of that famous spot in the Maroon Bells? Are you tired of being rushed through Upper Antelope Canyon by the guides, with hundreds of people packed in that narrow slot canyon getting desert sand all over your equipment? Are you upset by the tripods of fellow photographers that keep on popping into your pictures at Schwabacher's Landing in the Grand Tetons? (No wide angle shots here.) Do you still hope to get that pristine shot at Delicate Arch in Arches National Park without human presence? Are you disappointed that you didn't get the choice spot at Mesa Arch in Canyonlands National Park for that sunrise shot even though you got up at 4:00 a.m. to reach the viewpoint?

If the answer is yes to any of the above, I would like to suggest an alternative that I just recently began to explore: the Valley of Fire State Park in Nevada. Only 55 miles northeast of Las Vegas and located within the confines of the Mojave Desert, this state park contains over 35,000 acres. The main road through the Park is 10.5-miles long, connecting the East and West entrances. In the middle of the Park, from the Visitor's Center, the shorter road known as the Scenic Drive proceeds north to the Petroglyph Canyon, Rainbow Vista, Fire Canyon, the White Domes, Striped Rock, and the Fire Wave. A geological wonderland, there are beautiful rock formations of sandstone, limestone, shale, and conglomerates. At sunrise and sunset the sandstone formations simply glow, hence the appellation: Valley of Fire.

The Valley of Fire, albeit a desert, is not without its flora. Throughout the park you will see burro bush, creosote bush, brittlebush, beaver tail, and cholla (the so-called jumping cacti). In spring, assuming some prior rainfall has taken place, desert marigold, indigo bush, and desert mallow will be in bloom. Although photography is possible anytime of the year, the best seasons are autumn, winter, and spring when the temperature is moderate. It simply is much too hot in the summer, with highs exceeding 100 degrees most days.

And, the Valley of Fire has abundant wildlife, primarily nocturnal, that includes coyote, kit fox, jackrabbit, skunk, antelope ground squirrel, snakes, lizards, bobcat, and bighorn sheep. Desert tortoises also inhabit the Park but are rarely encountered. On our last trip to the Park my wife spotted a bighorn sheep near the side of the road on the Scenic Drive, and I had just enough time to get my camera, change the settings, and photograph this animal scampering away amidst the brilliant red rock landscape.

The Valley of Fire has a rich cultural history, being the home to Basket Maker people and the Anasazi. Throughout the valley petroglyphs can be seen depicting hunting images, dating from 300 BCE to about 1150 CE. Indeed, one of the shorter hikes, to a place of stored rainwater known as Mouse's Tank, is through the Petroglyph Canyon. Along the hike there also are many possibilities for taking shots of abstract patterns, especially in the morning when the red rock is illuminated.

Let me now illustrate some of the specific scenic wonders found in the Valley of Fire. In most of the illustrations that follow I was the only photographer on site. The Fire Wave, close to the end of the Scenic Drive, is probably the most sought after spot in the Park. To get to the Fire Wave there is a relatively easy .6-mile hike that hugs around some of the large monoliths. Looking like a strawberry swirl ice cream sundae, this scene is a photographer's dream. Mainly a late afternoon and early evening shot, I photographed some where the setting sun illuminated a portion of the Fire Wave and the surrounding sandstone cliffs and a number from the top in more even light zooming in and out. I also hiked down below the Wave and caught the golden evening light on its backside. On the way to the Fire Wave I had hiked down a striated red and white rocky area, using it as a long foreground to the distant Gibraltar Rock, with the tip of the rock catching the last rays of the sun. And, after an extended shoot of the Fire Wave and the uphill return, the alpenglow on the distant eastern mountains with a peach colored sky caught my eye, and I had to stop and capture the moment. What can I say; it is like a kid being given free access to the candy store.

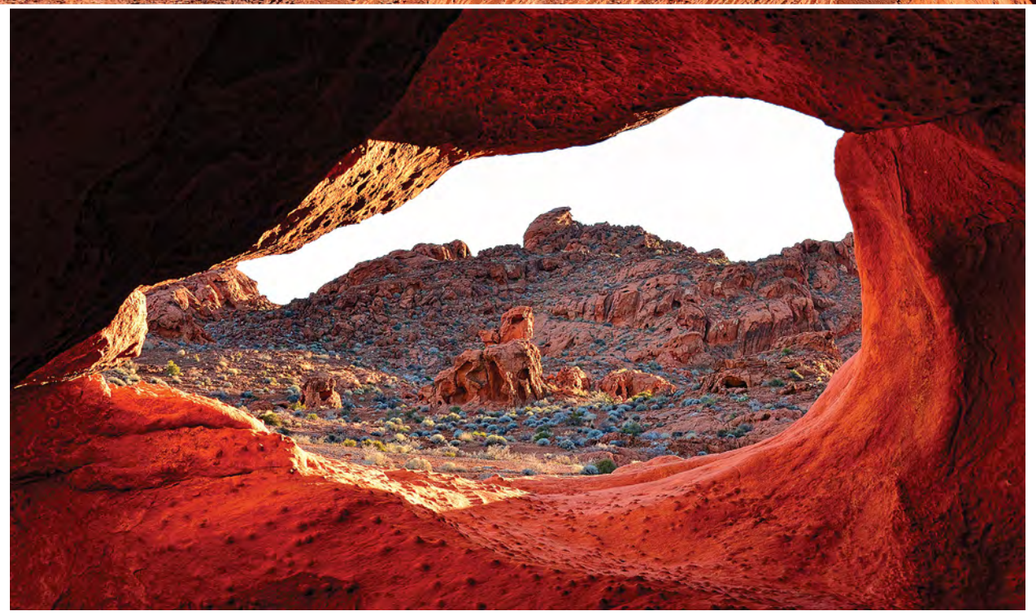
As previously mentioned, the Scenic Drive goes north from the main road and is aptly named. Early in the morning after sunrise the landscape is bathed in a golden light and

Valley of Fire State Park, Nevada, by Michel Hersen.

Left: Bighorn sheep, Nikon D 7100, Nikkor 18-200mm, focal length 200mm, f/16 at 1/100 second, Hoya circular polarizer, ISO equivalent 400, handheld.

Below: Fire Wave. Nikon D 7100, Nikkor 18-200mm, focal length 200mm, f/18 at 1/9 second, Hoya circular polarizer, ISO equivalent 200, Gitzo tripod with Arca-Swiss head.

Digital capture by Michel Hersen



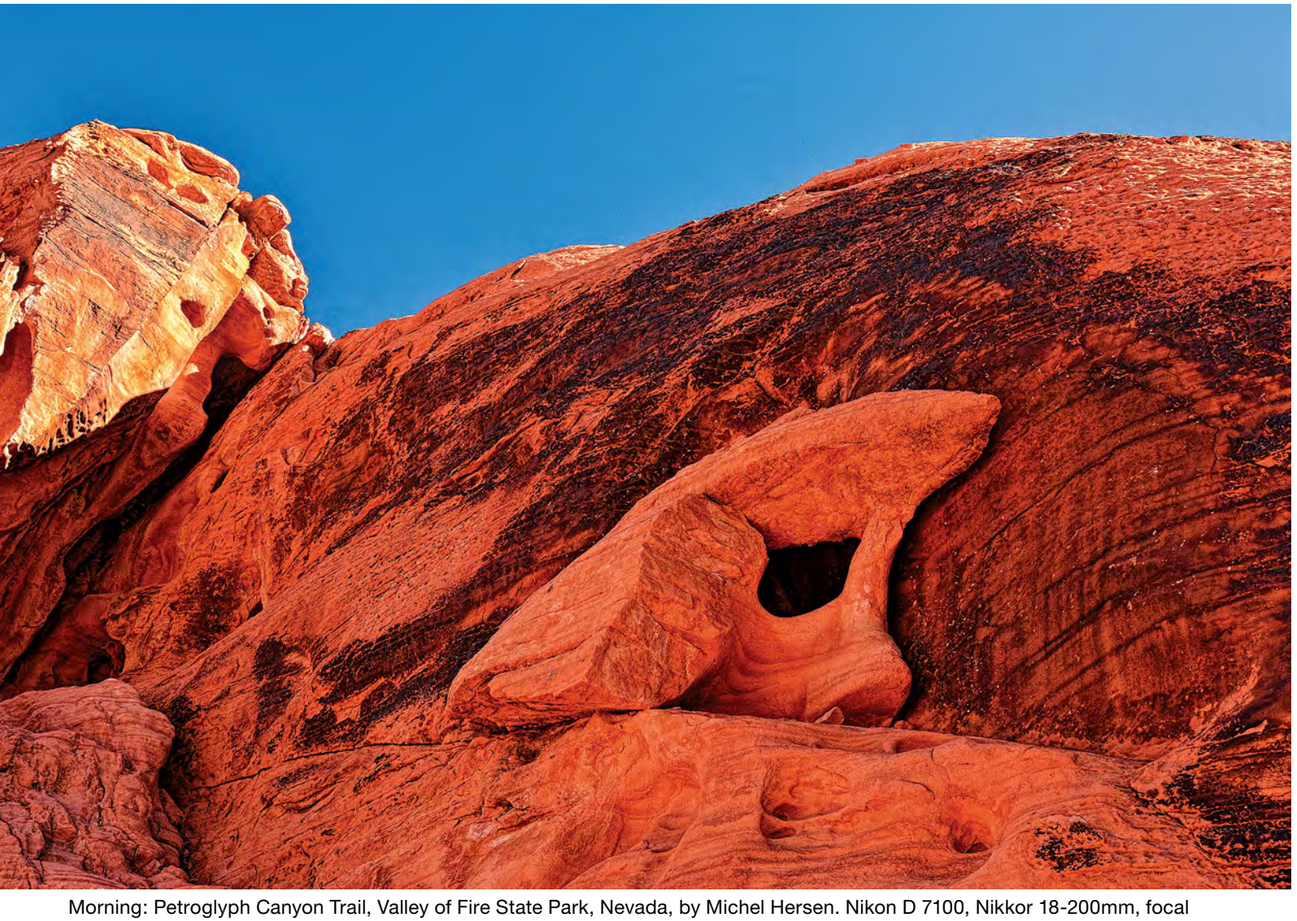
Valley of Fire State Park, Nevada, by Michel Hersen.
Below: Elephant Arch. Nikon D 7100, Nikkor 18-200mm, focal length 70mm, f/18 at 1/100 second, Hoya circular polarizer, ISO equivalent 200, Gitzo tripod with Arca-Swiss head.
Facing Page Top: Arch Rock. Nikon D 7100, Nikkor 18-200mm, focal length 70mm, f/16 at 1/40 second, Hoya circular polarizer, ISO equivalent 200, Gitzo tripod with Arca-Swiss head.
Facing Page Bottom: Through the Arch: Visitor's Center. Nikon D 7100, Nikkor 18-200mm, focal length 70mm, f/20 at 1/6 second, Hoya circular polarizer, ISO equivalent 200, Gitzo tripod with Arca-Swiss head.

there is a panoply of color. The road leads to an area known as the Striped Rock, named for obvious reasons, and here too the colors of the artist's palette are ever present. The Valley of Fire is home to over 400 arches, most of which have never received photographic attention. It is only a matter of hiking and finding them in good light. Indeed, I should point out that there are relatively few restrictions for hikers other than to avoid climbing on the more fragile arches. Two of the better known arches are Arch Rock and Elephant Arch. In proper light the contrast between the red rock and the blue sky is wonderful. It also is possible to frame the landscape by photographing from within an arch. There is a very small arch on the eastern side of the road just before the Visitor's Center that most people ignore. From the outside it certainly does not look very imposing. But both in the morning and afternoon one can crawl into it and use the nicely illuminated arch walls as a framing device for the more distant landscape. I also used this framing device for the distant landscape from the open window of one of the cabins not far from the main road. These cabins were constructed during the Roosevelt era by the Civilian Conservation Core in the 1930s to provide shelter for passing tourists.

The Fire Canyon, about half way up the Scenic Drive, is an excellent venue to photograph early morning light hitting the sandstone peaks. At dawn the spectacle that unfolds is absolutely enthralling. Again on the Scenic Drive the area known as Rainbow Vista is a striking display of color, especially in late afternoon and early evening. The opportunity for photographing colorful abstract patterns and scenics abounds. As can be seen from the illustrations, the title Rainbow Vista is justifiably applied given the pastel palette that emerges at the golden hour.

There was a scene that caught my attention at the evening hour. Just off the road on the Scenic Drive at the beginning of the path leading to the Fire Wave I found a pastel colored rock formation that glowed in the soft light and also provided me with ample opportunity to capture its varying moods, including one with subtle earth shadow. The next gift may be just around the corner.

In summary, I plan to visit the Valley of Fire again. I think I have only scratched the surface here in terms of photographic possibilities. I would encourage others to do the same, especially if color and great light is your mantra. NP



Morning: Petroglyph Canyon Trail, Valley of Fire State Park, Nevada, by Michel Hersen. Nikon D 7100, Nikkor 18-200mm, focal length 70mm, f/16 at 1/30 second, Hoya circular polarizer, ISO equivalent 200, Gitzo tripod with Arca-Swiss head.

Preparation Is the Key
Do Some Winter Homework!

Article and Photography by Joe McDonald, Editor

Joe's and Mary Ann's web site: http://hoothollow.com/index.html (Click for Live Link)

Raccoon, Hoothollow, McClure, Pennsylvania, by Joe McDonald. Canon EOS 1D Mark IV, Canon 70-300mm F4-5.6 IS USM lens, focal length 112mm, f/7.1 at 1/250 second, ISO equivalent 400. Four Manual Flash Units set at 1/16th power. Camera triggered by a Cognisys Range IR infrared beam.

Gray squirrel, Hoothollow, McClure, Pennsylvania, by Joe McDonald. Canon EOS 1D Mark IV, Canon 70-300mm F4-5.6 IS USM lens, focal length 81mm, f/8 at 1/250 second, ISO equivalent 400. Four Manual Flash Units set at 1/16th power. Camera triggered by a Cognisys Range IR infrared beam.

Digital capture by Joe McDonald

While going into autumn may not seem to be the most opportune time to be talking about spring and summer subjects, preparing for those upcoming seasons certainly is. I say this because, just recently, I finished teaching a photo course dealing with flash and camera remote triggers, and while some of the participants had the proper gear, most did not know how to use what they had. By the time the course ended, summer was waning and the opportunity to really exploit the gear they had was quickly disappearing. The winter months, when distractions might be a bit less for many of us, is the perfect time to get to know, practice, and master unfamiliar gear or concepts.

My students only had a week to do this, although they did have the advantage of my instruction in explaining concepts and in demonstrating the use of the various equipment. I had several projects available that my students could work on, and while they enjoyed varying degrees of success their efforts motivated me to work on the same projects after the course was completed. Too frequently other demands distract me, but motivated by their enthusiasm I decided to apply what I taught to my own projects. Fortunately the frequent rain and thunderstorms that often stymy some of my outdoor projects held off, giving me several days to work. I'll outline a few of those projects here, in hopes that some of you may have a chance to practice these lessons this winter or perfect the techniques involved so that you can use them next spring.

For years I've thought about, and lazily put off, photographing flying insects at night using an infrared trigger and flashes. Setting this up to demonstrate to our students was easy, and once the gear was set up I really had little excuse not to run a flying insect trap nightly. I wish I had done so earlier in the season, when the bigger moths, like the huge cecropias and beautiful lunas, were about, but even in midsummer several moths and many other insects were still flying. The setup for that shoot was surprisingly easy.

I used four electronic flashes set on Manual Mode, with the Power Ratio dialed down to 1/64th power. For this project and most of the others that follow I set the flash on Manual Mode rather than TTL so that I was assured of a specific flash

duration. On TTL, the flash exposure is determined by the flash duration, which is based upon the aperture used, the flash to subject distance, and the position, reflectivity, and size of the subject itself. Flash duration functions like a shutter speed, and if a flash is on too long, analogous to a slow shutter speed, motion may blur. Fast flash durations are like fast shutter speeds, and stop the action. Some photographers get tripped up with this concept, since even a slow flash is still emitting a fast or very short burst of light, and at the slowest that flash duration is likely to be around 1/1000 second. Action-stopping flash speeds for fast-moving subjects, and a flying insect, up close, certainly qualifies here, may need to be at 1/15000 second or so.

At night, for these insects, there was no ambient light so any shutter speed slower than the flash synch speed could be used. However, during the day, ambient light can play a role, and your ISO, aperture, and shutter speed may be such that ambient light will be recorded in addition to the flash exposure. This results, essentially, in recording two exposures, one by the fast flash, and another by the slower shutter. Most synch speeds are 1/300 second or less, and for most active subjects that shutter speed isn't sufficient to stop action. The flash will, but if ambient light registers, too, you'll record a blur. This is commonly called ghosting.

Since TTL flash durations vary based upon the three factors listed above, if a particular flash duration is too slow, blur will occur for a fast moving subject even when the sole light source is the flash. This will not happen on Manual Mode when you adjust a flash to a particular power ratio, because each adjustment changes the flash duration by a fixed amount. On full power, the flash will fire at its slowest duration, or longest, depending upon how you look at this, and that flash duration may be 1/1000 second. As you dial down the power ratio from full power down to as low as 1/128th power with some flashes, the flash speed increasingly shortens, using the shutter speed analogy, the flash is faster. One can dial down the power ratio until the flash duration (speed) is sufficient to stop the action. You might wonder why you don't simply dial down to the lowest power ratio, but as the power ratio decreases, the light intensity decreases. Thus, a flash has to be closer, or a higher ISO used, or a wider aperture set to accommodate for this.

Dialing my flashes down to 1/64th power provided an extremely fast flash duration, perhaps as fast as 1/30000 second, more than enough speed to freeze the motion of a flying insect. I positioned these flashes around a target area where I aimed a Cognisys Range IR, an infrared tripping device that can fire either a camera or a flash. Here's important Lesson Number One. When any camera-tripping device fires a camera there is some lag time between the time the device signals the camera to fire and the camera actually fires the shutter. This is because the camera's mirror (assuming we're using an SLR) must flip up and out of the way, the lens aperture must close down, and the shutter must open. This lag time can be significant, as slow as 1/20 second or slower in some cameras, and rarely faster than about 1/60 second. That means something can break a beam and be long gone before the picture is taken. I'll address this problem with one of the other projects shortly, but lag time is not a problem if a flash is wired directly to the trigger. Then, when a beam is broken, the flash fires virtually instantaneously, as there is no mechanical delay, only the speed of electrons traveling at the speed of light to trigger a flash. At night, for flying insects, that method is the solution, and all that is required to record an image is for the camera's shutter to be open at the instant the flash fires. To insure that happens, I simply set my camera's shutter for a 15-second exposure, placed the camera drive on continuous, set my electronic release to the locked position, and the camera fired 15-second exposures throughout the night. Of course, most of those frames were blank because no insect flew into the beam and triggered the flashes. But out of the thousand plus shots I made each night, I would have at least 30 shots where some insect flew into the beam and into my lens' angle of view and I caught some interesting shots.

For these insects I used a 100mm macro lens, although a longer macro, or a small telephoto or zoom lens with extension tubes would have worked as well. Macro lenses focus to 1:1, or life-size, but that magnification would provide too limited an area, and too shallow a focus, to be effective. Instead, I backed off to about a 1:3 magnification, one-third life-size, which gave me more coverage and better depth of field. It's been said many times before in this magazine, but it bears repeating—as image size increases, depth of field decreases. So it is actually counterproductive to come in tight for a true macro shot when doing so reduces your area in focus.

The Range IR is sensitive enough that even a mosquito would trigger the flashes, but I was more interested in larger moths and other nocturnal flying insects. I positioned the flashes close enough to my target area so that I had plenty of light, even at a low power ratio, to provide great depth of field. This helped insure that if a part of an insect broke the Range IR beam the depth would carry for the insect to be sharp. Focus Stacking wasn't an option here! Each flash was mounted on a lightstand, the Range IR on a Manfrotto Articulating Arm, and the camera on a Really Right Stuff tripod, with the electronic release on. Every morning I retrieved my card, and after a quick edit in BreezeBrowser culling out all the blank images, I would have a bundle to further check for critical sharpness. The results were wonderful, and I can't wait to do this again next year, starting in early summer, when I'm a bit less pressed for time.

Now, on to another project. All summer I have been filling a feeding station on one of our porches with mealworms. Tufted titmice, Carolina wrens, blue jays, and Eastern phoebes visited the feeder so often that I would go through 20,000 mealworms in a three-week period. After only a few days, I had these birds habituated to landing on a small stump where the mealworms were located, and it was an easy task then to position flashes and a camera tripper to catch birds as they landed on the perch. Most of the students attempting this project were a bit greedy, trying to catch a bird in flight before they first mastered the equipment and the beam to simply capture a bird on the perch. If they accomplished that task first, and they gained an understanding of how the infrared beam on a Range IR worked, it would be an easy progression to the next step, catching the bird in flight.

Some students were successful, and some less so, but the lesson here is that it's best to work in steps, moving from a relatively easy task to a more difficult one, and mastering exactly how a camera-tripping beam works is the

Eastern box turtle, Hoothollow, McClure, Pennsylvania, by Joe McDonald. Canon EOS 1DX, Canon 100mm F2.8 Macro IS USM lens, f/20 at 1/200 second, ISO equivalent 400. Four Manual Flash Units set at 1/8th power.

key. In contrast to the nocturnal flying insect project where an insect broke the Range IR beam which fired the flashes instantaneously, in this case the Range IR had to be wired to the camera. With the insects, long shutter speeds of 15 seconds were possible, since we were working at night. The birds were flying during the day, and the shutter speed had to be fast enough to underexpose the ambient light so that the image would be exposed by, and captured, only by the electronic flashes.

Remember, when a camera is wired to a camera-trigger like the Range IR there is a lag time. The best first step would be to simply catch a bird perched at the feeder so that a basic understanding of the equipment is attained. Once that is accomplished, the Range IR can be positioned progressively further and further away from the perch, still aimed so that the bird flying in is likely to break the beam, and at some point during this progressive beam placement the camera would capture a bird with its wings out, either about to land or still in flight. Those students not working progressively aimed the beam too far away to have any luck, while those who worked in progressive steps were successful.

After the course I repeated the exercise, working in sequential steps using just three flashes set on Manual Mode at a 1/16th power ratio. I captured several exciting shots.

An easier project was photographing raccoons at night or gray squirrels during the day that crossed a small pond outside our studio. Just as with the birds, lag time could be an issue since the Range IR had to be wired to the camera. For the raccoons the lag time made little difference since these husky mammals just ambled along, moving little from the time they broke the beam. The gray squirrels were a different issue, often racing across the log and passing beyond my lens coverage before the camera fired. It took several attempts to position the Range IR beam in order to catch a squirrel, but like any other problem, it was solved through trial and error.

Our gardens were treated to an influx of intriguing diurnal moths appropriately called hummingbird moths, but also known as clear-winged sphinx moths or Nessus sphinx moths. The challenge here did not involve a camera trap but simply hard work, following the moths as they went from flower to flower, and trying to get close enough to catch

Hoothollow, McClure, Pennsylvania, by Joe McDonald

Above: Eastern phoebe and tufted titmouse. Canon EOS 1DX, Canon 70-300mm F4-5.6 IS USM lens, focal length 135mm, f/25 at 1/200 second, ISO equivalent 400. Three Manual Flash Units set at 1/16th power. Camera triggered by a Cognisys Range IR infrared beam.

Facing Page: Sphinx moth. Canon EOS 1D Mark IV, Canon 100mm F2.8 Macro IS USM lens, f/22 at 1/200 second, ISO 800. Two Canon Twin Light flashes mounted on a Really Right Stuff FR-87QR flash bracket, TTL flash set at 0 compensation.

Virgin tiger moth, Hoothollow, McClure, Pennsylvania, by Joe McDonald. Canon EOS 1D Mark IV, Canon 100mm F2.8 Macro IS USM lens, f/22 at 15 seconds, ISO equivalent 400. Four Manual Flash Units set at 1/64th power triggered by a Cognisys Range IR infrared beam.

these fast-moving moths in focus. For this type of work TTL flash really shines, as the working distance can vary, making a manual mode flash exposure problematic. Flash duration isn't much of a problem either, since the flash to subject distances are always reasonably close, insuring the flash burst will be a short duration. I used a Really Right Stuff macro flash setup and two Canon Twin Lights with the camera mounted on a monopod to support the rig as I waited for a foraging moth to come close. While a ballhead can be mounted to a monopod, I have found that a dedicated monopod head works best since I have more control over the camera's position. With a loose ballhead the camera or lens may flop, but with the MH-01Pro monopod head that's not an issue. That head is also the one I use for gorillas or for working from boats.

Two very ambitious students tried photographing mammals that might walk across a large fallen tree trunk that spanned a small stream on our property. Having positioned a game camera earlier, I knew the tree trunk functioned like a mammal highway, with raccoons, opossums, mink, gray fox, porcupine, and even a bobcat using the log, although on any given night nothing might cross via the tree. The students hoped to illuminate the stream and the log to capture a sense of ambience rather than just a straight portrait, but when I checked on their work I discovered that they failed to envision how the light would look and it was very flat and uninteresting. Because they were going to photograph at night, they mistakenly believed they would have to wait until dark to test the flashes. They didn't. Had they underexposed the ambient light, they could have made a test shot. To underexpose the ambient light would have required a few steps, including lowering the camera ISOs and going to the fastest flash synch speed. That may not have been enough and they may have had to close down the aperture, too, which might underexpose their flash exposure. However, they could have solved that by increasing the power ratio of the flashes just for the test to get the right light for a smaller aperture. Instead, they were going to wait. Fortunately they still had an hour before dark to make the corrections, but it was a stressful hour, and with a storm predicted they couldn't leave their gear out all night. They didn't have luck, but to add insult to injury, when they went to retrieve the gear they spooked a porcupine just seconds before it would have crossed the log!

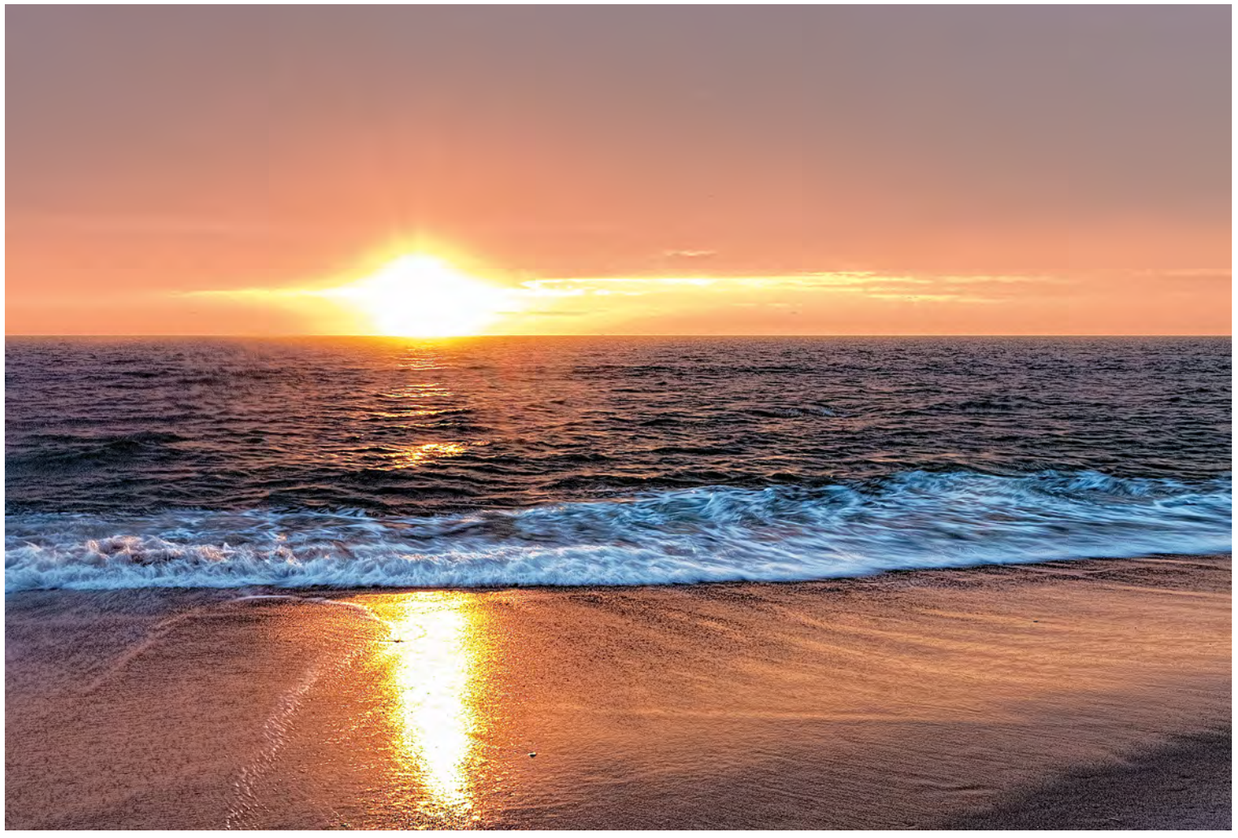
Motivated by their sighting the porcupine I tried the same setup a few nights later. This time, I tested my light arrangement long before dark, then reset the flash power ratios to a lower ratio so that the flashes would recycle faster. Good weather was forecast, so I had the advantage of having the camera and flashes out all night, and I caught a porcupine, raccoon, and opossum for my efforts.

Admittedly, the idea of testing the flash exposures in the manner just described might not occur to a beginner, but that's the point of this story and the others from the course. During the fall and winter anyone really interested in doing this type of work can experiment, practice, and perfect techniques that can be applied later in the field. In our course, I set up word problems that would describe conditions a photographer might face in the field, and I would recommend interested photographers in doing something similar, outlining the conditions and then working out a solution based upon that data. Believe me, if you wait until you are on site, faced with real conditions, you may not only be unprepared, you're quite likely to be overwhelmed. This doesn't have to be—practice truly does make perfect! NP

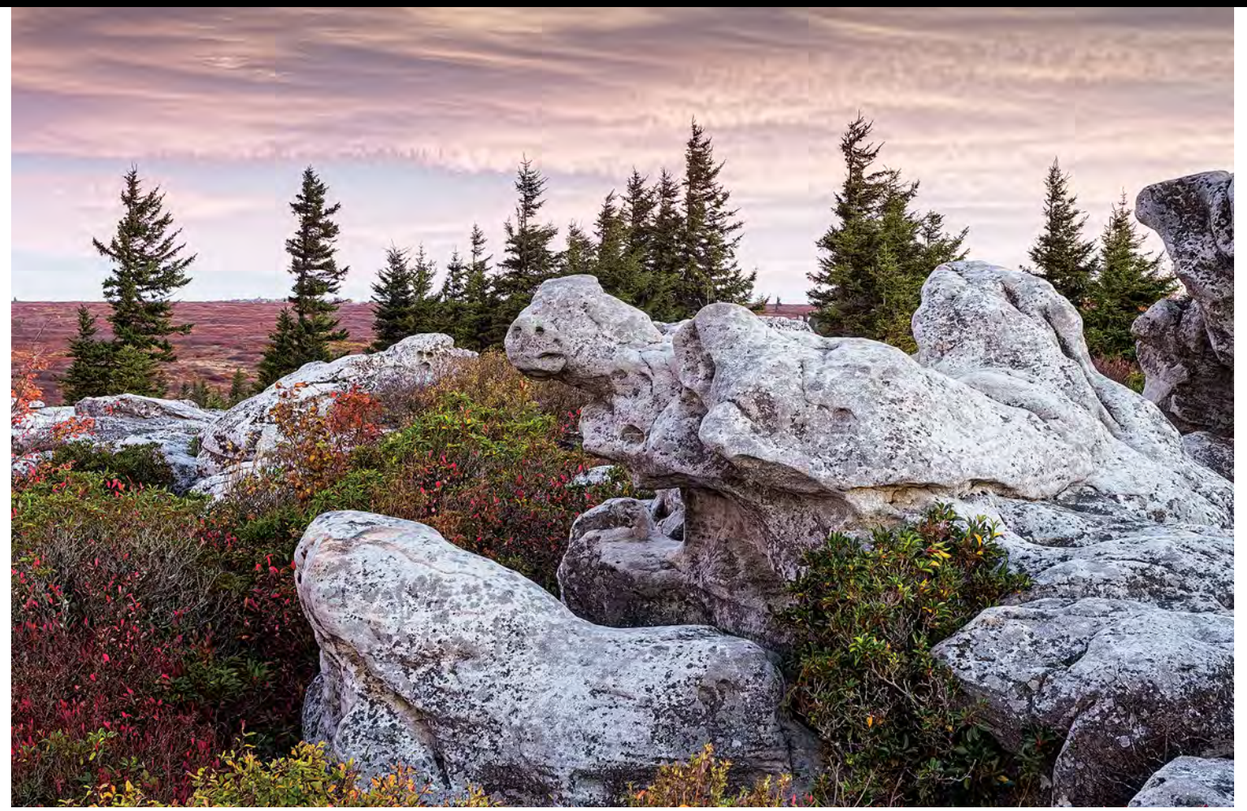
An Icon of the Wild
Galen Rowell's Enduring Influence

Article and Photography by Mark Hendricks, Field Contributor

Mark's web site: http://markhendricksphoto.com (Click for Live Link)



Digital capture by Mark Hendricks



Images by Mark Hendricks

Above: The Dolly Sods Wilderness features plants and animals more commonly found in Canada. This image shows blueberry, huckleberry, cranberry, sandstone, and red spruce that make up this most unique wilderness. Canon EOS REBEL T3, Canon EF17-40mm F4L USM lens, focal length 40mm, f/11 at 0.6 second, evaluative metering mode, auto bracket exposure mode, ISO equivalent 200.

Facing Page: Dawn storm break, Assateague Island. A rainstorm had gone on all night and as it continued a brilliant sunrise broke over the horizon. Canon EOS REBEL T3, Canon EF17-40mm F4L USM lens, focal length 23mm, f/11 at 1/8 second, Galen Rowell 3 Stop Hard Edge Graduated ND filter, evaluative metering mode, auto bracket exposure mode, ISO equivalent 100.

It is hard to fathom that it has been over twelve years since the world lost the great Galen Rowell. He was the ultimate adventure photographer, a master of prose, and led the crusade against falsification in nature photography before most consumers owned a computer. At a time when so many mountain photographers utilized cumbersome large format equipment, Galen preferred the 35mm SLR because it was lightweight and allowed him to move through the landscape with ease. He held a number of first ascent records in mountaineering, was the oldest man (at 57) to climb Yosemite's El Capitan in a single day and completed a book on Tibet with the Dalai Lama; but beyond his many accolades Galen's legend is that of the archetypal explorer, humanitarian, and intrepid mountain climber. His great talent in writing on photography and adventure travel allowed him to express a deep connection to wilderness that resonated with many.

I have no formal training in photography; the great outdoors is the classroom. Others may augment their learning with workshops and online classes. While these are worthy pursuits, they can be financially burdensome to those without disposable income. Luckily Galen was incredibly voracious in his ability to write profoundly on the complete photographic process. From his classic volume on outdoor photography, *Mountain Light,* to his numerous books and articles on adventure and travel, Galen's insightful words rank among the best "textbooks" for both the amateur and professional photographer alike. In our overly tech-happy world, where Photoshop is more often used as a verb than in reference to a software package, the writings and philosophy of Galen Rowell are perhaps more important now than when they were when first published.

This is not an opine longing for the days of yore; I love digital photography. Nor is this a biographical piece. Details about Galen's amazing life abound in many printed works and blogs. However, it is a tribute to one man's philosophy that has influenced my work more than any other. Galen

embraced technology, such as digital printing, but his ideas transcend the mediums of film or digital sensors as a means of recording light.

We are in the midst of exciting times as camera technology gets more and more impressive. Yet the constant bombardment of the new, most up-to-date equipment has begun to leave me a tad neurotic. ("You mean we have ok image quality at ISO 204,800?!") Yearning for the latest camera gear is fine, as we should always strive for quality equipment, but it will never be as important as passion, familiarity with the gear we own, and the emotional response that is elicited from a subject. This is what Galen Rowell has taught me, and unfortunately, I never got the chance to meet him.

Galen documented wilderness and life all across this big blue marble but he is perhaps most known for his work in the Sierra Mountains of California and in Tibet. This is a far cry from the mid-Atlantic region of the eastern United States where yours truly was born and raised. Yet, when I admire a Galen Rowell image I become enthralled with a desire to be within the scene itself, almost like an awakening of the collective unconsciousness that is adrift in the wild all humans share. He was the first photographer who convinced me of the emotional power that can be contained in only one image. Additionally, he was the first photographer whose books I looked forward to reading as much as viewing the images. Because of his talent as a writer he ingrained many quotes in my mind. These are but some of the quotes of Galen's I cherish and I hope their interpretation through my journey inspires you to learn from this great master of the camera. I am better for it and I believe you will be as well.

"(Photography) evolved from an intense devotion to mountains and wilderness that eventually shaped all the parts of my life and brought them together." *Mountain Light,* Page 40.

Even on a camping trip, fellow travelers will chastise me for waking up at such an early hour. "Pre-dawn light is pure magic," I will normally reply to the sounds of snoring from my tired companions. To experience the earth as it meets the sun is one of life's most wonderful daily events, with or without the camera. Yet what is it about the sunrise that drives us to carry the camera? Why do we photograph? And why do we choose to photograph nature? Superficially these questions appear rhetorical, but these are important questions every photographer should consider before the shutter is released. At its most fundamental, photography is a form of communication. Whether showing the plight of an endangered species or ecosystem, exhibiting our artistic perception of a scene, or simply wanting to share with others a moment that we enjoyed, we are communicating with a viewer.

Galen was first a rock climber and wilderness adventurer who began to carry a camera only after these passions were firmly established in his life. The impetus for his early images came from a desire to communicate with non-rock climbers why he was hanging off vertical granite cliffs and hiking in remote backcountry. He first had a passion, or rather a devotion, to wilderness which then transferred into photography from which the two became congealed and inseparable. His emotional response to a scene was as tangible for him as his Nikon. As his career blossomed he later developed photographic techniques to better exhibit his subjects. These techniques ranged from the athletic to the intellectual, i.e. developing chest pouches for carrying a camera when trail running and having a firm grasp on the physical properties of light and the cognitive sciences.

To make film record a scene more like the human eye, Galen became an expert on the way film rendered light. He partnered with Singh-Ray to create a line of graduated neutral density filters that I find invaluable, though today's camera RAW files provide much more flexibility in dynamic range than slide film ever did. With the current technologies of exposure blending and in camera HDR, one can argue that use of Graduated ND Filters have become archaic. I have flirted with all the above methods to increase dynamic range but I now appreciate my Graduated ND Filters more than ever. I would much rather use the filters than spend more time in the digital darkroom. The less time in front of the computer, the more time I can be out enjoying the wild lands that give meaning to my life. The camera is a tool in the journey, and it is the wilderness that inspires me. I find the optical quality and color fidelity of these filters to be superb and I continue to prefer them over the current technology when appropriate, which is almost always.

Galen was also a master storyteller and often wrote of a photograph being more powerful than reality. To give a sense of depth and majesty, he often placed the figures of human or animal subjects within a mountain landscape. These images became visual narratives of rock climbing expeditions and conveyed the natural history of a species. When adding a human figure to the landscape it not only shows the grandeur of the wilderness but also may make it relatable, and thus more powerful. This works just as well for wildlife. One of my favorites of Galen's photographs is "Mountain Goat Climbing a Sheer Wall, Logan Mountains, Northwest Territory (Canada, 1973)." While the subject is self-explanatory, the image shows the goat in the midst of a vertical climb that would give even the most confident climbers some difficulty. The relationship between the goat and mountain are deeply demonstrated. The goat is a powerful, strong animal that can handle terrain that is as beautiful as it is dangerous. This juxtaposition of wildlife photography into the landscape imparts meaning that would have been lost if Galen had only photographed the goat closely.

Fast forward to the fall of 2013, which saw one of the largest irruptions of snowy owls on record in the United States. Concentrations of owls were found near my home in the mid-Atlantic including, but not limited to, downtown city areas and suburbs. Much to the chagrin of bird watchers and photographers many sand dunes on my beloved Assateague Island National Seashore were transformed into wintering time-shares by the majestic owl and the occasional seal. Often I met budding photographers who, acting ethically to not disturb the animal, were nonetheless enervated by not being able to "fill the frame" with the white feathered visitors. At one time I too would have been perturbed by this seemingly innocuous, but disappointing, feeling but from studying Galen's wildlife photography I learned that placing the animal in the landscape transforms the meaning of the photograph. There are already an innumerable amount of portrait-esque images of most animals. Here was a real opportunity to document an uncommon wild species and how it lived in a foreign landscape, but the notion of "filling the frame" blocked creative output and appreciation of the rare sightings. Galen's wildlife images are visual sentences that disclose the season, the weather, the struggle of existence, etc. Whether the subject is close or far, I strive for my wildlife images to tell a story, and Galen's did just that.

"I've visited enough wilderness in the east to know not only what is there, but also what has been lost in this area of

Images by Mark Hendricks

Above: Smoky Mountains, Cades Cove, brilliant golden fall light made the valleys in Cades Cove burnished in yellow. A Galen Rowell Two Stop Soft Edge Graduated ND Filter was used to properly expose the grass and blue sky. Canon EOS REBEL T3, Canon EF17-40mm F4L USM lens, focal length 36mm, f/7.1 at 1/1250 second, evaluative metering mode, auto bracket exposure mode, ISO equivalent 400.

Below: Fall color display, Monongahela National Forest, West Virginia. Canon EOS REBEL T3, Canon EF17-40mm F4L USM lens, focal length 25mm, f/11 at 1/60 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

Images by Mark Hendricks

Right: Balsam fir, Shenandoah. A balsam fir is contrasted against a snow-covered mountain in a Shenandoah National Park designated wilderness area. Canon EOS REBEL T3, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 105mm, f/9 at 1/200 second, evaluative metering mode, auto bracket exposure mode, ISO equivalent 400.

Facing Page: The Dolly Sods Wilderness features plants and animals more commonly found in Canada. These images show blueberry, huckleberry, cranberry, sandstone, and red spruce that make up this most unique wilderness. Canon EOS REBEL T3, Canon EF17-40mm F4L USM lens, focal length 17mm, f/11 at 1 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

early settlement by Europeans." *North America The Beautiful,* page 174

Preach to the choir, Brother Galen. Whenever I return home from a trip in one of the great wilderness areas of the American West I normally become a tad melancholy due to the lack of representation of the wild in my motherland on the east coast. The history and urbanization of the eastern United States took place long before the ideas of wilderness advocates like John Muir became engraved in the social conscience of its citizens. But the east has its superlatives. Whether the tropical species found within the mangroves of Everglades National Park, the elk that wander the rugged Alleghenies of North Central Pennsylvania, or the crown jewels of Appalachia parklands, Shenandoah and Great Smoky Mountains National Parks, wilderness is alive in the east.

Galen's work as an advocate for wilderness inspired me to seek out lesser-known (but extremely rewarding) locales near my home. One such area is the Monongahela National Forest of West Virginia. Within the vast hardwoods of this wild forest and sitting upon the Allegheny Plateau is the Dolly Sods Wilderness area, my personal Shangri-La of designated wilderness in the east. When one first enters this area it is common to feel as if you were transported to a more arctic environment. Vast fields of heath barrens and sphagnum moss are contrasted with wind swept red spruce groves and ancient sand stone formations. During the fall months the tundra-like high sods becomes burnished in spectacular autumn hues. Neighboring to this area, but still within the Monongahela, are the Roaring Plains and Otter Creek wilderness areas. Old growth conifer and hardwood forest fill this ancient land and I am overcome with appreciation that these sanctuaries exist and forget that I am only hours away from Washington, D.C.

While eastern wilderness places are not as vast or as frequent as their western counterparts, when I am in these areas I have found components in each that I enjoy as much, and in some locales more, than the west. Galen, a California boy, realized later in life that his home state offered the wild lands he desired, though it took his frequent journeys around the world to truly appreciate it. When I visit the wild lands near my home I am reminded of this quote from Galen's artist statement featured on his website MountainLight.com, "I have a confession to make. I've known all along that more of what I am seeking in the wilds is right here in my home state of California than anywhere else on earth." I also share in this confession, and implore you to find something to appreciate close to home.

"I have made many of my favorite pictures when I was carrying only one camera with a couple of lenses." *Galen Rowell's Vision,* page 62, "Carrying Light and No-So-Light," and
"What I mean by photographing as a participant rather than observer is that I'm not only involved directly with some of the activities that I photograph, such as mountain climbing, but even when I'm not I have the philosophy that my mind and body are part of the natural world." "Frequently Asked Questions," *Outdoor Photographer,* April 2002

A constant mantra I have heard in nature photography and photojournalism is "f/8 and be there." Now wherever the subjective "there" is depends on the photographer, but if your subject is found within wilderness it may be more difficult to get to your "there." Galen, the mountaineer, stressed often the necessity to travel light. Backpacking and mountaineering require specialized equipment and when paired with photographic gear the weight increases rapidly. The weight can be both physically and mentally limiting, with the

mental being the biggest blockade in capturing images. Too much gear equates to too many choices. Outdoor photography, when the light is fleeting or an animal is fleeing, requires quick decision making. Unless I am working for a client and require specific gear, I will only carry two lenses with me on wilderness expeditions: a medium telephoto (70-200mm or 100-400mm) and a wide-angle lens (16-35mm or 17-40mm). These two workhorses cover most of the situations that arise in the wild, do not add much extra weight, and grant me the creative freedom that would not exist if I had not forced myself to become very familiar with this light gear.

This methodology was rooted in Galen's idea of participating in the wilderness and going beyond mere spectating. To the casual observer most nature photography is thought of as a sedentary hobby. And why shouldn't they? How many times have you witnessed large groups of photographers lined up in the same location waiting for the right light? Galen ran and climbed to get a different angle. While his intellectual curiosity made him an expert in understanding light and optical phenomena, he would create moments for himself when the light was not optimal or at an angle he preferred. His epic images of mountain climbing could only happen because he was a climber himself much like his landscape images were so unique because he actively "chased" moments.

Galen often analogized this approach to outdoor photography much like an action sport. His most famous photograph, Rainbow Over the Potala Palace, Lhasa (Tibet, 1981) serves as the perfect example. This incredible image depicts a rainbow seemingly sprouting to the heavens from the great palace bathed in golden evening light. Galen may have been in Tibet at the right time to see that rainbow, but he was only in the right place due to pure athleticism. Not happy with the distracting elements which limited his compositions Galen dropped most of his camera gear and ran over a mile at 12,000 feet in elevation to "line" the rainbow up with the palace. He ran with a light tripod and carried one body and one lens. While the surroundings were nothing less than perfect, it was the quick mobility and even quicker thinking of Galen to bring that image, almost surreal, to life.

"The elements of the art of adventure apply just as much to a walk through a city park as to photography of the most exotic places on earth." *Galen Rowell's Vision,* Preface.

Most will not be able to get to the wild areas Galen visited, nor equal his athleticism. Some photographers love their graduated ND filters while others prefer image blending in software. These differences in personal style can help us to express our photographic vision, but also distract from the fundamental value of the art form. I believe the most important lesson Galen taught us was to passionately care about what we photograph. Allow that passion to fuel the desire to create an image that is as equal parts you as it is the subject. Allow it to help you tell a story about a cause dear to your heart. The tragic plane crash that claimed the lives of both Galen and his wife, Barbara, prevented us from ever knowing what work could have come about if he had transitioned to digital. However we can take solace that this incredible artist left behind a legacy of work that can continue to inspire and educate photographers for generations to come.

Thank you, Galen. May your memory exist on every mountain and in all wild lands. NP

Dolly Sods sandstone, by Mark Hendricks. Ancient Sandstone formations abound in the Dolly Sods Wilderness in the Monongahelia National Forest. Canon EOS REBEL T3, Canon EF17-40mm F4L USM lens, focal length 26mm, f/11 at 1/4 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

Donkey Tales

Article by Tina Wright, Field Contributor
Photography by Tina Wright and Kevin Juberg, Field Contributors

Tina's and Kevin's web site: www.naturesalbum.com (Click for Live Link)

We had just arrived in town following Memorial Day weekend and immediately headed out to view the donkeys. We quickly found the Two Cows Clan grazing in their usual location near the lake's edge. Many of the primary herd members were present, including Scarface, the dominant Jack, and several of his Jennies and foals. Everything seemed normal as always, but then from around a tree walked Wooly-Booger's Mom, and we waited for her foal, Wooly-Booger, to follow. She never did. It quickly became clear that her mother, who by this time was far into another pregnancy, was anxious. Suddenly there was a piercing bray that we assumed was resonating from Scarface. We were shocked to see that it was Wooly-Booger's Mom. Female donkeys rarely bray and typically only do so when they are deeply distressed. We continued watching her for about an hour until the sun went down and throughout that time she was acting troubled. Then we lost sight of her as she broke away from the herd and walked into the fading light of the desert, alone for the first time in ten months, the silence only broken by the desperate sounds of her braying.

Digital capture by Tina Wright and Kevin Juberg

Wooly-Booger at sunrise, Two Cows Clan, Arizona, by Tina Wright. Nikon D800, Nikkor 500mm lens, f/4 at 1/400 second, ISO equivalent 800.

Wild donkeys (burros), Arizona, by Tina Wright.

Above: Dry Lake Clan walking across the dusty expanse of the dry lake bed during a severe drought at sunset. Nikon D800, Nikkor 500mm lens, 1.4x teleconverter, f/4 at 1/640 second, ISO equivalent 400.
Below: DJ, dominant Jack of the Arroyo Clan, walking at sunset. Nikon D300S, Nikkor 500mm lens, 1.4x teleconverter, f/4 at 1/500 second, ISO equivalent 400.

One year before this event my husband and I began a personal photo essay we named, “The Donkey Project.” Originally we intended to produce a nice portfolio on the wild burros that live near our home in Arizona, but it very quickly evolved into something much larger than that. We found ourselves going to see the donkeys frequently, sometimes several times a week, and in that period we began to recognize individuals and in turn started naming them and observing and recording their behaviors. We are photographers, not scientists; however, we have gained much insight into the lives of these animals by simply watching and photographing them. It is a project that is ongoing and one that has become very dear to us.

Burro is the Spanish word for donkey. Arizona is home to more wild burros than any other state in the United States with about 2200 statewide, approximately 350 of which roam the site in and around Lake Pleasant Regional Park, located 25 miles northwest of Phoenix. These animals are all part of the Lake Pleasant Herd Management Area (HMA) which is overseen by the Bureau of Land Management (BLM). The area covers 103,000 acres in the Sonoran Desert and is made up of rugged mountains, steep canyons, dry lake and creek beds, and at its heart, a large, picturesque year-round lake from which the park takes its name. Arizona’s donkeys are descendants of pack burros that belonged to the prospectors and miners of the late 1800s that either escaped or were left to their own devices, and today are very well adapted to thrive in this harsh environment.

Wild burros are protected under the Wild Free-Roaming Horses and Burros Act of 1971 when it was stated, “Congress finds and declares that wild free-roaming horses and burros are living symbol of the historic and pioneer spirit of the West; that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people.” We obviously agree with this statement wholeheartedly. We often see many beautiful images of the wild horses that live across our country, but rarely see images of donkeys, especially depicting their behaviors and social structures in the wild. One of the primary reasons behind starting “The Donkey Project” was to bring awareness to these noble yet often overlooked icons of the American West.

We follow four small family herds that we call clans: the Two Cows Clan, Arroyo Clan, Dry Lake Clan and Road Crew Clan. Each herd is comprised of a dominant male, known as a Jack, several females, known as Jennies, and their young, known as foals. These herds can be found altogether or split into smaller groups but they tend to stay in a defined territory range. There are also many bachelor herds roaming throughout the management area made up of several young adolescent males that band together after they get too old to remain with their herd. Though you will occasionally encounter a lone individual, donkeys are highly social by nature and enjoy being in the company of others so normally they are seen in pairs at minimum. The donkeys in this area display a variety of colors. Gray-dun is the most common, but brown, black and even red and white can be seen.

Donkeys can be found anywhere in the park and we always start our search for them the same way. We begin by driving north along Castle Hot Springs Road, the main paved road leading into the park (a map can be obtained at the park or on their website). We then turn east onto Lake Pleasant Access Road and head a short distance to Two Cow Cove, a dirt road overlooking the lake and shoreline on both sides. The Two Cows Clan are frequently found grazing just off the road. In fact, we spot this herd more often than any other. Their territory is located within developed camping areas containing hiking trails, picnic areas and boating marinas. Because of this the donkeys in this region are fairly habituated and can be photographed from a relatively close distance. This is also one of the best places to capture images of the donkeys against the backdrop of the lake.

From there we head back to Castle Hot Springs Road and drive north farther into the park to the end of the road. It is along this stretch that you may encounter the Road Crew Clan. They tend to graze along the roadside, especially around dusk. At the end of the road we first go east on Castle Creek Drive and explore the small canyons and open desert along this short section of road. This is the Arroyo Clan’s territory and if there are young foals present it is a great location to photograph them running and playing together.

Leaving the Arroyo Clan’s territory, we drive to the intersection of Castle Hot Springs Road and continue straight, heading west. This is where the paved road ends and the dirt road begins. The road is well maintained, accessible with any car and covers open desert. A few miles in we come to a bridge that spans a wide open area. This is what we call the dry lake bed. In reality it is a large creek branching off the main lake. There is water here for a few months in the winter and spring, but for most of the year it is a desolate dustbowl. This is the Dry Lake Clan’s territory, but it is also a meeting place of sorts, especially for bachelor herds.

The dry lake can present many incredible photographic opportunities, and because it is an expansive, relatively open territory, it is possible to see large numbers of donkeys. We have seen as many as thirty or more individuals congregating in the dry bed at one time. As mentioned earlier, donkeys are social animals who develop strong bonds with other family and herd members. They are also very physical and enjoy mutual grooming and play. We have observed many interesting social behaviors here including several pairs of bachelors engaged in “play” fighting. The fights look real, with the opponents rearing, biting, and chasing one another, but aren’t as fierce or serious as a true Jack fight, where blood is often drawn. This is just practice, and a bit of fun for these young Jacks, preparing them for future battles for dominance. Other great opportunities exist in the makeup of the terrain itself. There is a lot of dust here and this easily becomes stirred up by the movements of the donkeys. They love laying down and rolling in the soft dirt to take a dust bath, especially near sunset. This is a great chance to capture dramatic images of the donkeys backlit against the glowing red dust rising into the air around them.

The donkeys can be approached with relative ease, though they are wild and will generally only tolerate people coming so close before they will move away. As with any wildlife, take your time watching from a distance and allow them to get used to your presence, then slowly advance closer, watching to make sure the animals are comfortable with the distance. Donkeys are curious and love to spend as much time watching you as you do watching them. They will watch as you move toward them and quickly let you know you are too close with a defiant stomp of the hoof and a cheeky snort.

There is one donkey that seems to be the exception to the rule when it comes to being alone. We named him Lonesome George because he is always by himself when we encounter him. He is an adult Jack who seems more interested in human companionship than the company of his own kind. We think he is probably old and no longer part of a defined herd. He

Above: Dry Lake Clan watching us, Arizona, by Kevin Juberg. Nikon D800, Nikkor 500mm lens, 1.4x teleconverter, f/4 at 1/320 second, ISO equivalent 400.
Below: Jenny and her foal in sunset light, Arroyo Clan, Arizona, by Tina Wright. Nikon D300S, Nikkor 500mm lens, 1.4x teleconverter, f/4 at 1/500 second, ISO equivalent 400.

Above: Scarface, dominant Jack of the Two Cows Clan, in late afternoon light, by Tina Wright. Nikon D300S, Nikkor 28-300mm lens at 230mm, f/8 at 1/800 second, ISO equivalent 400.
Below: Burro taking a dust bath, Two Cows Clan, by Tina Wright. Nikon D800, Nikkor 500mm lens, 1.4x teleconverter, f/4 at 1/400 second, ISO equivalent 400.

Lonesome George, by Tina Wright. Nikon D300S, Nikkor 28-300mm lens at 28mm, f/18 at 1/100 second, ISO equivalent 200.

is not shy about walking right up to people or cars and will put his head through an open window if given the chance. He is the only burrow we have come across in this area that is like this. If your paths cross please remember that no matter how friendly he may appear he is still a wild Jack. Give him his space and allow him to move around you and under no circumstances should you feed him. Unfortunately we have seen people feed George and not only is human food bad for him, it puts him in danger of being hit by a car as he gets more accustomed to begging for a meal on the roadside. With all of these donkeys, it is easy to view them as you would with their domestic counterparts, but these animals have reverted back to their wild ways and should be treated as such.

We always take two main lenses out with us, and have a Nikkor 28-300mm zoom lens on one Nikon body and a Nikkor 500mm F4 lens on another body. We also carry a 1.4x teleconverter that we sometimes use with the 500mm lens. This setup covers us well in almost every situation we encounter with the donkeys, from environmental portraits and action shots to tight close-ups. Enjoy them from a reasonable distance and be patient and you will be rewarded with great photographs of a wonderfully charming symbol of the Old West.

For us the past year has been extraordinary. This project has been rewarding in so many ways and has become such a special part of our lives, more than we ever thought possible when we first embarked on it. It mostly brings us joy, but it has brought sadness too. We know the burros are wild and they belong to the desert, but when you get to know them on an individual basis you can't help but get emotionally involved in their lives. When Wooly-Booger disappeared we were devastated. We first encountered her in the early stages of the project when she was only a few weeks old. Since then, we have observed and photographed her and her mother more than any other donkeys at Lake Pleasant. We spent days searching the desert but never found her. Fact is, we have no idea what has happened to her. Wooly-Booger's Mom is an exemplary mother, always watching after and teaching her foal. We felt her pain that day in the desert as she slipped away, alone and braying, into the vast and empty landscape. Over the next couple of months we only saw her a few times, still alone.

Then on August 4th, we followed our normal route and immediately found the Two Cows Clan. As we approached them we saw the dominant Jack, Scarface, and all the usual members of the group. Then we saw Wooly-Booger's Mom. She had rejoined her herd and this time she wasn't alone. By her side was a tiny one-week-old dark-coated foal. We were overcome with joy. Her new baby was a girl, just like her sister before her, and she quickly proved herself to be a little spitfire. Full of curiosity, she ran and played and kicked and checked out her fellow herd members and as always, her mother was diligent in watching over her newborn and ensuring her safety. We named her Scarlett. As the sun inched ever closer to the horizon, another hot summer day came to an end. We watched the Two Cows Clan disappear into the fading light of the Sonoran Desert with its newest member and Wooly-Booger's Mom following close behind. NP

Desperado and Desperado's mom engaged in mutual grooming, Two Cows Clan, Arizona, by Tina Wright. Nikon D800, Nikkor 500mm lens, 1.4x teleconverter, f/4 at 1/500 second, ISO equivalent 400.

For the Love of Ice

Article and Photography by Sivani Babu, Field Contributor

Sivani's web site: http://www.suntrailimages.com (Click for Live Link)

The first time I professed my love for ice, I was clearly in front of the wrong crowd. I tried to explain what I see when I see an iceberg or a snow drift. I tried to explain that I see a living, breathing creature with a personality—sultry, graceful, formidable, coy. It's all there, and just like photographing a person, the challenge is in trying to capture that personality in a single frame. My friends humored me, but I could tell that they did not quite get it. Then I showed them a photograph, and the image conjured the beauty of ice that my words failed to convey.

A friend snowshoeing up a distant mountainside, by Sivani Babu. Nikon D4, Nikkor 300mm F2.8 lens, f/4.5 at 1/1250 second, spot metering, manual exposure mode, ISO equivalent 400.

Digital capture by Sivani Babu

My love of ice began in Antarctica in 2009. Like many first-timers to the "White Continent" I headed south for the animals, but it was the call of the ice that took me back four years later, armed with a desire to capture the emotions of a place that has captivated me like no other.

Antarctica is unique, but many of its photographic challenges are not. Wherever you are, ice and snow (and even sand) are fickle subjects. Exposures get tricky when blinding whites are set against the darkest of blues and blacks, shadows lack detail, scenes lack depth, and compositions sometimes take a backseat to sensory overload. But if you have ever been awed by a first snow, or cast your gaze on the otherworldly expanse of shimmering sand dunes, you know some of nature's best work is found in these landscapes, and the frustration is worthwhile for that moment when everything falls together.

It is no surprise that the best times to shoot are generally early and late in the day when the landscape reflects the warm colors of the sky and the side lighting of the sun shows off textures, creates long shadows, and helps bring back some of the detail that can get lost in harsh midday light. While you can certainly take advantage of the magic hours and twilight, the rest of the day does not have to be a waste. With a little bit of preparation and creativity, you can maximize your shooting time throughout the day.

USE THE HISTOGRAM

I always leave the histogram on when shooting, but in snow, ice, or sand, I rely on it almost exclusively. The glare that comes off of these landscapes is blinding. And even with a set of appropriate sunglasses or goggles, it can be impossible to make out details on the small LCD screen of my camera. If you are not already, get familiar with your histogram.

In a balanced scene, you are generally looking for a bell-shaped curve. If there is a significant amount of snow, ice, or sand in your shot, however, chances are it is not a balanced scene. A large amount of data should be stacked on the right side of the histogram, but if it looks like the data goes beyond the right edge, the highlights are overexposed. Dial down the exposure compensation, or decrease your shutter speed and try again. A large amount of data in the middle of the histogram can indicate that the shot is underexposed and whites might come out looking gray. At times, underexposure is necessary to capture the details of the scene and is preferable to blown-out highlights, but be aware of shadows that lose too much detail. You may be able to bring those details out in post processing, but it could be time consuming and will not look as good as getting it right in the camera.

FILTERS, BRACKETING, AND HDR

Capturing details in both shadows and highlights is often difficult or impossible in a single shot. When the dynamic range of the scene exceeds the range of the camera, we are forced to make a choice between capturing the textures and details of darker elements, such as rocks, trees, and water, or those of brighter elements—ice, snow, and sand. Graduated neutral density filters can go a long way when there is a relatively linear separation between dark and light, but when the distinction is not linear, the only option for capturing what you actually see in the field is to take several exposures and spend some extra time processing.

Bracketing, or taking a set of the same image at differing exposures, serves two purposes. For a shot that can be composed and properly captured in a single frame, bracketing can help ensure that you get the exposure just right. When I bracket, I usually make a set of three images, although many cameras allow you to take larger sets, which can capture a wider dynamic range. When the dynamic range of the photograph just cannot be captured in a single image, those bracketed images can be made into a composite using High Dynamic Range (HDR) processing.

COMPOSE FOR EMOTION

Our eyes see things in a way that a camera simply cannot, and when we find ourselves in a new environment, it is hard not to want to capture everything. On the other hand, stepping out into a sea of white or beige can also be a daunting compositional endeavor that leaves us wondering where to begin. The best advice I have ever received as a photographer is to take my time.

When I approach a scene, I remind myself that what I feel at that moment is more important than what I see. Take stock of how a place makes you feel and then find the simplest images that convey those feelings.

In Antarctica, one of the most powerful things I felt was loneliness—not the sad kind, but adventurous and humbling. Capturing that feeling became a goal and my favorite attempt came when I saw a friend snowshoeing up a distant mountainside just before sunset. The isolated figure, the dying light, the texture of the snow, and the vastness of the place all came together. The simplicity of the scene made the shot.

EMBRACE THE MONOCHROME

Prior to leaving for Antarctica, I was peppered with questions about what I would see and do there. What kind of wildlife would I see? Where would we stay? What is there to photograph that is not blue or white? It was that last one that always led me on a tangent. Snow, ice, and sand are reflective. If the sky above is awash in pinks and purples, those colors are going to be reflected in the landscape. Of course, there are times when the world is in fact cast in monochrome. Embrace it. Use it. Highlight shadows and variations in texture and tones. If there is enough contrast, try going black and white. These landscapes can be warm and inviting, but there is no reason to avoid their stark, forbidding side as well.

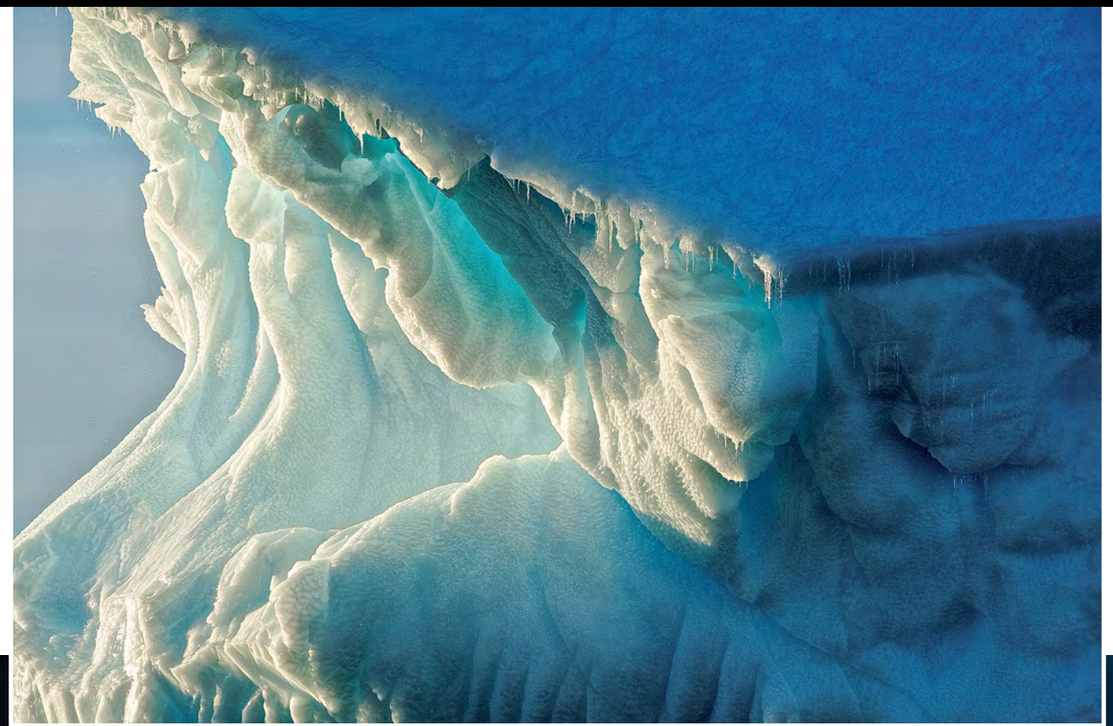
LOOK CLOSELY AND GO LONG

Icebergs are behemoth marvels of nature and adequately conveying that is a challenge in itself, but there is so much more to them than size. One of my favorite parts of an iceberg is where it meets the water. If the water is calm enough, a tight shot of the reflection of the ice in the water can feel like a game of peek-a-boo. Usually, capturing that shot requires the use of a long lens.

From the ripples of sand dunes to the sculpted faces of icebergs, snow, ice, and sand are rich in textures and patterns. Look for them. Even when the sunlight is at its harshest, isolating a small part of an iceberg or snowbank can provide abstract beauty. When the conditions are not right for sweeping landscape shots, and even when they are, consider breaking out a macro or long lens and getting in close. Take advantage of naturally shaded areas and create your own shade when possible.

SAFETY FIRST

Although not the purpose of this article, it bears mentioning that the quickest way to ruin a great photo shoot is to get hurt or lost. And unfamiliar landscapes with few landmarks can make it very easy to do the latter.



Images made in Antarctica, by Sivani Babu

Above: Pleneau. Nikon D4, Nikkor 300mm F2.8 lens, f/8 at 1/1250 second, spot metering, manual exposure mode, ISO equivalent 1600.

Facing Page Top: Lemaire Charcot. Nikon D4, Nikkor 300mm F2.8 lens, f/6.3 at 1/2500 second, spot metering, manual exposure mode, ISO equivalent 400.

Facing Page Bottom: Ice. Nikon D7100, Nikkor 24-70mm F2.8 lens, focal length 70mm, f/7.1 at 1/800 second, matrix metering, auto exposure mode, ISO equivalent 200.

On a recent trip to White Sands National Monument in New Mexico I received a friendly lecture from park staff about how disorienting the dunes can be. Not everyone received this lecture. I was chosen because I was a photographer. Anecdotally at least, photographers get lost more frequently than others at White Sands, partially because we wander further than the average visitor, but also because we are so focused on trying to find the right shot that we lose awareness of our surroundings.

Having a compass and knowing how to use it is never a bad idea.

It is one thing to look out toward the horizon after a fresh snow, or over a frozen pond in the dead of winter, or across glistening sand rippled by wind, and see the intricacies of the landscape before us. It is another to distill what we see and feel in those moments into a handful of photographs that can bring those sights and feelings to others and back to us for decades to come. That is the challenge.

The technical and nontechnical hurdles that we face when approaching these types of extreme landscapes are distinct and daunting, but they are not insurmountable. After enduring the bitter cold or the intense heat, after composing and recomposing your shot, after waiting patiently for the right light and the right instant, when you capture that image that takes you on a journey, the frustration disappears. And when you find yourself professing your love for ice in front of a confounded group of friends, forget the words and just show them that picture.

NP

Snowy Owls Irrupt Over New Jersey

Article and Photography by Susan Puder, Field Contributor

Susan's web site: http://www.eaglecreekphotos.com (Click for Live Link)

The winter of 2013-14 brought much discontent to the northeast with bitterly cold days and snow every other week it seemed. But, there was a bright spot for birders and other lovers of nature during all the gloomy weather—it appeared to be snowing owls, snowy owls to be precise. The east coast of the United States saw an irruption of these charismatic raptors from the Canadian Arctic that hasn't been seen in decades. From Massachusetts to Jacksonville, Florida, to even Bermuda, snowy owls were everywhere. They were front page in the newspapers, they were on television, and they were on social media. Wherever you looked, you could find snowy owls making headlines.

Irruptions or unpredicted invasions of northern bird species to areas that they rarely visit can happen for a variety of reasons. Several years ago, crossbills arrived in the state due to food shortages in the north. But this large irruption of the owls in the United States hadn't been seen in over 50 years. Experts determined that the breeding season in the Arctic last summer was a great one with a surplus of lemmings, the owl's food mainstay. Most of the owlets fledged due to a steady diet of lemmings. Juvenile snowy owls usually do not stay in the Arctic for their first winter as they need to sharpen their hunting skills for the harsh winters. Usually they will come south to the Maritimes or to the northern states along the Canada border. But with such a successful fledge season, hundreds of owls made it a very special year for birds and photographers alike. By the end of March only a few stragglers hadn't yet headed north. Most experts doubt we will see a winter season like the one that just past—during our lifetime. And for that I thank the lemmings that gave up their lives to make it possible.

Preferring to sit on the ground or low-lying rocks or stumps like those in the Arctic, the young owls subsisted on voles, mice, and other small mammals. A year after Superstorm Sandy, a bumper crop of these rodents provided tasty meals for the usually night-hunting owls. Occasionally, they would take larger prey such as ducks and other waterfowl. Even though these white owls have one of the largest wingspans of any owls, they were harassed by peregrine falcons and large gulls.

Snowy owls in New Jersey, by Susan Puder.
Above: Nikon D7100, Sigma 150-500mm F5-6.3 lens, focal length 500mm, f/8 at 1/1250 second, matrix metering mode, auto exposure mode, ISO equivalent 400.
Facing Page: Nikon D7100, Sigma 150-500mm F5-6.3 lens, focal length 500mm, f/8 at 1/800 second, matrix metering mode, auto exposure mode, ISO equivalent 280.

Digital capture by Susan Puder

I had first seen these majestic owls years ago up in Churchill, Manitoba, taking the Tundra Buggy tour for polar bears. At the time, my longest lens was 300mm, so my photos of the distant birds left much to be desired. There have been occasional snowys in New Jersey over the years, but I never had the opportunity to see them in my home state.

Then the news came at the end of November 2013 that two or three were being seen at Gateway National Recreational Area at Sandy Hook. I quickly contacted a friend and we headed up the Garden State Parkway to Sandy Hook, and first parked in the wrong lot, but a friendly birder gave us the correct location. We headed there and found a space in a largely filled up lot, highly unusual for early December. After a quick walk to the beach, we first saw a small crowd with binoculars, scopes, and cameras on the observation deck and on the beach. Following their direction, there it was—a juvenile snowy owl resting on the beach, occasionally opening its eyes to see what all these people were looking at. Everyone gave it space, all the while trying to get photos at different angles.

After taking hundreds of shots, we moved on towards the water's edge to find another owl flying low along the surf. It landed not far in front of us, giving more great photo opportunities. The owl eventually flew further north on the beach and landed with the tip of Manhattan and the new World Trade Center building in the background. Unfortunately for me, I wasn't able to get a good photo of the scene as it was too far away, but the memory will last.

Soon afterwards, reports came from all corners of New Jersey that dozens of snowy owls were being spotted. Amazing. They were at Barnegat Light, Stone Harbor, Cape May, Jersey City, Island Beach State Park, along the Delaware Bay, and Holgate on Long Beach Island had five to six seen in one day. I believe that all but three counties in New Jersey reported owls.

The best place I found, along with hundreds of other people, was the Edwin B. Forsythe National Wildlife Refuge in Oceanville. One Saturday I traveled there, finding dozens of cars parked along the south dike, to see one brave female who spent most of the day sitting on a small rock dike. I have never seen anything like it. The owl was the greatest attraction in New Jersey, and didn't look too stressed by the crowds. Photographers with a variety of camera and lens sizes were getting the photographs of a lifetime. Then again, some people just had to get too close with their cell phones to take photos. Another day, one owl decided to take in the view from atop the visitor's center, giving everyone great shots while not being bothered by people getting too close.

My Nikon D7100 camera, along with the Sigma 150-500mm F5-6.3 APO was up to the challenge. I find the optical stabilizer was a great benefit when photographing these birds, especially as I get older and the camera seems to get heavier every year. As the birds didn't move much except for turning their heads, I used aperture priority f/8 with 400 ISO. Using a tripod or monopod is helpful, as is a beanbag on a car window, but I found myself out on the beach or along the road taking photos without the help of these tools. We may have had snowstorms and extremely chilly days last winter, but these snowy owls were so special that the weather didn't seem that bad after all. NP

Snowy owls in New Jersey, by Susan Puder.

Left: Nikon D7100, Sigma 150-500mm F5-6.3 lens, focal length 500mm, f/8 at 1/800 second, matrix metering mode, auto exposure mode, ISO equivalent 280.

Facing Page Top: Nikon D7100, Sigma 150-500mm F5-6.3 lens, focal length 500mm, f/8 at 1/800 second, matrix metering mode, auto exposure mode, ISO equivalent 280.

Facing Page Bottom: Nikon D7100, Sigma 150-500mm F5-6.3 lens, focal length 500mm, f/8 at 1/800 second, matrix metering mode, auto exposure mode, ISO equivalent 720.

The Path Less Taken
Kruger to Swaziland

Article and Photography by Gavin Emmons, Field Contributor

Gavin's web site: www.gavinemmons.com (Click for Live Link)

Young baboon, Kruger National Park, South Africa, by Gavin Emmons. Canon 70D, Canon 400mm DO IS USM lens, Canon 1.4x III teleconverter, f/7.1 at 1/500 second, ISO equivalent 640, handheld.

Zebras, Mlilwane Wildlife Sanctuary, Swaziland, by Gavin Emmons. Canon 70D camera, Canon 100-400mm IS USM lens, f/7.1 at 1/400 second, ISO equivalent 500, handheld.

Digital capture by Gavin Emmons

Southern Africa is a dream destination for many photographers, luring visitors with the promise of diverse megafauna and wild landscapes. The "big five"—lions, leopards, elephants, rhinos, and water buffalo—can be reliably seen in many protected areas of southern Africa, as well as giraffes, hippos, and numerous other mammals, birds, and reptiles.

Most photographers choose to travel in southern Africa as tourists with safari tours, independent car rentals, or a combination of the two. These experiences can yield wonderful images and memories, but are often prohibitively expensive for many people; the costs of plane tickets, accommodations, car rentals, tour guides, and itineraries are substantial.

My wife and I chose a different path when we traveled to southern Africa for five weeks in November and December last year: we signed on for "voluntourism" with All Out Africa (www.alloutafrica.com), combining over a week of safari exploration in Kruger National Park in South Africa with four weeks of wildlife conservation work in wildlife reserves in Swaziland. The experience allowed us to see unique aspects of southern Africa, from the popular safari destination of Kruger to the little-visited kingdom of Swaziland, and the varied conservation challenges of both. Both environments offered endless photographic opportunities on a much more affordable budget and a level of local intimacy that was rewarding and fulfilling.

ON SAFARI IN KRUGER

The orange light of dawn was beginning to spread across the horizon as we rumbled along in a 20-seat park vehicle driven and guided by a ranger. We had started out from Lower Sabie Camp in the darkness, passengers on a sunrise wilderness drive, and had already encountered an abundance of wildlife. Hippos shuffled off into roadside reeds, zebras and water buffalo grazed on open savanna grass, and troops of chacma baboons stared at us as we drove by. Giraffes moved with their slow-motion gait and foraged among low trees, and herds of elephants occasionally caused roadblocks with their procession in front of us. The early morning light cast a reddish glow on white (or square-lipped) rhinos next to the dirt roads. The ranger suddenly yelled out and halted the safari truck, pointing enthusiastically as a rare black (or hook-lipped) rhino trotted in front of us, stopping to snuffle and stare at us before continuing into acacia cover. We all felt quite fortunate with the diversity of mammals observed during the early morning hours. As the sun rose higher and we proceeded back to Lower Sabie Camp, we were treated with another surprise: an adult leopard padding across the road, along the side of our safari vehicle and off into low brush, stopping to stare at us for long minutes. In a few hours we had wonderful views and photo opportunities with four of the "big five," and numerous other mammals and birds.

Kruger National Park is a well-known and popular safari destination, and for good reason: it is the largest national park in South Africa and protects healthy populations of lions, leopards, elephants, rhinos, water buffalo, giraffes, and zebras. Many uncommon species like African wild dogs can (with some luck!) also be reliably seen. The park is well organized, with overnight camps spaced throughout the

varied park habitats and excellent paved roads connecting them.

In my time at Kruger, I explored some of the southern region of the park, entering via Paul Kruger Gate, staying several nights at Lower Sabie Camp, and leaving the park via Crocodile Bridge Gate to the east. Traveling with the All Out Africa staff, we mainly used private shuttle buses and vehicles driven by very knowledgeable guides, and I opted to join a number of sunrise and sunset wilderness drives organized from Lower Sabie Camp and led by park rangers. Many visitors rented 4WD vehicles—a relatively affordable option in South Africa—and toured in Kruger National Park on their own. Outside of the camps, visitors are required to stay in vehicles at all times unless they are being led on guided walks by rangers.

Given the restriction of staying in a vehicle, the combination of private vehicles and ranger-led wilderness drives seemed to provide the best balance for photographers. During the day, private vehicles allowed for flexibility to explore and stop as needed for wildlife photography and observations. The wilderness drives provided some definite benefits as well: they were inexpensive and were the first vehicles allowed out of the camps in the morning and the only vehicles allowed out past sunset. Additionally, the ranger-led trucks were the only vehicles allowed on restricted dirt roads, where many of the highest concentrations of wildlife could be found, and the rangers themselves were often locals with extensive knowledge of wildlife locations and behavior. The wilderness drives did tend to cater to stops for big mammals, but certain rangers adapted readily when it was clear that

Hippo, Kruger National Park, South Africa, by Gavin Emmons. Canon 70D camera, Canon 400mm DO IS USM lens, Canon 1.4x III teleconverter, f/7.1 at 1/3200 second, ISO equivalent 1000, handheld.

Red bishop in territorial display, Mlilwane Wildlife Sanctuary, Swaziland, by Gavin Emmons. Canon 70D, Canon 100-400mm IS USM lens, f/7.1 at 1/640 second, ISO equivalent 640, handheld.

a majority of passengers were interested in birds and other fauna. Both the open-sided safari trucks for the wilderness drives and private vehicles allowed visitors the freedom to easily aim and focus cameras and telephoto lenses on wildlife and landscapes on either side of roads.

Spending multiple nights at one or more of the camps and lodges provided more excellent possibilities for wildlife photography. My first night was spent at Protea Lodge at Paul Kruger Gate, the southwestern entrance to the park, and there were wonderful opportunities to see vervet monkeys, local nesting birds, and greater galagos in the fig trees near dawn and dusk, in addition to some luxurious bush food and accommodations. Lower Sabie Camp had great campsites and offered superb close-up occasions for photographing nesting birds—including barbets, mousebirds, weavers, and starlings. The camp restaurant also sits right next to the Sabie River, and hippos, crocodiles, and elephants can be observed easily.

Time spent with the staff of All Out Africa and the national park rangers also provided some valuable insights into ongoing conservation issues at Kruger. Despite the massive size of the national park, it is still a fenced property, and has endured the challenge of poachers (mainly from Mozambique) killing rhinos and elephants for ivory. Beyond the park fencing, human encroachment and landscape alteration for farming, urban development, and resource extraction have created enduring challenges for migrations of mammal herds and dispersal of predators, especially as human populations continue to grow.

However, the enthusiasm with which the local rangers and guides shared their passion of Kruger National Park also gave me hope. A game drive on my final day in Kruger exemplified this hope. The morning was overcast after a predawn storm, and our group of All Out Africa guides and volunteers was cruising along the roads outside of Lower Sabie Camp looking for wildlife activity. Many of us had seen leopards and cheetahs in previous days but so far had little luck with lion sightings. Suddenly we saw an adult pair on the side of the road, lying together after mating, then realized an entire lion pride was on the move, with cubs and juveniles crossing the road and blocking our way, sidling next to the vehicles so closely I could have touched them. At first, our safari group was alone with the lions, but we were soon joined by a multitude of additional vehicles, a combination of private drivers and guided groups. Watching and photographing the pride of lions was inspiring, but watching the people was interesting too. Visitors from numerous countries had come together with local guides and rangers to participate in a passion for wildlife and wild places, and were sharing that excitement. The money spent on these experiences was going to local communities as well as park operations, preserving wild habitats of Kruger and also protecting a way of life for the people living in and around the national park. As we drove east out of Kruger and south towards Swaziland, I felt enriched not only by the diverse habitats and wildlife of the park, but by the capacity of people to connect with that wildness, and to work to protect them.

VOLUNTEERING IN SWAZILAND

Leaving Kruger National Park and traveling south into Swaziland, the differences between the two regions become apparent. The kingdom of Swaziland is characterized by moist savanna and rolling hills, interspersed with rivers, acacia woodlands, and rural settlements. There are a few small cities but less developed infrastructure than you will find in South Africa. The entire kingdom of Swaziland is about the same size as Kruger National Park, and as a result protected areas in Swaziland tend to be relatively small in size. Consequently, wildlife species that require large ranges and open areas—including lions and cheetahs—are poorly represented in Swaziland. Leopards do roam through the kingdom but are rarely seen. However, most other species—including elephants, water buffalo, and hippos—can be reliably seen in game reserves and wildlife sanctuaries. Additionally, because many of the reserves lack large mammal predators, visitors can often drive and walk independently through protected areas.

It was into this context that I drove to Mbuluzi Game Reserve (a privately-run protected area) in eastern Swaziland to volunteer with All Out Africa and assist with wildlife conservation efforts. Mbuluzi shares borders with two other protected areas—Hlane National Park (run by the king of Swaziland) and Mlawula Nature Reserve (run by the Swaziland government)—and together the three reserves cover the largest tract of protected land in Swaziland. The area is characterized by brushy savanna, riparian corridors of the Mbuluzi and Mlawula Rivers, acacia woodlands, and cliffs rising up to the Lebombo Mountains along the border with Mozambique.

Working as a volunteer to assist with All Out Africa's wildlife conservation efforts was deeply rewarding photographically and on a personal level. Although wildlife and nature photography was not the focus of my time at Mbuluzi, I was nevertheless able to capture beautiful images of wildlife and landscapes while working and during free time. Living in "the bush" for four weeks—at the Mbuluzi field camp and at other protected reserves in Swaziland—presented me with intimate photographic opportunities that would otherwise have been difficult to experience on a shorter stay in southern Africa. My wife and I assisted with a wide variety of projects, including telemetry research with crested guineafowls and leopard tortoises, handling and radio-tagging of white-backed vultures, camera-trap surveys of nocturnal mammals, and inventories of local rodents and birds. We lived and worked with a varied team of researchers and volunteers that included native Swazis, South Africans, Americans, and Swedes, and gained a solid appreciation for the challenges of trying to preserve uncommon and sensitive wildlife species in the context of a growing human population, conversion of savanna habitats to sugarcane fields, and poaching pressures.

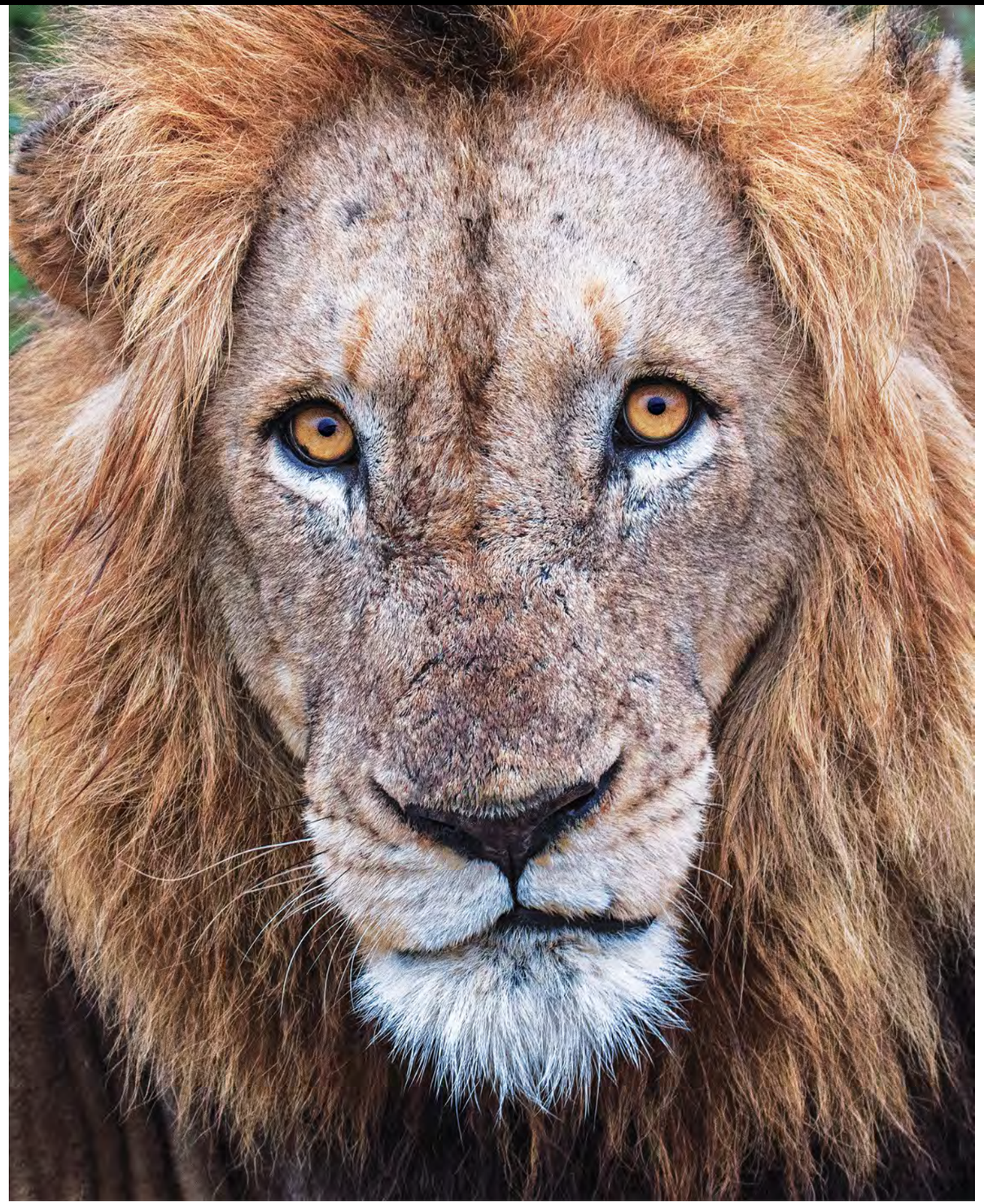
As volunteers, my wife and I had access to much of Mbuluzi Game Reserve and could explore freely on work and free time through the property. We experienced days of walking among herds of giraffes, watching adult pairs of African fish eagles in courtship, listening to the distinctive calls of turacos, kingfishers, and hornbills as the daylight faded and cast orange and scarlet upon the horizon over the snaking flows of the Mbuluzi River.

We also benefited from the expertise and recommendations of our Swazi co-workers; the All Out Africa staff were enthusiastic in helping us see Hlane National Park, Mkhaya Game Reserve, and Mlilwane Wildlife Sanctuary, in addition to the volunteer work and adventures we experienced at Mbuluzi and Mlawula. Highlights at these protected areas included nesting African paradise flycatchers at Hlane, abundant views of white and black rhinos at Mkhaya (a reserve set up specifically for rhino conservation), and walking among herds of adult and baby zebras and impalas at Mlilwane while red bishops and other riparian birds sang and perched boldly

Images in South Africa, by Gavin Emmons.

Above: Giraffe herd, Mbuluzi Game Reserve, Swaziland. Canon 70D, Canon 100-400mm IS USM lens, f/7.1 at 1/500 second, ISO equivalent 640, handheld.

Left: Baby African elephant with adults, Kruger National Park, South Africa. Canon 70D, Canon 100-400mm IS USM lens, f/7.1 at 1/160 second at f/7.1, ISO equivalent 1600, handheld.



African lion, Kruger National Park, South Africa, by Gavin Emmons. Canon 70D, Canon 100-400mm IS USM lens, f/7.1 at 1/160 second, ISO equivalent 1600, handheld.

along shorelines of ponds and rivers. Although Swaziland may not have the vast protected areas of more well-known African parks, it offers an intimacy of exploration and discovery that I found refreshing and photographically inspiring.

Volunteering in Swaziland was a great way to see wildlife research projects in effect, to talk directly with local biologists and managers, and to give back to Swazi conservation efforts. On top of all of this, volunteering provided a relatively inexpensive way to see southern Africa. Factoring in the logistics of plane flights, in-country transport, medical vaccinations, food, and lodging, the costs of spending five weeks in southern Africa (a week in Kruger and four weeks in Swaziland) as "voluntourists" ended up costing my wife and I half as much as an equivalent one- to two-week safari trip offered by most tour agencies. On many levels, it was well worth the effort!

PARTING WORDS

Traveling to southern Africa as a "voluntourist" did involve some logistical planning. All Out Africa served as a tour agency to organize in-country transport, food, and lodging. My wife and I planned for our time in Africa by bringing gear for photography as well as backcountry camping, anticipating the need for rain gear, backpacks, etc., given our time living at a remote field camp in the bush. The winter season in southern Africa also brings monsoonal rains, requiring appropriate waterproofing of photo and camping equipment with pack covers, drybags, and Ziploc bags.

With the winter rains, the landscape in Kruger and Swaziland transformed into a green and lush world. Although this did cause many large mammals to disperse somewhat from waterholes, it also had the photographic benefit of bringing cooler, overcast days, a profusion of wildflowers, and baby animals for many species, particularly herbivores.

On the technical level for photo equipment, I found that gear needs in Kruger and Swaziland reserves were quite similar. The acacia woodlands and moist savanna often required a bit of luck for photography: mammals and birds could be hidden in the brush, but could also come quite close. With this in mind, I brought three camera bodies, combining full-frame and crop sensor DSLR bodies. The light—especially at dawn and dusk, but during overcast days as well—was often diffuse and I benefited from camera bodies that could maintain clean images despite high ISO speeds. I mainly used a 100-400mm zoom lens and a 400mm DO lens, with the latter often attached to a 1.4x teleconverter, and felt this combination worked well to provide me with enough reach for intimate wildlife portraits balanced with the flexibility to move and adjust quickly to opportunities in vehicles and while hiking. A wide-angle zoom for landscape images completed my inventory of primary photo equipment.

Although my wife and I ended up working with All Out Africa, there are certainly other organizations (such as Life Net in Kenya) that can also provide visitors with the chance to explore the unique path of "voluntourism" in Africa. There is a lot to be gained by giving back to local communities in Africa, not only with the money you spend on safaris, but also with personal efforts working with conservation research and community development projects. The wildlife and landscapes inspired me with their beauty, and the people I worked with inspired me with their passion, generosity, and enthusiasm. I'll definitely be returning for more photography and more volunteering in the future. I hope to see you there! NP

River at sunset, Mbuluzi Game Reserve, Swaziland by Gavin Emmons. Canon 1D Mark IV camera, Tamron 19-35mm lens, f/16 at 0.6 second, ISO equivalent 500, Gitzo 3530LSV tripod. Arca-Swiss Z1 ballhead.

Gallery of Images by Gavin Emmons

Gavin's web site:
www.gavinemmons.com (click for live link)

Baby zebra, Kruger National Park, South Africa, by Gavin Emmons. Canon 70D, Canon 100-400mm IS USM lens, f/7.1 at 1/1000 second, ISO equivalent 500.

"There is no greatness
where there is no
simplicity, goodness and truth."
Leo Tolstoy

"Confidence in the goodness of another is good proof of one's own goodness."
Michel de Montaigne

"Wisdom has its root in goodness, not goodness its root in wisdom."
Ralph Waldo Emerson

"Gratitude is not only the memory but
the homage of the heart
rendered to God for his goodness.
Nathaniel Parker Willis

Crested Guineafowl, Mkhaya Game Reserve, Swaziland, by Gavin Emmons.

Red-billed Oxpecker on Giraffe, Kruger National Park, South Africa, by Gavin Emmons.

Red-backed Shrike, Mbuluzi Game Reserve, Swaziland., by Gavin Emmons.

Spectacled Weaver, Kruger National Park, South Africa, by Gavin Emmons.

Southern Masked Weaver tending to nest, Kruger National Park, South Africa, by Gavin Emmons.

Tawny-flanked Prinia calling from fern perch, Mlilwane Wildlife Sanctuary, Swaziland,by Gavin Emmons.

Narina Trogon, Mkhaya Game Reserve, Swaziland, by Gavin Emmons.

White Rhino, Mkhaya Game Reserve, Swaziland, by Gavin Emmons.

A Winter Adventure in Mount Rainier

Article and Photography by Randall J. Hodges, Field Contributor

Randall's web site: http://www.randalljhodges.com (Click for Live Link)

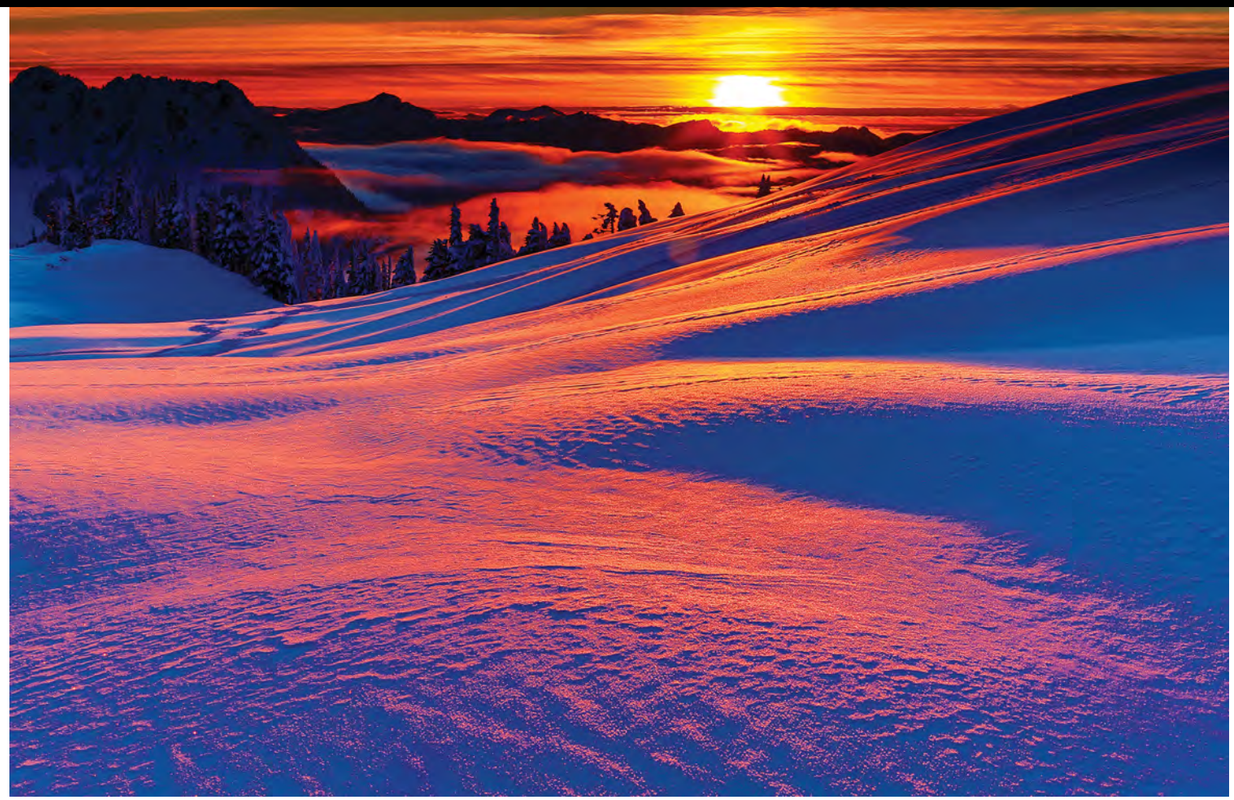
For my work as a professional landscape photographer in the Northwest, winter brings a special set of challenges to overcome. Sure, I can get out on the beach for fulfilling image making (which I love to do), but in other locations around the Pacific Northwest I find it much more difficult to get great images. Down low in the forest all the leaves are off of the trees and have lost some of that special pop, so I save my images of waterfalls, forest trails, and forest scenes for the beautiful spring green. Up high in the mountains the issue is way too much snow making most of my summer playground off limits. Yes I can snowshoe in, but being in position for sunrise or sunset is difficult and I am often unable to travel out far enough to get to the ideal shooting locations I covet the most.

Mount Rainier National Park in Washington offers one of the few places where I can get fantastic winter images and immerse myself in Mother Nature's winter blanket of snow and ice. For the heartier hiker and backpacker, Paradise at Mount Rainier allows you to backcountry camp and stay overnight in some of the greatest winter scenery on the planet. For the normal tourist during the winter, you can drive up to Paradise (weather permitting) and enjoy the winter scene for the day, get lunch at the visitor center, do a little sledding or snowshoeing, and drive back down the mountain to get out before park staff lock the gate at 5:00 p,m.

For those with a winter backcountry camping permit, we get to stay overnight! Of course staying in a tent on 10-20 feet of snow pack in freezing temperatures is not for everyone, but for those of us who call this an adventure, Mount Rainier is as good as it gets! As a backpacker, what a treat to be able to go to the visitor center during the day to warm up, have a pizza and a salad, then watch everyone else leave while you get to stay out and capture amazing images of sunrises and sunsets, all by yourself! Snowshoeing in the park is superb during the day and even better at night under the light of the moon! If you want to go sledding by moonlight, you will have the slopes all to yourself.

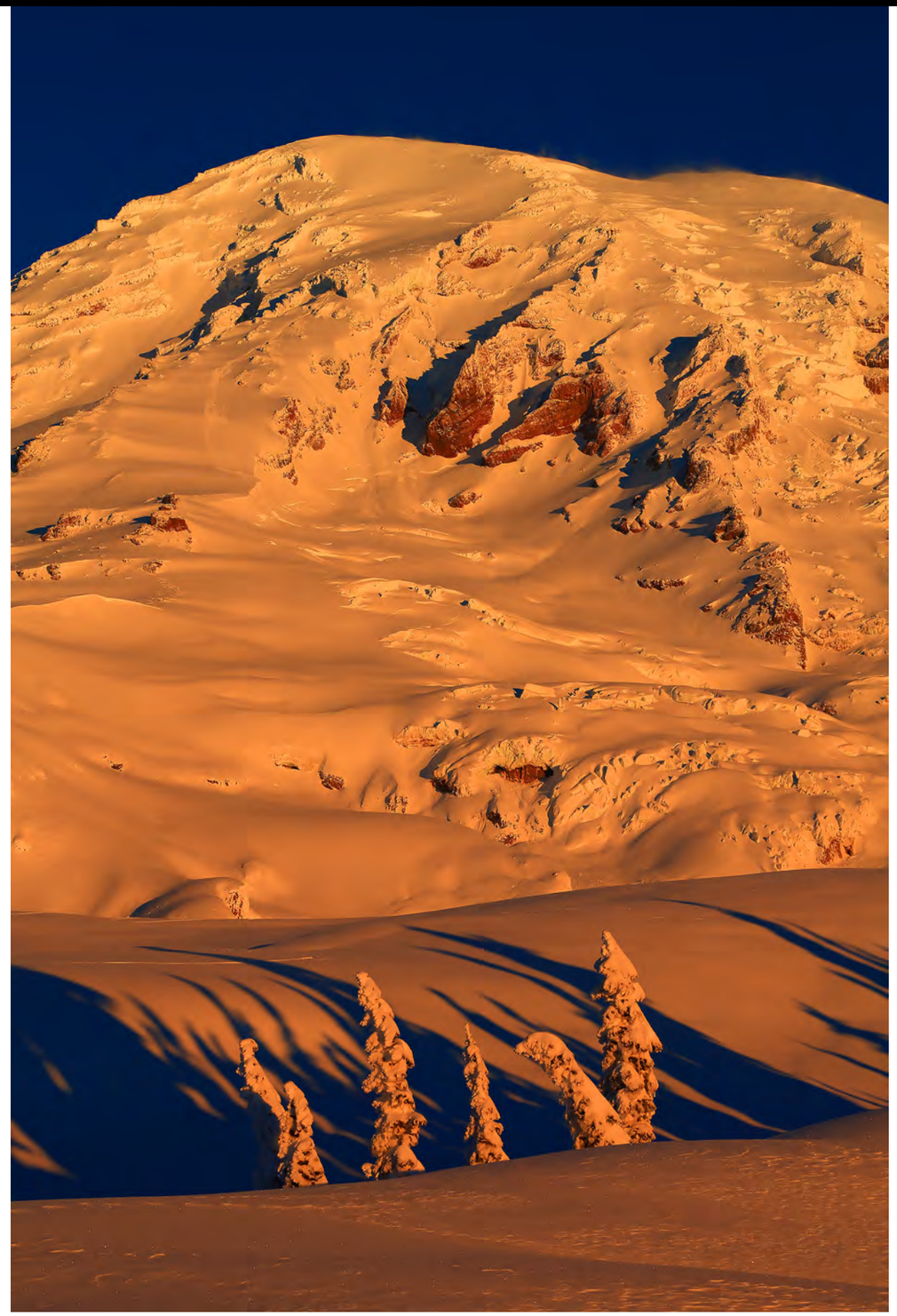
After stopping at the Longmire Ranger Station to pick up our winter backcountry camping permit, we drove up to Paradise and parked the car. It took three hikes to get all of the gear we required for snow camping into the backcountry, but eventually we had our three tents up, one for me to sleep in, one for my photographer hiking buddy Bryan to sleep in, and one big tent we set up as our "cabin" tent. We backpacked in a propane heater to make this our thaw out and cooking zone. The day was getting on, so we got our snowshoes on and proceeded to search for the ultimate area for our sunrise and sunset shoots. The ticket here was to establish a good beaten down path to the photo area in the snow, so we could make the trip to it over and over without the need to put on the snowshoes. After a couple hours of snowshoeing up and around the mountain, we settled on a spot about a mile up from camp. We did a couple of up and back down hikes and got the trail packed down pretty well. On the first night the weather did not cooperate so no epic images were captured and we received about four more inches of snow. We were very grateful for the warmth in our "cabin" tent and it was nice to have a place to hang out.

Up before sunrise on day two we made our way along the trail to our photo spot and captured some stunning photographs of Mount Rainier glowing red in the sunrise light. I was extremely happy with these images and we shot right into morning light. Then I captured an image of Mount Rainier



Digital capture by Randall J. Hodges

Images in Mount Rainier National Park, Washington, by Randall J. Hodges.
Facing Page Top: Mount Rainier National Park. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 50mm, f/20 at 1/10 second, -2/3, 3-stop hard graduated split neutral density filter, ISO equivalent 100.
Facing Page Bottom: Mount Rainier. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 50mm, f/20 at 1/10 second, -2/3, 3-stop hard graduated split neutral density filter, ISO equivalent 100.



Mount Rainier National Park, Washington, by Randall J. Hodges. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 84mm, Bulb f/18 at 1/60 second, -1/3, no filter, ISO equivalent 100.

Images in Mount Rainier National Park, Washington, by Randall J. Hodges.
Above: Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 45mm, f/18 at 1/15 second, -1/3, Focal 2-stop hard graduated split neutral density filter, ISO equivalent 500.
Below: Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 35mm, f/20 at .6 second, -1/3, Focal 35mm 3-stop hard graduated split neutral density, ISO equivalent 100.

building a lenticular cloud. These clouds can build so fast; one minute it was totally clear, the next there was the lenticular cloud. Wow! We returned to camp and fueled up with a hearty breakfast, then we strapped on our snowshoes and donned our day packs for an excellent day of snowshoeing up to Mazama Ridge. It was a gorgeous sunny day and the surroundings we hiked though were astonishingly beautiful. It is always amazing to be in alpine county when it is buried beneath its winter blanket. We made it up to about 7000 feet on the ridge where I captured some images of hoar-frosted trees.

Back at camp we ditched our snowshoes and took our packed trail back to the parking lot and visitor center where we enjoyed a first-rate pizza, salad, and beer! Not a treat I am used to having while backpacking! Yummy! It was now time to prepare for our sunset hike back up the mountain. Temperatures dropped rapidly after our daytime high of 35 degrees, and it was already back down into the low twenties. Once we arrived at our intended photo spot, it was already "go" time, and I captured a beautiful set of images looking west at sunset. The unreal tones reflecting in the snow actually made it look like we were in the sand on a beach! Another wonderful photo shoot in the bag and we made our way back to camp. The temperature was now down into the teens and it started snowing again so we enjoyed some time in the "cabin" with the heater on and made a delicious, well-deserved dinner!

On day three we were up again before sunrise and made our frigid morning trek up to our chosen photo spot and I was finally warmed up from the hike just as we started our sunrise shoot. On this morning I captured some super shots of frozen trees lit by alpenglow. These would turn out to be some of my favorite images of the trip. Then the sun cast an incredible glow on Mount Rainier, this time in golden tones, and another batch of splendid winter images were captured. Numb fingers always remind you of the freezing temperatures you are hiking in, and it was time to hike hard and fast just to stay warm,

Images in Mount Rainier National Park, Washington, by Randall J. Hodges.
Below: Lenticular cloud over Mount Rainier. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 40mm, f/18 at 1/60 second, -1/3, circular polarizer, ISO equivalent 100.
Facing Page: Hoar-frosted trees. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 50mm, f/18 at 1/85 second, +2/3, ISO equivalent 100.

as standing still let the chill in. After our nice snowshoe trip for the day we decided to hang out in the visitor center again for that pizza, beer, and some well-deserved thaw out time! What a luxury to be warm!

We returned back up the snow-packed trail for sunset, and I had the opportunity to capture another beautiful shot over the Tatoosh range with some nice golden tones, but did not hit the super image jackpot. We made our way back to the "cabin" for thaw out time. Finally, patience paid off and conditions were right, so it was time to capture a long exposure star photo of our amazing camp. This was a complex image, so we got about setting up the scene.

Turning on long exposure noise reduction, I set the camera's ISO to 100, put the camera in bulb mode at f/4 with focus set to infinity for the 24mm wide angle shot. I locked the shutter open and I focused my headlamp on the tree in the foreground for just over a second to light it up. Turning off the headlamp we walked into our scene and we both crawled into our sleeping tents and lit them with our headlamps while we counted to 30 so we would not overexpose the tents. After turning the headlamps off, we exited the sleeping tents and met up in our cabin tent and we stayed in there for one hour with a very small candle lit. Then we walked back through the scene and waited a few minutes so we would disappear and not show up in the image, and then ended the exposure at just over one hour and 10 minutes.

Back in the cabin tent we took off the layers and were enjoying the warmth from our propane heater, while our star photos processed in the cameras, when suddenly the tent got very bright. "Oh my" I said as we realized the full moon had just risen. We put our layers back on, put off dinner for a while, and headed back out for image making. I was finally able to grab my signature shot of the Paradise Inn Lodge and Mount Rainier at night with stars, lit by the spectacular full moonlight. We were so glad we decided to stay one more night. We put the camera to bed still turned on to finish processing all the spectacular star images, and we crawled into our four-season tents for some much needed sleep. This night I had a fox run right over the top of my tent on his way to somewhere important. In the morning, I confirmed it was a fox by tracing his footprints in the snow going right over my tent. How cool is that!

One more time, waking up before sunrise on the fourth and final day, we made our trek back up our now very packed snow trail to our awesome sunrise spot. On the way, predawn light showed a touch of the colors that were about to come, and we quickened our pace to arrive just in time to capture a series of spectacular images, which for me turned out to be some of the best winter photography of my life. Looking away from Mount Rainier south to the Tatoosh Range, Mother Nature turned up the color and we were graced with super red and blue tones that reflected off the snow to create magic in the eye, and in the camera. What a joy as a photographer to be out in it, seeing it, and capturing it, to the best of our abilities in this frozen paradise. When Mother Nature puts on a light show like that, I feel very blessed for being alive and a part of it all! What a finish to an amazing trip!

Back at camp it was time to tear down the tents and pack out all our equipment. The process took many trips up and down, but through all the effort, we knew we had already gotten our reward. Another magnificent trip out in the field capturing the beauty of our planet. And a rare winter trip that actually worked out for fantastic winter image making. Happy hiking and snowshoeing everyone! NP

Paradise Inn Lodge and Mount Rainier at night with stars, Mount Rainier National Park, Washington, by Randall J. Hodges. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 28mm, Bulb f/4 at 8 seconds, -1/3, circular polarizer, ISO equivalent 1000.

Images in Mount Rainier National Park, Washington, by Randall J. Hodges.
Left: Mount Rainier. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 28mm, f/18 at 1/30 second, -1/3, 1-stop hard graduated split neutral density filter, ISO equivalent 100.
Below: Campsite. Canon EOS 5D Mark III, Canon EF24-105mm F4L IS USM lens, focal length 24mm, bulb f/4 at 1 hour and 10 minutes, ISO equivalent 100.

Winter Landscape Photography in California

Article and Photography by Satish Menon, Field Contributor

Satishr's web site: http://pixgaga.com (Click for Live Link)

California offers an excellent variety of landscape photography opportunities. From the Pacific Coast in the west, to the Sierra Nevada Mountains in the east—from the Redwood forests in the Northwest to the Mojave Desert areas in the Southeast. The state has a large number of national forests, many of them housing world famous national parks.

REDWOOD NATIONAL AND STATE PARKS/ CALIFORNIA COASTLINE

To the northwest, the redwood national and state parks provide access to almost half of all remaining coastal redwood old-growth forests containing the tallest and one of the most massive tree species on earth alongside tens of miles of pristine coastline. When you visit, stay in either Crescent City or McKinleyville, or in many of the vacation rentals along the coast between these towns. One of the key not-to-be-missed attractions is the Avenue of the Giants—a scenic highway running through the nearby Humboldt Redwoods State Park. Extraordinary ocean views and scenery abound as you go down south from here along the California coast. Sensational vista points, beaches, sea stacks, and coastal forests will treat you as you pass through Fort Bragg, Point Reyes National Seashore, Muir Woods, Monterey, Carmel, and Big Sur, just to name a few. After you reach the southern part of the state along the coast, near Santa Barbara, there is also an option to visit the Channel Islands National Park by boat.

Digital capture by Satish Menon

MOUNT SHASTA, SHASTA LAKE, AND LASSEN VOLCANIC NATIONAL PARK

In the north of the state, as you go into the mainland, one will enter the Shasta-Trinity National Forest and the Shasta National Forest areas containing the ever popular Mount Shasta and Shasta Lake. The former is a great hiking destination while the latter is famous for boating. As you proceed to the east in California, you will pass through the Lassen National Forest, containing Lassen Volcanic National Park. The dominant feature of this park is Lassen Peak, the largest plug dome volcano in the world and the southern-most volcano in the Cascade Range. Bumpass Hell is one of the most spectacular locations in this national park containing boiling springs, mudpots, and fumaroles. If you plan to visit this area, a good place to find accommodations would be the town of Chester. This also gives you easy access to Lake Almanor, which is quite famous for water-based activities.

EASTERN SIERRA

As you proceed southbound from the northeastern region in the state, you will go through a series of national forests containing several well-known national parks. This route of travel along the eastern side of the Sierra Nevada range is also famous for its scenic beauty and photographic opportunities. The Lake Tahoe area is a key starting point in the north for any Eastern Sierra drive in California. From here, take US 395 and go south, all the way to Bishop and beyond, to enjoy the Eastern Sierra. At the northern end of US 395 is Topaz Lake and Walker River Canyon. As you go south, you will hit the intersection with the Sonora Pass road. This is the second-highest pass in the Sierra Nevada, allowing travel from Sonora on the west to Bridgeport on the east of the Sierras. Although you can access a section of this pass in winter, you cannot drive through to the other side, since it is closed due to snow accumulation. Go further south to find Twin Lakes. If you choose to travel west on this exit, you witness expansive ranch lands and pastures to the Twin Lakes Recreation Area. Both the lakes on this road are lined with aspen and cottonwood trees. Continuing southbound on US 395, you will proceed towards Mono Lake and will hit the Conway Summit and Virginia Lakes to the west. Mono Lake is a large, shallow lake with high levels of salt content due to the fact that it has no outlet to the ocean. The limestone tufas of Mono Lake are world famous. Seen early in the morning or late in the evening, the orange glow of light reflected in the lake is widely photographed. Mono Lake is to the east of US 395, but if you choose to proceed west from here, you will enter Tioga Pass, the eastern entry point for Yosemite National Park. It is the highest highway pass in California in the Sierra Nevada. While driving through Tioga Pass is a great way to explore sections of the Yosemite National Park in the summer, this pass is closed in winter due to snow accumulation. You can access sections of it in the winter from either end. In the winter, access Yosemite National Park from the west. Proceeding south further on US 395, one arrives at the June Lake Loop. This scenic drive is a treat any time of the year, but the early morning views of June Lake from its obvious beach is especially spectacular in winter. Just a short drive south from the June Lake loop on US 395 is the town of Mammoth Lakes. This is a great place to find accommodations for an overnight stay. As you proceed to explore the rest

Images of California by Satish Menon.

Left: Bird tracks, Eureka Dunes, Death Valley. Nikon D300, Nikkor 17-35mm F2.8 lens, focal length 28mm, f/22 at 1/15 second, spot metering mode, manual exposure mode, ISO equivalent 200.

Facing Page: Lenticular clouds, Twin Lakes Rd, Eastern Sierra. Nikon D300, Nikkor 17-35mm F2.8 lens, focal length 25mm, f/11 at 0.5 second, matrix metering mode, auto exposure mode, ISO equivalent 200.

of the Eastern Sierra, this highway takes you through several more lakes and canyons until you hit Bishop and Big Pine Canyon.

YOSEMITE NATIONAL PARK

One of the most famous national parks in the world, Yosemite is internationally recognized for its spectacular cliffs, waterfalls, streams, and giant sequoia groves. Most visitors spend their time only in Yosemite Valley, which is just one part of the national park. While Yosemite Valley covers the major waterfalls and the spectacular Tunnel View, there is so much more to see in the park. Exploring the views along Tioga Pass is highly recommended, although access to it is limited in winter due to road closures.

SEQUOIA AND KINGS CANYON NATIONAL PARK

Sequoia National Park contains Mount Whitney, the highest point in the contiguous 48 United States. The park is famous for its giant sequoia trees, including the General Sherman Tree, the largest tree in the world. Beyond the hills and the streams in this park, there are over 240 known caves. The commercial cave open to park visitors is the well-preserved Crystal Cave. One of my favorite locations in this park is Moro Rock. Visitors can hike to the top using a 400-step stairway.

DEATH VALLEY NATIONAL PARK

A California gem, this national park contains a diverse desert environment of salt-flats, sand dunes, badlands, valleys, canyons, and mountains. It is the largest national park in the contiguous 48 United States. It contains the second-lowest point in the Western Hemisphere in Badwater Basin at 86 meters below sea level. Daily summer temperatures of 120 degrees F are common while in December, the average high is 65 degrees F and the average low is 39 degrees F. Visiting this park in the winter is therefore practical. Two often missed but spectacular locations in this park are the Racetrack Playa and the Eureka Dunes. Both locations require 20 plus miles of unpaved road driving that can take over two hours. High clearance vehicles are recommended for the strenuous drives to these locations. Extraordinary views in total solitude are a great reward. Racetrack Playa is a scenic dry lake known for its moving rocks. Eureka Dunes cover an area of only three square miles, but the dunes rise approximately 680 feet above the surrounding valley floor, making them one of the highest dunes in North America.

JOSHUA TREE NATIONAL PARK

Named for the tree-like yuccas native to the area, Joshua Tree National Park includes parts of two deserts, the Mojave Desert and the lower Colorado Desert. Apart from the Joshua trees, dominant parts of the landscape are hills of bare rock, usually broken up into loose boulders. At lower elevations, yucca and cholla cactus are found. The park also contains five oases featuring the California fan palm.

MOJAVE NATIONAL PRESERVE

This US national preserve is the third largest unit of the National Park system in the contiguous United States. Scenic mountains, sand dunes, and Joshua tree forests are found everywhere. A highlight would be the Kelso Dunes, especially in early morning or late evening.

SUMMARY

To summarize, California offers a wealth of opportunities to a landscape photographer. Inclusive of oceanscapes, forests, waterfalls, mountains, lakes, rivers, deserts, and canyons, this is indeed a photographer's paradise. NP

Images of California by Satish Menon.

Above: Tunnel View, Yosemite National Park—a panoramic stitch of several overlapping frames. Nikon D700, Nikkor 70-200mm F2.8 lens, focal length 70mm, f/11 at 1 second, matrix metering mode, manual exposure mode, ISO equivalent 200.

Facing Page Top: Cloud's Rest and Half Dome, Yosemite National Park. Nikon D300, Nikkor 17-35mm F2.8 lens, focal length 35mm, f/22 at 1/125 second, spot metering mode, manual exposure mode, ISO equivalent 200.

Facing Page Bottom: Racetrack Playa, Death Valley National Park. Nikon D300, Nikkor 17-35mm F2.8 lens, focal length 19mm, f/22 at 0.8 second, spot metering mode, manual exposure mode, ISO equivalent 200.

Water, Water Everywhere

Article and Photography by Norman Nokleby, Field Contributor

Norman's web site: www.LightJourneys.us (Click for Live Link)

The title of this article is a line from *The Rime of the Ancient Mariner* by Samuel Taylor Coleridge. These words poetically express the fact that water covers seven-eighths of the earth's surface. So, it is no wonder that photographs of water are so prevalent. When images of water are mentioned, one might imagine a serene mountain stream or a thundering waterfall. These certainly can be beautiful, inspiring scenes. However, water can also play a significant part in nature photography when it is used not as the principal subject, but rather as a secondary element. As a secondary element, water is not the primary focal point. But, it can still make an important, even critical, contribution to the final image. Being aware of the possibilities mentioned below will help you make the most of these opportunities in the field.

Reflections are one of the most common ways that water can be used as a secondary element in photo-

Images by Norman Nokleby.
Left: Snow, Greenville County, South Carolina. Nikon D200, Nikkor 18-70mm lens, f/20 at 1/30 second, matrix metering mode, auto exposure mode, ISO equivalent 320, Gitzo tripod.
Facing Page: Icicles, Pisgah National Forest, North Carolina. Nikon D200, Nikkor 18-70mm lens, f/16 at 1/6 second, matrix metering mode, auto exposure mode, ISO equivalent 100, Manfrotto tripod.

Digital capture by Norman Nokleby

"Derive happiness in oneself
from a good day's work,
from illuminating
the fog that surrounds us."
Henri Matisse

Fog, Great Smoky Mountains National Park, Tennessee, by Norman Nokleby. Nikon D200, Nikkor 80-400mm lens, f/16 at 1/640 second, matrix metering mode, auto exposure mode, ISO equivalent 100, Gitzo tripod.

"Truth is the torch
that gleams through the fog
without dispelling it."
Claude Adrien Helvetius

Images by Norman Nokleby.
Above: Water droplets, Ashmore Heritage Preserve, Greenville County, South Carolina. Nikon D200, Nikkor 200mm macro lens, f/32 at 1/2 second, matrix metering mode, auto exposure mode, ISO equivalent 100, Gitzo tripod.
Below: Rainbow, Capitol Reef National Park, Utah. Nikon D200, Nikkor 18-70mm lens, f/22 at 1/60 second, matrix metering mode, manual exposure mode, ISO equivalent 100, Gitzo tripod.

graphs. Opportunities for mirror-like reflections include lakes, rivers, streams, and water-filled erosion pits in rocks. In coastal areas, be aware of tidal pools as well as ebbing water that can provide an ideal reflective surface on the beach. When scouting for reflections, position yourself on the same side of the reflector as your light source so that you and your camera are looking towards what is being reflected. The exceptions to this guideline are when combining water with a sunrise or a sunset.

Since lake surfaces are susceptible to being rippled by the wind, going out early in the morning or late in the day will increase your chances of finding a calm spot. If you cannot find a calm area when photographing water, all is not necessarily lost. Movement on bodies of water can provide the opportunities for more abstract or painterly images. To make your image more abstract, include less of the surrounding area, which will provide fewer contextual clues to a viewer. And conversely, more of the surrounding area in your frame, and hence more context, will yield less abstract work.

Water droplets on blades of grass, leaves, flowers, or even insects can enhance what might otherwise be an ordinary image. The water can be dew, raindrops from a recent shower, or even mist from a nearby waterfall. Regardless of the source, these droplets on objects can be disturbed by even the slightest accidental touch. One way to decrease the likelihood of contact with your subject is to increase your camera-to-subject working distance by using a longer-length macro lens or a telephoto lens with a close-up filter.

Rainbows provide some of the most spectacular opportunities to use water in a secondary role. A rainbow is created when light is refracted through water droplets, similar to the way light behaves when it is projected through a glass prism. The color spectrum displayed consists of red, orange, yellow, green, blue, indigo, and violet. (An acrostic to help remember these colors and their order is the name ROY G BIV.) Usually, a rainbow is happened upon as opposed to a shot being planned with a rainbow in it. You may be able to enhance its colors by using a polarizing filter.

Clouds are bodies of fine water droplets or ice particles in the atmosphere above the earth's surface. If the whole sky is covered in white, nondescript clouds, keep the area above the horizon out of your image as much as possible. However, a few puffy cumulus or streaky cirrus clouds in an otherwise clear blue sky can add drama or interest to a landscape. Clouds can be particularly effective if the number of elements in the frame is minimal.

Clouds can be a powerful addition to a photograph at sunrise or sunset, where rays of sunlight paint their surfaces with a variety of hues. This type of lighting can also provides creative opportunities for silhouettes. Arriving at a location about a half hour before a sunrise and remaining after the sun has gone below the horizon will maximize your opportunities at a day's bookends of light. Rays of sun breaking through holes or cracks in clouds, regardless of the time of day, can also add impact.

Frost, Great Smoky Mountains National Park, Tennessee, by Norman Nokleby. Nikon D200, Nikkor 200mm macro lens, f/16 at 1/10 second, matrix metering mode, auto exposure mode, ISO equivalent 100, Gitzo tripod.

Fog, simply put, is a cloud that is in close proximity to the ground. Fog's limited visibility and light dispersion can create a photo opportunity where one might not exist in clear weather. It can also create an interesting mood in a photograph.

Frost snow, and coatings of ice are occurrences of water in solid form that, to one degree or another, conform to the shape of the object they are on. Frost can be thought of as frozen dew. Frost is most likely to occur on nights when the humidity is relatively high, the temperature is around freezing, the sky is clear, and there is little or no wind. In addition to valleys, low-lying areas such as ditches and other areas sheltered from breeze are good places to look for frost-covered objects. A coating of ice can enhance brightly-colored leaves or berries. When shooting snow-covered objects, include some color in the frame to provide contrast.

Icicles are another solid form of water that are more influenced by gravity than by the object they hang from or encase. When photographing icicles, try to include some contrasting element, such as a rock face or leaf that will provide some color. A reflector disk or a diffused flash can help provide highlights on the icicles or lighten the area behind them. Where it is possible, shooting from behind icicles can provide fascinating backlit compositions.

With the exception of dry, arid deserts, water really is just about everywhere. But as the *Ancient Mariner* observed, there is more to water than just its presence or absence. Because water is so common, it is easy to take for granted water's various forms and the creative ways in which this secondary element can enhance images of nature. Being conscious of the different appearances of this component of our environment can help you incorporate water as a subtle, but integral, feature in your photographs. NP

Birds As Art
2nd International
Bird Photography Competition

Article by Arthur Morris/BIRDS AS ART, Editor

The BIRDS AS ART web site: www.BIRDSASART.com (Click for Live Link)

Like the 1st, the BIRDS AS ART 2nd International Bird Photography Competition was a big success. With more than 200 photographers entering more than 2000 images, many of them spectacular, the distinguished panel of international judges, Sandesh Kadur, Scott Elowitz, Mary Ann McDonald, Michael Frye, Peter Kes, Denise Ippolito, last year's winner Lou Coetzer, and yours truly, Arthur Morris, had their work cut out for them.

You can view all 25 honored images by visiting the BIRDS AS ART Blog at www.BIRDSASART-Blog and clicking on the tab for the 2nd-IBPC, the third from the left on the upper yellow tabs bar.

Without a great cast of sponsors, this contest would not exist. Thanks to the following businesses for their wonderful generosity: major sponsor B&H Photo Video, Think Tank, Delkin Devices, *Nature Photographer* Magazine, Lens Coat, HP Marketing, Outdoor Photo Gear, RAW Workflow, Wimberley, Essential Photo Gear, 4th Generation Designs, Breeze Systems, Vested Interest, and the contest organizer, Arthur Morris/BIRDS AS ART.

Arthur Morris, a Canon Explorer of Light Emeritus, is widely recognized as one of the world's premier bird photographers. At the time of publication he was working on a streak of a new blog post every day for 365 days—www.BIRDSASART-Blog.com. NP

Squabbling bald eagles. The Grand Prize-winning image was created by Clemens Van der Werf in March 2012 from a small work boat in Kachemak Bay, Alaska. He used the handheld Canon 70-200mm F2.8L IS lens with a 1.4x III teleconverter and the EOS-1D Mark IV. ISO 500. 1/1600 second at f/5.

Capturing action like this is one of the great challenges of bird photography as fights of this nature usually last a second or two at most. A perfect exposure, the sharp eyes of the combatants, the two perfect head angles, the look on the upper bird's feet and its outstretched talons, the plain snow background, enough depth of field to cover both birds, and the circular flow of this pleasingly designed image all combined to put this one at the top.

Short-eared owl. Doug Schurman's superb portrait of a usually reclusive species garnered top honors in the Hand-of-Man category. The nicely weathered post was the hand-of-man element. Doug created this image with the Canon EF 600mm F4L IS II lens, the 1.4x III teleconverter, and the EOS-1D Mark IV at Boundary Bay, British Columbia, Canada. ISO 800, 1/1250 second at f/5.6.

He was standing on the Dyke Trail in the late afternoon watching a few short-eared owls and northern harriers fly over a grassy meadow when suddenly and for no reason the owl flew right up to him, landed on the post, and proceeded to bark for more than ten minutes. The judges loved the image design, the sharpness, the calling pose, the sweet light, and the wonderful background.

Anhinga with nesting material. For the second year running Jenaya Launstein took first place in the Youth category. She created this photograph at Vierra Wetlands on Florida's east coast with the tripod-mounted Nikkor AF-S 300mm F4 D IF-ED lens, the TC-14EII teleconverter, and the Nikon D300.

She noticed that every time the male bird brought a perfect branch to the nest that his mate sent him out for another so she put herself in position and was justly rewarded. Aside from the sharpness and the lovely background, the perfect wings-down position is the great strength of this image.

Great horned owl painted. Carol Nichols created the original of this rehab owl for her Digital Creations category-winning image with the tripod-mounted Canon 300mm F4L IS lens and the EOS-5D. ISO 800, 1/1250 second at f/5.6 on a foggy morning at a Florida birding festival. This and other raptors were courtesy of the Audubon Center for Birds of Prey, Maitland, Florida.

After optimizing the image in Photoshop, Carol created the painted effect with Topaz Simplify. The painted look, the feather detail, and those big bright yellow eyes made this one the judges' choice.

Immature glaucous gull in flight with guillemot in its bill. Who would think that a backlit image of a young gull flying directly away from the photographer would win first place in the Action/Behavior category? Not me for sure. At least until I saw this amazing image, created by Niko Pekonen on the cliffs at Vardö, Norway, in March 2013. Many gulls were harassing the guillemots (murres on this side of the pond) that were returning to their nests with baitfish for their young. Suddenly one grabbed the small seabird in this photo by the tail causing it to drop its prey. The gull promptly let go of the adult bird, dove, and snatched the fish before it made its way back into the sea.

The action is fantastic and the pink backlight very pleasing. Without having both birds looking back at us the image would have been delegated to the trash bin. But it is the raised wings, the open bill, and the priceless look on the guillemot's face that put this one over the top.

Hooded crane flock. Seungho Cho created the image that placed first in the Pleasing Blurs category with the tripod-mounted Canon EF 600mm F4L IS lens and an EOS-1D Mark IV at Ganwoalho, a lake in Seosan, Chungchongnam-do, South Korea. ISO 1600. 1/15 second at f/4.

It was a very dark afternoon. In spring and fall several thousand hooded cranes stop by the lake while on migration; about 200 stay on to winter. This species is listed as Vulnerable on the IUCN Red List of Threatened Species. The degree of blurring and the dark, mysterious mood of this photograph made it a hit with the panel of judges.

Snow geese fire. Dave Klein created the winning Small-in-the-Frame/Environmental category image during a conflagration on March 14, 2011, at Squaw Creek NWR in northwestern Missouri. He used the handheld Nikkor 70-200mm f/2.8 VR lens (at 135mm) with the Nikon D-300 S. ISO 800. 1/320 second at f/11.

The image design, the trees, the flames, the reflections, and the large flock of both white and dark morph all were nicely unified by the panoramic crop to create a memorable winning image. This one missed taking the Grand Prize by a single judging point.

Great grey owl jumping off. The first place image in the Flight category was created by Pierre Giard at Laval, Quebec, during the great grey owl irruption of 2013 with the tripod-mounted Canon 500mm F4L IS lens, the 1.4x II teleconverter, and the EOS-1D X. ISO 1600. 1/1000 second at f/6.3.

Based on a hunch, Pierre found his cooperative subject at a local park near his home. On a cloudy afternoon he found the bird on its hunting perch looking left and right and left and right. When the bird pooped, he knew that it was about to take off. It did and as the bird left its perch Pierre fired a quick burst that included the winning image.

Great grey owl is on the top ten most wanted list of most birders and bird photographers. That fact, the soft light, the sharpness of the face and the eyes contrasting with the motion-blurred wingtips, the incredible wing position, and the bird's focused intent all combined to make a very fine and worthy image.

Snowy owl/snow angel. Gail Bisson flew to Ottawa, Ontario, Canada, in January 2014 to visit Bird Photographer's.Net avian moderator Daniel Cadieux with high hopes of photographing the snowy owl irruption. On the first morning, the weather was terrible; it was cloudy with icy rain and very poor visibility. When this bird flew in they barely had time to set up their gear and create a test exposure. ISO 1600. 1/2000 second at f/6.3 was just right.

When the bird landed it held its wings up for just an instant. Gail knew that she captured something special. It turned out to be the top image in the Portrait category. Lousy light and poor conditions can often turn out to be a winning combination for nature photographers.

Showcase of Images

Autumn's brilliance, by Barbara Magnuson and Larry Kimball, Field Contributors. Nikon D300, Nikkor 70-200mm F2.8 lens, focal length 200mm, f/22 at 1/15 second, matrix metering mode, auto exposure mode, ISO equivalent 125.

"A mature person is one who does not think only in absolutes,
who is able to be objective even when deeply stirred emotionally,
who has learned that there is both good and bad in all people and in all things,
and
who walks humbly and deals charitably with the circumstances of life,
knowing that in this world no one is all knowing
and
therefore all of us need both love and charity."

Bryce Canyon National Park, Utah, by Thomas S. Parry, Field Contributor. Canon EOS 40D, Canon EF16-35mm F2.8L II USM lens, focal length 16mm, f/8 at 1/200 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

"Joy can only be real
if people look upon their life as a service
and
have a definite object in life
outside themselves and their personal happiness."
Leo Tolstoy

Hooded merganser, by Willy Onarheim, Field Contributor. Nikon D200, Nikkor 600mm F4 lens with teleconverter, focal length 850mm, f/9 at 1/120 second, matrix metering mode, auto exposure mode, ISO equivalent 400.

"Joy in looking and comprehending
is nature's most beautiful gift."
Albert Einstein

Bald eagle, by David Watts, Field Contributor. Canon EOS 7D, Canon EF 300mm F4L IS lens with 1.5x teleconverter, focal length 420mm, f/10 at 1/1600 second, evaluative metering mode, manual exposure mode, ISO equivalent 800.

"Rejoicing in our joy,
not suffering over our suffering,
makes someone a friend."
Friedrich Nietzsche

"The marvelous richness of human experience
would lose something of rewarding joy
if there were no limitations to overcome.
The hilltop hour would not be half so wonderful
if there were no dark valleys to traverse."
Helen Keller

Male wood duck, by Willy Onarheim, Field Contributor. Nikon D800, Nikkor 70-200mm F2.8 lens, focal length 200mm, f/2.8 at 1/640 second, matrix metering mode, auto exposure mode, ISO equivalent 320.

"With the past, I have nothing to do;
nor with the future. I live now."
Ralph Waldo Emerson

"To find joy in work is to discover the fountain of youth."
Pearl S. Buck

Lilac-breasted roller, Africa, by James O. Day, Field Contributor. Nikon D600, Nikkor 80-400mm F4.5-5.6 lens, focal length 110mm, f/8 at 1/1500 second, matrix metering mode, auto exposure mode, ISO equivalent 400.

"In all toil there is profit,
but mere talk tends only to poverty."
Proverbs 14:23

“Never be afraid to sit awhile and think.”
Lorraine Hansberry

Mesquite Flat Dunes, Death Valley National Park, California, by Michel Hersen, Field Contributor. Nikon D7100, Nikkor 18-200mm F3.5-5.6 lens, Hoya circular polarizer, f/18 at 1/30 second, matrix metering mode, auto exposure mode, ISO equivalent 200, Gitzo tripod with Arca-Swiss head.

“Your talent is God’s gift to you.
What you do with it is your gift back to God.”
Leo Buscaglia

North Lake, Bishop Creek Canyon, Eastern Sierra Nevada, California, by Craig Malburg, Field Contributor.

“I never found a companion
that was so companionable as solitude.”
Henry David Thoreau

“People see God every day,
they just don’t recognize him.”
Pearl Bailey

"For happiness one needs security,
but
joy can spring like a flower even from the cliffs of despair."
Anne Morrow Lindbergh

Elephant seals and gulls, Piedras Blancas Elephant Seal Rookery, California, by Kevin Juberg, Field Contributor. Nikon D300s, Nikkor 500mm lens, f/4 at 1/500 second, matrix metering mode, manual exposure mode, ISO equivalent 400.

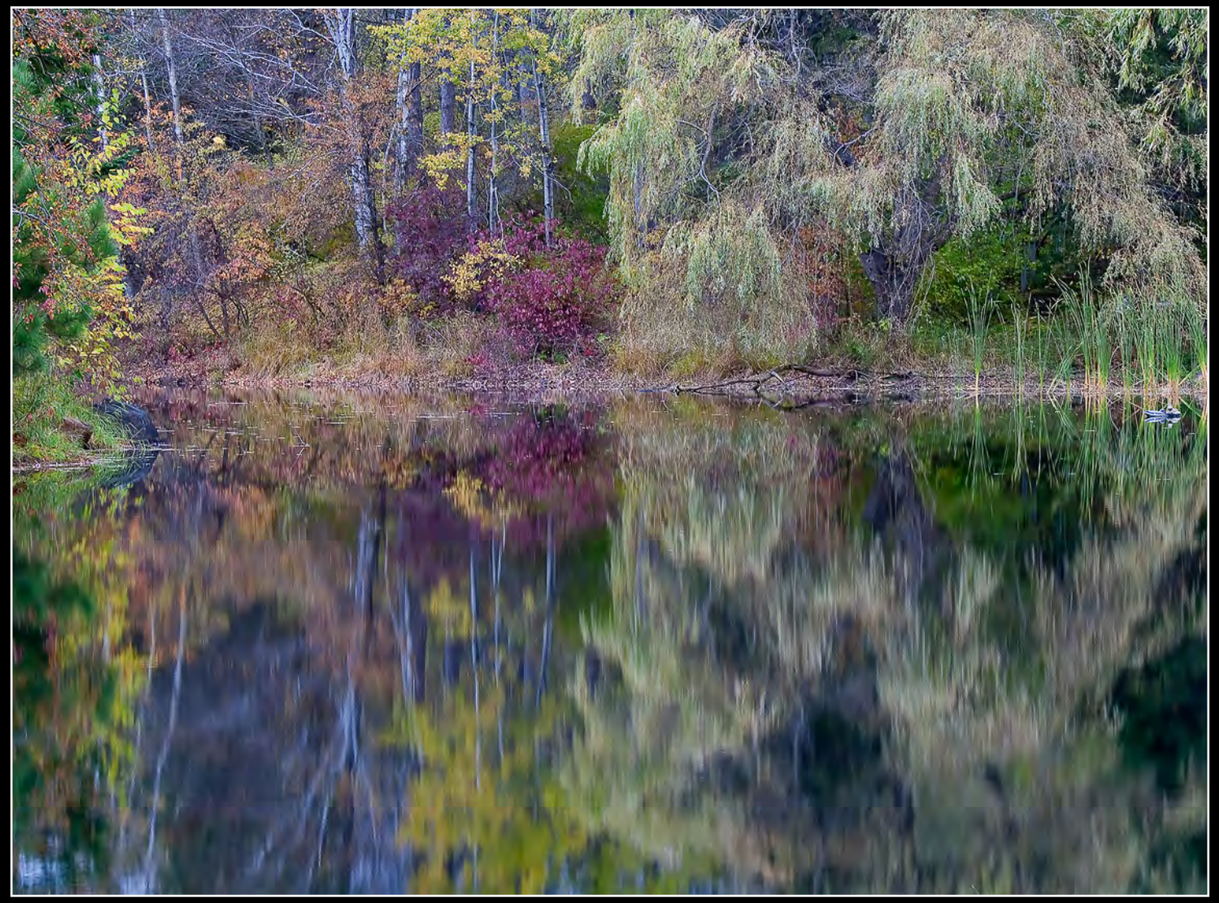
"The monotony and solitude of a quiet life
stimulates the creative mind."
Albert Einstein

"Riches take wings, comforts vanish,
hope withers away,but
love stays with us. Love is God."
Lew Wallace

Squirrel, Grand Teton National Park, Wyoming, by Pam Smith, Field Contributor. Nikon D7000, Nikkor 80-400mm F4.5-5.6 lens, f/5.3 at 1/200 second, center-weighted metering mode, auto exposure mode, ISO equivalent 1250.

"When I lay these questions before God I get no answer.
But a rather special sort of 'No answer.'
It is not the locked door.
It is more like a silent, certainly not uncompassionate, gaze.
As though He shook His head not in refusal but waiving the question.
Like, 'Peace, child; you don't understand.'"
C.S. Lewis

"Life is God's novel. Let him write it."
Isaac Bashevis Singer



Autumn ccolors reflected in a still pond, by Roger Zimmermann, Field Contributor. Canon EOS DIGITAL REBEL XSi, Canon EF-S55-250mm F4-5.6 IS lens, focal length 84mm, f/14 at 0.4 second, spot metering mode, auto exposure mode, ISO equivalent 100.

"If God had wanted me otherwise,
He would have created me otherwise.
Johann Wolfgang von Goethe

"The important thing is not to stop questioning.
Curiosity has its own reason for existing.
One cannot help but be in awe when he contemplates
the mysteries of eternity, of life, of the marvelous structure of reality.
It is enough if one tries merely to comprehend a little of this mystery every day.
Never lose a holy curiosity."
Albert Einstein

Moraine Creek, Alaska, by Virginia (Ginna) Short, Field Contributor. Nikon D2X, Nikkor 80-400mm F4.5-5.6 lens, focal length 80mm, f/6.3 at 1/200 second, spot metering mode, manual exposure mode, ISO equivalent 100.

"Have courage for the great sorrows in life, and
patience for the small ones.
And when you have laboriously accomplished your daily tasks,
go to sleep in peace, God is awake."
Victor Hugo

"There is a privacy about it which no other season gives you.
In spring, summer and fall
people sort of have an open season on each other;
only in the winter, in the country,
can you have longer, quiet stretches
when you can savor belonging to yourself."
Ruth Stout

Black Sand Basin, by Carolyn Fox, Field Contributor. Canon EOS 7D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 100mm, f/4.5 at 1/640 second, evaluative metering mode, manual exposure mode, ISO equivalent 125.

"I have a great deal of company in the house,
especially in the morning when nobody calls."
Henry David Thoreau

"When you find peace within yourself,
you become the kind of person
who can live at peace with others."
Peace Pilgrim

Cold morning on the Gros Ventre River, Grand Teton National Park, Wyoming, by Diana LeVasseur, Field Contributor. Canon EOS 7D, Canon EF28-105mm F3.5-4.5 USM lens, focal length 105mm, f/8 at 1/500 second, evaluative metering mode, auto exposure mode, ISO equivalent 400.

"I saw that wisdom is better than folly,
just as light is better than darkness."
Ecclesiastes 2:13

*“Our lives begin to end the day
we become silent about things that matter.”
Martin Luther King*

Helen Hunt Falls in North Cheyenne Canyon Park, Colorado Springs, Colorado, by Bijan Pirnia, Field Contributor.

North Cheyenne Canyon Park was the first and the largest voter-approved city park in Colorado Springs. It was established in 1885 and encompasses 1620 acres. The waterfall is named after Helen Hunt Jackson (1830-1885), an American poet and novelist. Her classic novel, *Ramona,* was a best seller in 1884. Copies of it in paperback are still available in bookstores and libraries. This novel has also been made into movies four times since 1910, an annual theatre production in Hemet, California, since 1923, a radio broadcast in 1945, and a Mexican Telenovela TV series in 2000. BP

*“One can never consent to creep
when one feels an impulse to soar.”
Helen Keller*

Winter stream, by Bob Watson, Field Contributor.. Nikon D3X, Nikkor 70-200mm F2.8 lens, focal length 70mm, f/20 at 1/8 second, spot metering mode, manual exposure mode, ISO equivalent 100.

*“Laughter is the sun
that drives winter
from the human face.”
Victor Hugo*

"It is easier to prevent bad habits than to break them."
Benjamin Franklin

Fish Island Adélie penguin, Antarctica, by Norman C. Dulak, Field Contributor. Nikon D7000, Nikkor 28-300mm F3.5-5.6 lens, focal length 300mm, f/10 at 1/1250 second, matrix metering mode, auto exposure mode, ISO equivalent 640.

This Adélie penguin seemed to glide over rocks on one of the Fish Islands in Antarctica. NCD

"In this world, there is no clarity. There is only love and action."
Mother Teresa

"He went that way." Adélie penguin, Antarctica, by Linda Dulak, Field Contributor. Nikon D7000, Nikkor 28-300mm F3.5-5.6 lens, focal length 300mm, f/10 at 1/2000 second, matrix metering mode, auto exposure mode, ISO equivalent 800.

This Adélie penguin was on one of the Fish Islands. As I rounded the corner the penguin seemed to be pointing to the path to take, almost as a personal tour guide. LD

*"Our brightest blazes of gladness
are commonly kindled by unexpected sparks."
Samuel Johnson*

Everglades sunrise, Everglades National Park, Florida, by Sam and Brenda Fletcher, Field Contributors. Nikon D800, Nikkor 28-300mm F3.5-5.6 lens, focal length 105mm, f/16 at 1/100 second, matrix metering mode, manual exposure mode, ISO equivalent 200.

*"Gratitude is the fairest blossom
which springs from the soul."
Henry Ward Beecher*

*"The mountains shall bring peace to the people."
Psalms 65:6*

Jackson Lake and Mount Moran, by John R. Keys, Field Contributor. Nikon D700, Nikkor 24-85mm F3.5-4.5 lens, focal length 85mm, f/9 at 1/60 second, center-weighted metering mode, manual exposure mode, ISO equivalent 400.

*"I still find each day too short
for all the thoughts I want to think,
all the walks I want to take,
all the books I want to read, and
all the friends I want to see.
The longer I live
the more my mind dwells upon the beauty and
the wonder of the world."
John Burroughs*

*"When the solution is simple,
God is answering."
Albert Einstein*

Barred owl falling asleep while a chickadee perches nearby, by Roger Zimmermann, Field Contributor. Canon EOS DIGITAL REBEL XSi, Canon EF-S55-250mm F4-5.6 IS lens, focal length 250mm, f/10 at 1/50 second, spot metering mode, auto exposure mode, ISO equivalent 100.

*"The sum of all wisdom is
the knowledge of God and of ourselves. "
John Calvin*

Lioness yawn, Samburu National Preserve, by Pam Smith, Field Contributor. Nikon D7000, Nikkor 80-400mm F4.5-5.6 lens, focal length 400mm, f/5.6 at 1/320 second, matrix metering mode, auto exposure mode, ISO equivalent 200.

"God's gifts put man's best dreams to shame."
Elizabeth Barrett Browning

Winter set against autumn's splendor, by Barbara Magnuson and Larry Kimball, Field Contributors. Nikon D300, Nikkor 70-200mm F2.8 lens, focal length 95mm, f/22 at 1/10 second, matrix metering mode, auto exposure mode, ISO equivalent 125.

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Star Photography Techniques

Article and Photography by John and Barbara Gerlach, Editors

John's and Barbara's web site: www.gerlachnaturephoto.com (Click for Live Link)
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Part I of II

I remember photographing stars around 1980 in Arches National Park using Balanced Rock in the foreground with my beloved Kodachrome 25 slide film. It was easy enough. Focus on Balanced Rock before darkness falls, set the lens to f/2.8 and the camera's exposure mode to Bulb and wait for complete darkness. When the stars are shining brightly, trip the shutter with a cable release and lock it. Take a nap nearby for a couple of hours and then close the shutter. It was a slow process, not very flexible, and produced few images. But the images were memorable because they were unique and mysterious.

When I switched to digital cameras in 2002, photographing the night sky became far more problematic. I could not shoot long exposures because keeping the imaging sensor turned on for long periods of time caused excessive noise as the sensor heated up. To counteract the warm sensor problem, star photographers began shooting a series of exposures and combined all of these images with Photoshop to create the star trails. Not being a fan of spending a lot of time working on images with software (I would rather be outside shooting new images), I let others do it and moved on to other photo subjects.

Over the past few years, advances in photo technology—cameras, software, lenses—have made the stars much easier to photograph. These advances include:

- Lower noise at high ISO speeds
- Better noise reduction software controls
- Lenses of F2.8 or faster that are sharp at the maximum aperture
- Magnified live view for precise manual focusing
- Many software options for combining images automatically to produce star trails
- Plenty of star photography information and numerous images posted on the internet that provide inspiring examples of what can be done. One expert star photographer we admire is Aaron Priest. We follow him to learn how to do it and to see what can be done. you can go to—www.facebook.com/aaronpriestphoto to be inspired.

Barbara traveled to Alaska in 2012 to photograph the northern lights. While clouds prevented her from seeing the lights on most nights, she did get a few opportunities to shoot some northern lights. Her results rekindled my interest in the night sky. By the summer of 2013, we were beginning to shoot landscapes in the middle of the night and reading everything we could about night sky photography. Pleasing results quickly became easy to produce. Ideas for combining light painting with flash or flashlight, focus stacking, panoramas, stars in the sky, and even the moon with in-camera multiple exposure techniques exploded into endless possibilities for shooting images that we had never done before. We also realized that we spend most of our year at locations—Yellowstone National Park and Michigan's Upper Peninsula—where there are often clear skies free of light pollution, a perfect set-up for star photography.

GEYSERS

We have lived near West Yellowstone, Montana since 1993. We spend plenty of time photographing in Yellowstone, especially during fall and winter when the crowds have left. We enjoy photographing the geysers and know a fair amount about them. With the aid of powerful small flashlights, we wondered if it might be possible to photograph the geysers

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Geyser night photography, Yellowstone National Park, Wyoming, by Barbara Gerlach. Nikon D4, Nikkor 14-24mm F2.8 lens, focal length 24mm, f/2.8 at 20 seconds, matrix metering mode, manual exposure mode, ISO equivalent 3200.

Digital capture by John and Barbara Gerlach

at night while using the starry night sky as the background. Many geysers have predictable eruption times. Everyone knows that Old Faithful erupts about every 75 minutes, but it is only good for about two minutes before the main show is over.

Other lesser known though more spectacular geysers, such as Castle and Great Fountain, erupt for much longer periods of time, but only a couple times each day. The eruption predictions aren't nearly as precise as Old Faithful. For both Castle and Great Fountain, the eruption variable is plus or minus two hours from the predicted time—so it can be a long wait, but well worth it when these spectacular geysers erupt.

We picked White Dome geyser to be the first one to try and photograph. It is a small but quite adorable geyser that offers close access—you can park twenty yards from it—and it erupts on an average of two or three times per hour. That means we would get several chances to photograph it during a three-hour vigil in the middle of the night. This frequency provided us with many opportunities to make mistakes, learn from them, and develop a successful shooting strategy that will be explained shortly.

STARRY LANDSCAPES

There are three major ways to photograph the stars. All have merit, but they require quite different techniques.

- Stars as Pinpoints of Light: These images sharply record the stars as bright pinpoints of light in the sky. The starry background adds a strong mystical element to the image.
- Star Trails: Using a super long exposure, or by combining a series of shorter exposures, the stars appear as white curvy lines racing across the sky. Star trails create fascinating images and compositions can be especially effective when the stationary North Star is used as a power point.
- Astronomical Tracking: These images are made possible by a special motorized tracking device that moves the camera to follow the movement of the stars. The stars are pinpoints of light. This technique makes it possible to record dimmer stars in the sky and to produce an image with a lot more stars. The drawback is you can only photograph the stars and cannot use stationary foreground elements in the composition (because they will not be sharp as the camera moves during the process).

DESIRABLE SHOOTING CONDITIONS

Certain conditions make night sky photography much easier and more successful. These factors include the following:

- Clear Sky: The fewer clouds and the cleaner the air, the more stars that will appear in the image.
- Dark Night: A dark night that is relatively free of light pollution and moonlight is better for recording the dimmer stars in the night sky. The Milky Way, for instance, photographs best during the time period that includes five days before and after the new moon when light from the moonlight is minimal.
- No Wind: Wind rattles cameras even when mounted on a sturdy tripod. This wind-induced vibration makes it impossible to shoot sharp images. A calm night with no breeze is always best for the long exposures that night photography requires.
- Solitude: Hopefully, you don't find the night to be frightening. Both Barbara and I are completely at ease spending time in wild places at night. But, we know many people are uneasy in the woods and fields at night. Night photography isn't an especially good group activity. Having other photographers lighting up the same subject that you are photographing doesn't work well at all. Even when Barbara and I are shooting together, we typically select different subjects that aren't too close together. Then we can work our cameras, turn on flashlights as needed, and shoot without interfering with each other.
- An Interesting Foreground: A photogenic object in the foreground adds considerable interest to the image and provides a sense of depth. Shapely trees or rocks, waterfalls, geysers, old cars or tractors, and windmills are all effective foreground objects. The foreground does need to be reasonably close if you wish to light it up with a flashlight or flash. However, if you don't want to light the foreground, then even a distant mountain range that is reflected in a quiet pond makes a pleasing foreground element against the starry sky.

STAR ORIENTATION

Learning the names of individual stars and constellations helps you compose the image and find your way around the night sky through the seasons. Without a doubt, the most important star to learn is the North Star and the most important group of stars is the Big Dipper. Surely everyone can quickly find the Big Dipper, which is always visible in the northern hemisphere. The North Star is called that because the earth's axis points at it. As a result, the North Star appears to be stationary in the night sky and records as a point of light no matter what shutter speed is used. The North Star is especially effective for use as a power point in the image to produce a pleasing composition when producing star trails. Barbara uses an inexpensive phone app that shows her the night sky and helps her identify the various stars and constellations.

FINDING THE NORTH STAR

Contrary to popular opinion, the North Star is not the brightest star in the night sky—not even close! It is much dimmer than many other stars and is not one of the stars making up the Big Dipper as some Internet experts state. However, you can use the Big Dipper as a guide to easily find the North Star. Use the two stars that outline the side of the dipper furthest away from the handle. Extend a line that connects these two stars upward above the bucket until the line strikes another dimmer star—that is the North Star!

THE ELUSIVE MILKY WAY

The Milky Way is a spectacular mass of stars that photographs beautifully in the night sky when it is visible and the night is relatively free of other sources of light. In the spring, it appears in the southeastern sky. By summer, look for it in the southern sky, and then in the southwest sky during autumn. A dark night sky that is free of reflected city lights and moonlight is crucial for seeing and photographing it clearly. The night of the New Moon (which means there is no moon at all) or five days before and after the New Moon work best.

Geyser night photography, Yellowstone National Park, Wyoming, by Barbara Gerlach. Nikon D4, Nikkor 14-24mm F2.8 lens, focal length 14mm, f/2.8 at 20 seconds, matrix metering mode, manual exposure mode, ISO equivalent 3200.

SHOOTING PROCEDURES AND TACTICS

IDEAL CAMERAS

Any camera that is especially good at minimizing noise at ISOs in the 1600 to 6400 range is ideal. New cameras are better at high ISOs, especially if they don't have too many megapixels and they have full-frame sensors. With a larger sensor and fewer megapixels, the pixels are larger, so the signal-to-noise ratio is far more favorable. The more signal measured at each pixel, the less problematic the noise.

LENSES

Use a wide-angle lens to capture a large portion of the starry sky. To help the faint stars record in the image, it is crucial to use a fast aperture. A lens with a maximum aperture of F4 will capture many stars, but a lens with a maximum aperture of F2.8 is far more ideal for night shooting. Barbara uses a Nikon 14-24mm F2.8 lens while John bought a Canon 16-35mm F2.8 zoom for star photos.

TRIPPING THE CAMERA

Use a cable or remote wireless release (instead of your finger) to trip the shutter. Pressing the shutter with your finger can cause the camera to vibrate which adversely affects image sharpness. Using the two-second self-timer to trip the camera works just fine. To be honest, using your finger to gently trip the shutter works quite well if the exposure time is longer than ten seconds, as it often is in star photography. Some photographers use an intervalometer to fire the camera. If this feature is already built in to the camera, that is indeed an effective way to work. If your camera is not so equipped, then you can buy one for your camera. However, we don't see a need to invest in such a device and John gets along fine without one. Barbara does use hers because it is built in to her Nikon D4 and D4s.

KEEP YOUR NIGHT VISION

Turning on any light will ruin your night vision for a few minutes. Therefore, learn to work your camera in total darkness. You must be able to adjust the ISO, aperture, and shutter speed without turning on a light. Be sure you can activate live view, magnify the live image, and be able to bring up the image just shot in the dark, too. At times a light is necessary. A headlamp is best for navigating to your shooting location in the dark and a strong flashlight is useful for light painting and temporarily lighting the foreground to permit manual live view focusing. When you merely need to see something on the camera, using a weak headlamp with a red light works well because the red light doesn't hurt your night vision as severely as a white light. Since turning on a light at night is detrimental to your night vision and everybody else in the area, we find night photography is not suitable for groups. It is much easier to be alone while shooting the stars or at least far enough away from others where lights turning off and on won't affect your night vision or harmfully cast light on your foreground.

FOCUS AND COMPOSE THE IMAGE

This is easy if you arrive before total darkness so enough ambient light is available to compose and focus in the usual way. However, if takes fully two hours after sunset before the sky is no longer illuminated by the setting sun. In practice, most shooters arrive at the photography site two hours after sunset when the sky is truly dark. Autofocus does not work in dim light. Instead, use a strong flashlight to light up the foreground and activate live view, magnify the image, and manually focus on the foreground. This is quite easy to do and highly effective. Keep in mind when using wide-angle lenses that infinity isn't that far away. If your wide-angle lens reaches infinity at fifteen feet, then everything will be in focus if the foreground is set to 15 feet away or further.

In many cases, the foreground will be at infinity focus. In this case, achieve the sharpest focus by setting the lens to the infinity mark. Be sure to check this carefully. You simply cannot set the focus manually as far as it will go toward infinity because most lenses focus past infinity. Lenses are designed this way to allow for the influence of ambient temperatures. Look at the infinity mark on the lens and focus on a subject far away in the daylight. Notice where the lens focus indicator is set on the infinity mark. If you know ahead of time the foreground is at the infinity distance, then manually set the lens to infinity focus and tape the lens in place to prevent it from accidently getting set to some other focus distance.

EXPOSURE

Do not use any autoexposure mode. You must use manual exposure because the large areas of black in the night sky will cause severe overexposure if autoexposure is used. Fortunately, exposure is simple to determine. Start with f/2.8, ISO 3200, and twenty seconds. Shoot the image and bring it up on the LCD monitor. If everything looks too dark, try ISO 6400. If everything looks too bright, try ISO 1600 or stop down to f/4. If you wish to brighten the foreground, the scattered light in the sky, or both, use a longer exposure time. Adjust the shutter speed to achieve the overall exposure you desire.

THE 500 RULE

If your goal is to capture a sky full of bright pinpoints of stars, then you must use an exposure time that prevents the stars from moving significantly during the exposure (and creating star trails). A widespread rule to determine the shutter speed time is to divide the focal length of the lens into 500. For example, according to this rule, you can use a 25-second exposure with a 20mm lens (500/20 = 25 seconds), 24mm and 21 seconds, 35mm and 14 seconds, and so on. This rule is fraught with problems. As you know, the stars are constantly moving and they twirl about the heavens. However, the North Star appears to remain still because the axis of the earth points at it. Therefore, stars in the northern and southern skies do not move as fast as the stars in the eastern or western sky. This makes perfect sense because the earth spins.

In reality, we don't worry too much about using the longest possible shutter speed according to the 500 Rule. Normally, we achieve the exposure we want in the foreground by illuminating it with artificial light, or using a longer exposure for moonlight, or getting more reflected light in the night sky where the source is usually from the stars or the moon.

Milky Way night photography, Yellowstone National Park, Wyoming, by Barbara Gerlach. Nikon D4, Nikkor 14-24mm F2.8 lens, focal length 14mm, f/2.8 at 25 seconds, matrix metering mode, manual exposure mode, ISO equivalent 6400.

"I'd rather learn from one bird how to sing
than to teach ten thousand stars how not to dance."
e. e. cummings

Geyser, Yellowstone National Park, Wyoming, by Barbara Gerlach. Nikon D4, Nikkor 14-24mm F2.8 lens, focal length 24mm, f/2.8 at 30 seconds, matrix metering mode, manual exposure mode, ISO equivalent 3200.

"We need to find God, and he cannot be found in noise and restlessness.
God is the friend of silence.
See how nature—trees, flowers, grass—grows in silence;
see the stars, the moon and the sun, how they move in silence.
We need silence to be able to touch souls."
Mother Teresa

"If the stars should appear one night in a thousand years,
how would men believe and adore; and
preserve for many generations the remembrance
of the city of God which had been shown!
But every night come out these envoys of beauty, and
light the universe with their admonishing smile."
Ralph Waldo Emerson

Milky Way, Sedge Meadow, by Barbara Gerlach. Nikon D4, Nikkor 14-24mm F2.8 lens, focal length 24mm, f/2.8 at 25 seconds, matrix metering mode, manual exposure mode, ISO equivalent 6400.

Longer exposure times only help reveal the dimmer stars up to a point. Once you get to about 10 seconds, using longer exposure times will not brighten the stars or allow dimmer stars to reveal themselves. Why is this so? If your camera is stationary, allotting a longer exposure time does give more time for the photons of light from a dim star to hit a specific photosite. However, if the light received is still too dim to actually make the star appear in the image after a few seconds, a longer exposure time doesn't help because the star glides across the sensor and sends its photons of light to a new photosite and keeps doing that without ever sending enough signal to any group of photosites to appear in the image. The key to recording more stars in the night sky is to use a higher ISO and a fast aperture. However, using a longer exposure time does brighten the overall sky because it allows the sensor to collect scattered light across the heavens.

Use the following exposure suggestions to get close and make adjustments with the ISO, aperture, or shutter speed as needed:

- On a dark night with no moonlight, start with f/2.8, ISO 6400, and a twenty-second exposure time. This suggestion is quite effective for the Milky Way, which is made up of millions of very dim stars. If there is some moonlight on the landscape, try f/2.8, ISO 3200, and ten seconds. In both cases, adjust the shutter speed to add or reduce the brightness of the foreground. Keep in mind it is possible to overexpose the stars because they do have different colors. If you overexpose them, all of them will be white, instead of an assortment of blue, red, white, and other colors. Remember the three exposure controls for the stars are the aperture, shutter speed, and ISO. The

aperture and the ISO are the most important exposure controls. Beyond ten seconds, the shutter speed mainly affects the ambient moonlight or starlight on the landscape and in the sky. Longer exposure times do little to brighten the stars and do not reveal dimmer stars. Only shooting with a faster maximum aperture—f/2 for example—or increasing the ISO reveals more stars. If you have a tracking device that moves the camera with the movement of the stars, then longer exposure times do reveal more stars. Hopefully, new cameras will produce even better quality images at ISO 25,000 which will open up a whole new world of opportunities.

- White balance. If you shoot RAW, the white balance can be adjusted later. There is no one correct white balance answer, but we tend to use the K white balance option and set the K white balance to 3800K.
- Other options. Your camera may offer high ISO and long exposure noise reduction. We suggest you turn these off and use software to minimize the inevitable noise in the image. Don't bother setting the mirror lock-up. Although the movement of the mirror does cause the camera to vibrate slightly, it is only significant for shutter speeds between one second and 1/30 second. It is irrelevant when using shutter speeds longer than one second. Turn image stabilization off when shooting on a tripod. Don't use any filters and turn the camera's LCD display down to avoid spoiling your night vision. Try to keep things dark by setting your camera so the image that is shot doesn't come up on the LCD display automatically.

LIGHT PAINTING

A foreground that protrudes into the sky works fine as a silhouette with a starry sky background. However, lighting the foreground is effective, too. Often this light is naturally available from the moon. If the moon is close to the full moon in size, it is easy to make the moonlight illuminate the scene so much that it appears like the scene is shot during the daytime. Usually, we try to avoid the daytime look, though. Even when the moon is bright, it is possible to photograph the brightest stars. We normally use a flashlight (or electronic flash) to light the foreground. Both work well, but even though we are especially adept at using flash, we often find a flashlight works better to light the foreground because it is easy to light the subject from different angles to produce modeling and create a sense of depth during a single twenty-second exposure. Obviously, if the shutter speed is only a few seconds, you don't have much time to use a flashlight, so a flash works better. However, if the exposure time is extended to ten or more seconds, then there is plenty of time to use a flashlight. We use a strong flashlight (LED Lenser M7) that allows us to zoom the light beam. If the flashlight is too strong, then widening the light beam helps to prevent overexposure. Painting with a flashlight is a matter of trial and error. Take a shot and move the light beam over the subject. If the exposure is too much, reduce the amount of time the light is on the foreground.

Of course, if the exposure is too dark, then increase the amount of time the light shines on the object to be illuminated. Adjust the light from the flashlight by widening or tightening the light beam, the amount of time it shines on the object, or place a diffuser over the flashlight to reduce its output if needed. After a couple of shots, you will know what to do. Light painting skills rapidly improve with experience and you will soon be a master with them in no time. If light painting with a flash, use a wireless flash controller to get the flash away from the camera to avoid direct front lighting which is boring and doesn't reveal texture in the foreground. This technique works best if you have a wireless triggering device for firing the camera from a distance. Then you can hold the flash several feet or more from the camera and fire the shot without being near the camera. I use the Canon ST-E3-RT radio controller in combination with the Canon 600EX flash. Setting a button on the flash to the radio slave mode will fire the camera using the radio control. The light from the flash is similar to the color of bright sun. In most cases, a warmer colored light works better for lighting the foreground. Putting inexpensive color gel filters over the flash head is an effective way to color the light. A light red or yellow filter works well for this purpose. The filters are inexpensive because they do not need to be of high optical quality. Taping them over the flash head works fine.

THE IMPORTANT MULTIPLE EXPOSURE FEATURE

Early on in our night sky photography adventures, we constantly ran into a problem that took some time to solve. Shooting at the maximum aperture on the lens—say f/2.8—at ISO 3200 for twenty seconds is highly effective for capturing many stars in the sky. Unfortunately, using f/2.8 doesn't fully cover the depth of field sufficiently for most foregrounds that are closer than infinity focus. If the lens is stopped down to f/16 to acquire more depth of field, then most stars disappear because the exposure isn't enough. How can this conflicting need—for more exposure to get the stars and more depth of field to sharply focus the foreground—be solved? It took me a while to come up with the solution for this frequent problem without resorting to software solutions. Can it be done in the camera? Hopefully, your camera offers a multiple exposure feature. This is a feature that I failed to explore for the first year I owned my Canon 5D Mark III—a huge mistake. Once I remembered my camera offered multiple exposures, I started to wonder if it might be possible to change some of the settings between individual shots of a multiple exposure. Upon checking this feature, I learned the ISO cannot be changed between exposures, but the shutter speed, focus and the aperture can. Wow!

That night I ran a test using an old rusty hand plow. I set the plow up on a rock so it could be isolated against the night sky. I set the aperture to f/16 and used a 10-second exposure to give me time to paint the plow with a flashlight. I used a magnified live view image and a strong flashlight to focus precisely on the plow because it was much closer than infinity focus. After I shot this first image of a double exposure, I changed the aperture to f/2.8 and the shutter speed to twenty-seconds for the second image. I refocused the lens to the infinity mark to sharply focus on the stars. Naturally the plow was not in focus, but since there was little ambient light on the plow, an out of focus image of the plow was not recorded in the second exposure. When the double exposure was completed, the camera combined the two images into one. The final result included a nicely exposed and focused plow at f/16 against a starry night sky that is also well exposed and sharply focused at the same time. It is easy to change the F-stop and shutter speed between exposures without turning on a light. However, the focus is another matter. To change the focus from one shot to the second of a double exposure, I first focused on the foreground using a flashlight and a magnified live view image. Once I shot that image, I used a flashlight to manually set the focus on my 16-35mm zoom lens to infinity focus. From earlier testing, I knew precisely where to set the lens on the infinity mark. Being able to change the focus, F-stop, and shutter speed between images that will be part of a multiple exposure easily solves exposure and depth of field problems!

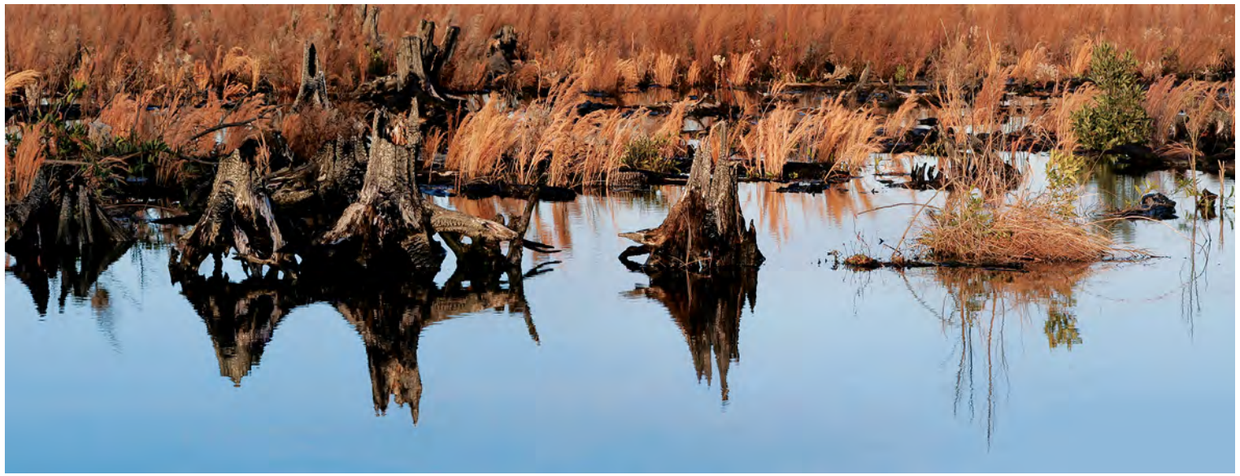
I use the multiple exposure solution frequently with excellent success. Be sure to find out if your camera offers it and use it to advantage. If your camera does not have it, make sure the next camera you buy does! Having the multiple exposure option is a reason to upgrade your camera. Having multiple exposure capability has opened up a new world of incredible opportunities. In the next column, shooting panoramas and producing star trails will be covered in detail. See you then! NP

Part II will cover: Shooting Panoramas and Producing Star Trails.

Right: Plow, night photography, by John Gerlach. Canon EOS 5D Mark III, Canon EF200-400mm F4L IS USM EXT lens, focal length 540mm, f/8 at 1/125 second, evaluative metering mode, manual exposure mode, ISO equivalent 3200.
Below: Northern Lights, by Barbara Gerlach. Nikon D4, Nikkor 14-24mm F2.8 lens, focal length 24mm, f/2.8 at 20 seconds, matrix metering mode, manual exposure mode, ISO equivalent 1250.

The Great Dismal Swamp National Wildlife Refuge
Beauty in Destruction

Article and Photography by Pam Ponce, Field Contributor



I was awestruck by the scene of destruction before me. At the same time, I was astonished to find it eerily beautiful. I was looking at an area of the Great Dismal Swamp National Wildlife Refuge that had been devastated by Hurricane Isabel in 2003 and then scorched by the South One fire of 2008. I knew that I wanted to capture this oddly strange beauty for others to see. This area of the refuge, bordering the Corapeake Ditch, is closed to the general public due to the research taking place there. I was issued a special permit to photograph this area with the understanding that my photographs would be used for educational purposes. My photographs would document the regeneration of the burn area over five years.

The Great Dismal Swamp National Wildlife Refuge, located in southeastern Virginia and northeastern North Carolina, encompasses 112,000 acres. The area includes five major forest types, the 3100-acre Lake Drummond, and remnant marsh. The five major forest types are pine, Atlantic white-cedar, maple-blackgum, tupelo-bald cypress and sweetgum-oak poplar. The previously dominant Atlantic white-cedar and tupelo-bald cypress forests have dwindled in size as the swamp has become drier and favored red maple growth. Previous logging operations, extensive draining, and fire suppression have contributed to the Atlantic white-cedar's decline. Nevertheless, the refuge still contained one of the largest remaining stands of Atlantic white-cedar on the East Coast when Hurricane Isabel roared through the area in 2003. Isabel destroyed 85 percent of the mature Atlantic white-cedar stands in the refuge. It was hoped that removal of fallen trees by a logging company would allow the refuge to reestablish a pure Atlantic white-cedar stand on the cleared ground. Unfortunately, in very dry conditions, a spark from the

Images made in the Great Dismal Swamp National Wildlife Refuge by Pam Ponce.
Above: "Reminder of the Flames." Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 105mm, f/11 at 1/100 second, evaluative metering mode, manual exposure mode, ISO equivalent 100. Six shots stitched in PT Gui.
Below: Corapeake sunset. Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 47mm, f/11 at 1/50 second, center-weighted average metering mode, manual exposure mode, ISO equivalent 100.
Facing Page: "Winter Silence." Canon EOS DIGITAL REBEL XT, Canon 24-85mm lens, focal length 71mm, f/11 at 1/60 second, manual exposure mode, ISO equivalent 100. Two shots stitched in PT Gui.

Digital capture by Pam Ponce

logging equipment started the South One fire in June 2008. When the fire was finally extinguished four months later, 4884 acres of swamp had burned.

In 2009, I looked at the result of all this destruction. It was a surreal scene with charred stumps spread over a vast and flattened landscape. The burnt stumps appeared to be walking on legs because two to three feet of peat soil had burned away and exposed their roots. They were fascinating subjects for a photographer. However, remembering my project, I began to search for life beginning anew in this blackened landscape. I enjoyed the small bursts of color that appeared against the scorched soil or the textured tree stumps. For two years, I watched the green duckweed spread over the water. Grasses and sedges sprouted in the burnt soil. Goldenrod added a touch of yellow in autumn. The refuge staff replanted the area with 235,000 Atlantic white-cedar seedlings. The burn area was thriving. Then Nature had her way and human plans, including my photographic project, vanished.

On August 4, 2011, a second fire was ignited when a lightning bolt struck in the previous burn area. The fire was named Lateral West and it spread through the debris left on the ground from South One. Hurricane Irene dumped 15 inches of water on the burning peat in late August but this did not extinguish the ground fire, which was deep below the surface. The peat soil that had taken thousands of years to accumulate was destroyed. In some areas, it burned to a depth of six feet. The Atlantic white-cedar seedlings that were laboriously planted after the 2008 fire were burned and with the change in ground level, hope for renewal of the forest vanished. The fire burned 6377 acres before it was officially declared extinguished on November 21st.

I am certainly not the first photographer whose plans have been foiled by nature. Who has not planned the perfect time and place for a photograph when gray skies appeared? Sometimes these suboptimal conditions force us to try something new and we are pleasantly surprised. However, I was not prepared for this permanent change to the landscape. I knew the project as originally conceived was doomed. I considered chalking it up to experience and moving on. However, the Dismal Swamp kept drawing me back. While I waited for the roads to Corapeake to reopen, I found other ways to photograph the burn area. My husband and I kayaked up the Feeder Ditch to Lake Drummond, where I was able to make images of the burnt shore with its few remaining trees. I had previously been entering the Great Dismal Swamp National Wildlife Refuge from the west but decided to try accessing the burn area from the east, through North Carolina's Dismal Swamp State Park. A friend and I loaded up our bikes with my photographic equipment and reached Corapeake Ditch by riding the Kim Saunders Trail and Forest Line Trail. By this time, I had decided a new photographic approach was necessary. I had already taken a few small panoramas but now I found that long horizontal panoramas would best capture the desolation stretching out towards the horizon. I bought a panoramic tripod head, the Nodal Ninja 5, to avoid parallax problems with foreground objects. I also invested in the stitching software PT Gui which did a commendable job. However, a number of my photos contained water ripples and moving cloud banks. I had to shoot as quickly as possible to minimize any change in position of the moving elements from one frame to the next. I still spent hours with the clone stamp and paintbrush touching up seam lines in photos taken on windy or cloudy days.

The later panoramas from 2011 to 2014 consisted of three to eight vertical shots. After cropping and merging, I was working with file sizes from 600 to 900 MB. I needed a rectilinear projection since I would be showing the panoramas on a flat gallery wall. I used portrait mode for individual shots because I knew the final image would require some cropping after stitching in PT Gui. I did not want the length/height ratio of the final panorama to result in an extremely long, narrow format. Shooting in portrait mode also allowed me to capture the scene without having multiple rows to stitch. Due to the flat nature of the landscape, I could easily capture sky, burnt land, and water with one row of vertical images. I generally used a long focal length, which required more shots for a given angle of view, but also gave a higher resolution panorama. I was satisfied that the panoramas were helping me capture the extent of Lateral West's destruction.

It was time to decide on a new educational focus for my project. I scanned all the information I had accumulated about the swamp, and decided to focus on the relationship of the fires to the hydrology in the swamp. This idea was approved by the refuge staff and I was issued a new permit to go back into the Corapeake area.

Fires are an important force in maintaining the diversity of natural communities in the swamp. In the past, Atlantic white-cedar forests were sustained by "surface" or shallow fires that destroyed existing vegetation and provided open ground for seed germination. The fires were beneficial to the propagation of Atlantic white-cedar as long as the fires did not burn deep enough to destroy the seed bank in the peat. During prolonged dry spells, fires would burn deep into the ground's peat layer and smolder for months beneath the surface. These "ground" fires would follow seams of plant material underground and then rise unexpectedly to the surface some distance from the original flames. These fires left depressions where water accumulated and favored the establishment of hydric species such as bald cypress.

In the past, fires often occurred in a mosaic pattern, meaning not all trees and vegetation were destroyed. However, the 2008 and 2011 fires were able to spread over thousands of acres and burned for months before firefighters were able to control them. The areas were completely decimated. Drying of the swamp and lowering of the water table contributed to the severity of these recent fires.

Human activity has been altering the hydrology of the Great Dismal Swamp for centuries. Land was cleared and ditched on the edges of the Great Dismal Swamp to be used for agriculture. Within the heart of the swamp, canals (also called ditches) and roads were built to remove timber for barrels, posts and boats. Shingles were manufactured in the swamp and then transported down the canals. One hundred and forty miles of roadbeds built within the swamp have permanently blocked the sheet flow of water in the swamp. These changes have favored the establishment of red maple, tuliptree, and sweetgum trees over the previously dominant Atlantic white-cedar and tupelo-bald cypress species. This has happened despite the refuge staff's use of water control devices in some of the ditches and other management strategies to maintain the natural diversity of the swamp.

I want to close this article with several parting thoughts. I hope this article has highlighted the complexity and difficulty inherent in preserving the world's last areas of wilderness. Human activity and natural events can lead to unforeseen consequences. What can photographers do to help? Certainly, our photographs can capture the beauty and

Images made in the Great Dismal Swamp National Wildlife Refuge by Pam Ponce.
Top: "Desolation." Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 47mm, evaluative metering mode, manual exposure mode, ISO equivalent 100. Three shots at five different exposures stitched to five panoramas in PT Gui then merged in HDR Efex Pro.
Middle: "Tree Poles." Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 30mm, f/22 at 1/40 second, evaluative metering mode, manual exposure mode, ISO equivalent 100. Seven shots stitched in PT Gui.
Bottom: "The Expanse of Destruction." Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 73mm, f/16 at 1/160 second, center-weighted average metering mode, manual exposure mode, ISO equivalent 100. Eight shots stitched in PT Gui.

amazing diversity in nature that people might not otherwise see. We can capture details that people have not noticed or photograph landscapes that people don't have the opportunity to see. Hopefully, our photographs bring our viewers pleasure and insight into the natural world.

I have attempted to use photography to increase awareness of how our actions can affect the world around us and how all life is interrelated. I try to learn about the science and the history of my photographic subjects, and pass this information on to others. I consult with people from other fields and enjoy collaborating with them on projects. I think art can make a unique contribution to the restoration and preservation of our world.

I have also attempted to photograph a darker side of nature in a ravaged landscape that could appear surprisingly serene. Although there was little color in the form of vegetation, the sky and water brought light into the area. At times, it felt peaceful. At other times, it seemed foreboding. I think this darker side of nature is too often ignored when looking for photographic subjects.

What will happen in the burn area of the Great Dismal Swamp? In 2012, eight thousand Atlantic white-cedar seedlings were planted on 20 acres where the peat loss was not too severe. However, in most of the burn area, the soil burned so deeply that the water table is now above the soil surface. Plant species that can tolerate standing water are beginning to appear. It seems that much of the 6377-acre burn scar will develop into marsh. Previously, less than 300 acres of the Great Dismal Swamp National Wildlife Refuge were marsh habitat. With the expansion of marsh habitat in the burnt area, refuge staff have noted that the wintering population of waterfowl is up 150 percent. At the 2013 Christmas bird count, three species never previously recorded at the Great Dismal Swamp were seen. They were the marsh wren, the peregrine falcon, and short-eared owl. Many other bird species, including the American bittern, Virginia rail, and the King rail, were seen in increased numbers. On a visit to the marsh this summer, I noticed that the burnt stumps were barely visible under the cattails and marsh grasses along Railroad Ditch. This scene felt vaguely familiar. It seemed the time had arrived again to photograph the regeneration of life in the burn scar of the Great Dismal Swamp.

NOTES

These photographs were part of an exhibit entitled "Fire & Water, A Tale of The Great Dismal Swamp." The exhibit ran from May 3 to June 19, 2014 at the TCC Visual Arts Center gallery in Portsmouth, Virginia (part of the Tidewater Community College campus). The exhibit included photos, text panels about fires and hydrology in the swamp, maps and graphic designs. Deloras Freeman, the Visitors Service Specialist at the Great Dismal Swamp National Wildlife Refuge, was a great help with this exhibit. She arranged for the Youth Conservation Corps to take boats into the burnt area and cut down some stumps that I had chosen to show as sculptures. These burnt stumps were mended, balanced and a welder made steel stands for them.

The Great Dismal Swamp National Wildlife Refuge offers many opportunities for photographers. Photographers can capture the beauty of the forest, Lake Drummond or the new marsh developing in the burn scar. Numerous dirt trails provide access to the swamp by hiking or bicycling. Railroad Ditch is open to vehicles from sunrise to sunset. Lake Drummond can be explored by water via the Feeder Ditch, which comes off the Great Dismal Swamp Canal. Spring migration brings colorful, neotropical birds through the forest. Waterfowl winter over in Lake Drummond. Butterflies and dragonflies abound near the ditches and trails in the summer. Deer and black bear can be spotted throughout the year. NP

The Great Dismal Swamp National Wildlife Refuge—http://www.fws.gov/refuge/great_dismal_swamp/

Early Growth on Burnt Peat, The Great Dismal Swamp National Wildlilfe Refuge by Pam Ponce. Canon EOS DIGITAL REBEL XT, Canon 24-85mm lens, focal length 35mm, manual exposure mode, ISO equivalent 100.

Images made in the Great Dismal Swamp National Wildlife Refuge by Pam Ponce.
Top: "Barren Vista." Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 102mm, evaluative metering mode, manual exposure mode, ISO equivalent 100. Four shots at three different exposures merged to 4 HDR images in PS; HDR images stitched in PT Gui.
Middle: "Flattened Landscape." Canon EOS DIGITAL REBEL XT, Canon 24-85mm lens, focal length 24mm, f/14 at 1/100 second, manual exposure mode, ISO equivalent 200. Three shots stitched in PT Gui.
Bottom: "Seeds Floating on Water." Canon EOS 5D Mark II, Canon EF24-105mm F4L IS USM lens, focal length 105mm, f/16 at 1/60 second, evaluative metering mode, manual exposure mode, ISO equivalent 200. Three shots stitched in PT Gui.

TREES— THEIR MOODS & PERSONALITIES

Article and Photography by Joseph Cagliuso, Field Contributor

Joseph's web site: http://josephcagliusophotography.com/ (Click for Live Link)

Silhouetted trees, by Joseph Cagliuso. Nikon D300, Nikkor 80-200mm F2.8 lens, focal length 120mm, f/14 at 1/60 second, matrix metering mode, auto exposure mode, ISO equivalent 200.

On my many photographic ventures, I wander through the natural landscape looking to photograph the unusual. It is the beauty of nature and its intimate details that inspires me to capture on camera a two-dimensional image, a visual expression.

I am fond of trees at any time throughout the four seasons of the year. With a combination of diffused or soft lighting conditions, as well as sunsets and sunrises, and with any type of atmospheric elements as wind, rain, snow, fog, or mist, trees become absolute stellar subjects to photograph. Trees consist of a wondrous blend of shape and form. They exhibit splendid patterns within their textured trunk and by their canopied shaped branches; a showy cluster of leaves and sometimes flowers as well are displayed. Their scent, either from the leaves or the flowers, are all qualities that can be experienced when in their presence. During these times when atmospheric conditions are present and the light is low on the horizon, moods are created and trees do show off their individual makeup or identity.

One radiant and crisp October afternoon on a hilly mountain edge with the sun beginning to set, I noticed a cluster of trees offsetting the hilltop with a band of clouds acting as a backdrop. With the backlit trees, the branches and their tiny leaves formed a silhouetted bouquet of circular shape. That shape transformed all of the individual details of the midtones and highlights into a pencil-like drawing of black spiny vertical lines and dots. The mood was set.

On another outing, I was walking a trail in a local state park; I noticed a group of trees standing erect in quiet solitude. Some had already started to shed their golden reds and orange-toned maple leaves, and others were not of the maple family with their leaves providing a splash of green and yellow color in the foreground. As I was setting up to photograph, the cloud cover was starting to move. I didn't want direct light to shine on the subject so I acted quickly, composed, and hit my remote shutter release. With cloud cover diffusing the light, specular highlights of the

Digital capture by Joseph Cagliuso

Trees in fog, by Joseph Cagliuso. Nikon D300, Nikkor 300mm F4 lens, focal length 300mm, f/32 at 1/5 second, matrix metering mode, auto exposure mode, ISO equivalent 200.

leaves was greatly reduced, increasing the deep and intense saturation of color in the leaves and of the tree trunks. Overcast cloudy days with its soft and hazy light give us a built-in diffuser providing ideal conditions for photographing autumn foliage without harsh or contrast lighting conditions.

A couple of years back I was photographing in the Aspen area in Colorado. As I was walking one of the trails I observed an area with evergreen trees lining a part of the forest. The light was harsh with the sun overhead. I looked at the trees and I just could not feel the moment was right. I packed up my gear and proceeded to check in at one of the local motels. It snowed overnight—there was not a lot, just a dusting. I drove off and decided to return to the same area I was at the day before. The sky was quite overcast but the air was still. As I approached the same group of evergreens, the scene was very different. My emotional reaction to what my eyes witnessed was beyond comprehension. The snow covering the forest of trees consisted of a layer of fine white powder sprinkled on the evergreens with each conical point covered with the snow dust. The soft contrast between the green foliage of the trees and the sprinkled snow created a mood of solitude and peacefulness. Composing the image required nothing more than extracting an area of the trees. When weather conditions change the appearance of the landscape and its mood is altered, it is at that moment I make the image.

I was photographing one day in the Great Smoky Mountains in Tennessee. I was up about one hour before first light and headed towards Cades Cove. Arriving there, the park ranger had just opened the gate so I proceeded without delay to a site where, if timing is right, fog will be in abundance. I drove to the area, a flat valley with trees in the foreground, flat pasture, and a tree line in the background. I noticed fog starting to roll in, creating a horizontal band capping the trees in the foreground and completely covering the trees in the background. With camera and lens on my tripod I focused on a scene I had noticed before the fog arrived. I zeroed in on this one tree. It was ball shaped with its branches and leaves—a circular bouquet of elegance. As the fog started to engulf the tree, its branches and leaves were barely visible but its circular shape could still be seen. A feeling, quiet and tranquil, was created right before my eyes. As the rising sun was approaching I knew that the fog would shortly be burned off so I composed the image and released the shutter. Atmospheric conditions such as fog and mist obscure or hide the contrasts of tone and color thus creating a mood within. Since the tree was sunlit by the early light, the fog produced a soft luminous light on the tree.

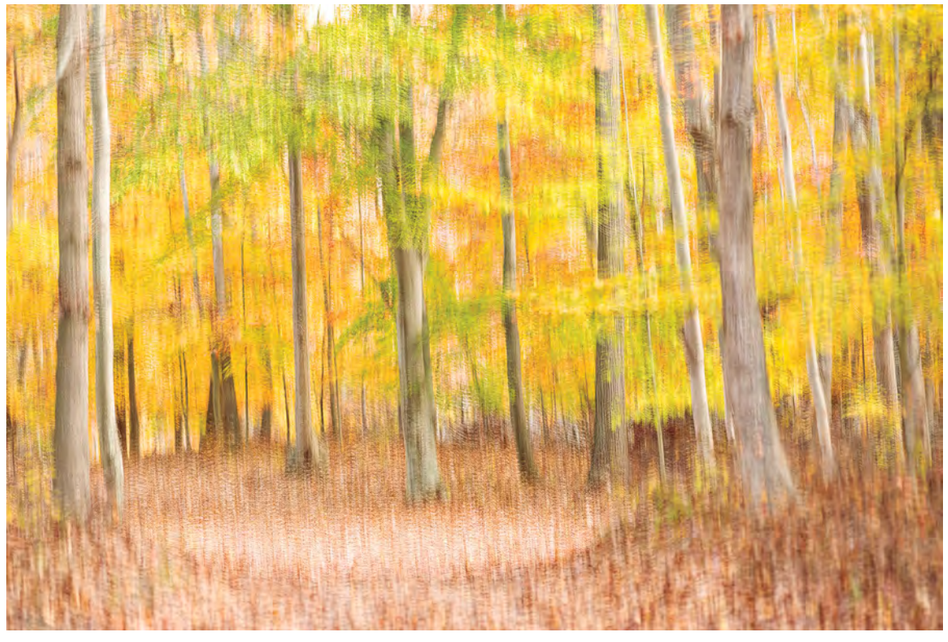
At times, trees can create a personality all their own by the surrounding growth. Each year across from my road I see a tree, its trunk completely covered by vines of green ivy. Adjacent there is an intertwining growth of spiny branches and leaves in their fall colors of reds and yellows and other shrubs that surround the tree. My immediate visual attraction is the contrast of color in the leaves, the implied circular lines of motion of the branches and the tree trunk. When photographing the tree I move back and forth along the road looking for the right combination of elements to give me a visual composition pleasing to my eye and which also express the trees vivid personality. I then take the shot. Each year I return and find the growth of the branches and its leaves are all different, but that ivy-embossed tree trunk is still exhibiting its unique personality.

There are many opportunities for creating images when the weather is imperfect. Let your creativity and imagination run wild so you can convey feelings of solitude and mood, as well as creating abstract interpretations of subjects—all an expression of your visual experience. NP

Images by
Joseph Cagliuso.

Right: Autumn's painterly forest. Nikon D800, Nikkor 80-200mm F2.8 lens, focal length 135mm, f/4.5 at 1/640 second, matrix metering mode, auto exposure mode, ISO equivalent 400.

Facing Page: Trees and fog with reflections. Nikon D300, Nikkor 80-200mm F2.8 lens, focal length 80mm, f/22 at 0.3 second, matrix metering mode, auto exposure mode, ISO equivalent 200.



Falkland Islands—
Planning a Happy Return

Article and Photography by Andy Long, Editor

Andy's web site: http://www.andylongimages.com (Click for Live Link)
http://www.firstlighttours.com (Click for Live Link)

Lots of time can be spent at a spot getting the shot you want of a rockhopper jumping into the water, Saunders Island, by Andy Long. Canon 5D Mark III, Canon 600mm F4 lens, f/5.6 at 1/2500 second, +1/3 EV, evaluative metering mode, aperture exposure mode, ISO equivalent 800.

The thrill of the return or the trepidation of wondering if it's going to be as good as it was previously? Both thoughts can enter the mind when planning a return visit to a photo destination with logistical challenges like the Falkland Islands.

With a camera in hand, the return can be as good as if not better than the initial trip, even if the shooting conditions are different. The best thing about going back to a prime shooting locale is the ability to plan for some of the logistical limitations and possibilities of the location based on prior experience. This experience allowed me to prepare for a return trip to the Falkland Islands with specific photo equipment and objectives, and gave me the opportunity to make use of new skills and ideas developed since my last trip to the islands.

A visit to the Falkland Islands off the coast of South America offers photographers the choice of not just one shooting location but multiple islands with spectacular opportunities for seeing and making images of wildlife. With flights going there just one day a week from Chile, a stay is set at one-week intervals, limiting how many places can be visited due to the logistics of flights between the islands. The problem is not how few places to visit but deciding which islands to focus on for photography.

Because of the challenges of arranging a visit to the Falklands, it's not always possible to visit all the intended destinations. Many popular islands have limited accommodations that are filled by reservations up to a year in advance. Returning to the Falkland Islands allowed me to take these logistical challenges into account; I knew that I might not be able to visit every island on my wish list, but I also knew that most of the islands have a good variety of penguins and other birds during the summer nesting season from November through February.

When setting up a return trip, I hoped to stay at The Neck at Saunders Island (an absolute must-see destination), Sea Lion Island, and Carcass Island, with a day trip to West Point Island and its great albatross colony. The schedule did not

Digital capture by Andy Long

Images made on Sea Lion Island, Falkland Islands, by Andy Long.
Above: Rock cormorant coming in for a landing at nest area. Canon 5D Mark III, Canon 600mm F4 lens, f/5.6 at 1/3200 second, evaluative metering mode, aperture exposure mode, ISO equivalent 800.
Below: Rock cormorant tight head-shot showing off the colors and detail. Canon 1D Mark II, Canon 600mm F4 lens, f/5 at 1/3200 second, +1/3 EV, center-weighted metering mode, aperture exposure mode, ISO equivalent 500.

allow for a stay at Carcass due to the popularity and limited accommodations of just one house on the island. The few rooms had been booked during the time frame I had set aside for my trip. Instead, my trip included stops at Saunders and Sea Lion Islands and in the main town of Stanley with a day trip to Volunteer Point and its ever-growing king penguin colony.

SEA LION ISLAND

Having visited each of these locations before, I could anticipate a variety of wildlife images using different photographic techniques. Based on my prior experience in the Falklands, I planned my return trip during the nesting season to give me the opportunity to extensively photograph bird behavior and interactions, as well as intimate portraits and details.

Because the birds in the Falklands have very little fear of humans and it is possible to get quite close without stressing them, some extreme tight compositions and portraits were possible. At the king cormorant colony on Sea Lion Island, I focused on trying to get creative compositions with both flight and close-up images.

The cormorant colony at Sea Lion Island is situated on top of a rocky cliff overlooking the ocean, so views and wind angles are great for capturing images of the birds returning to the nests with either food or nesting material, and landing with their wings outstretched in nice positions for good flight shots.

When attempting to photograph birds in flight, it's often best to begin tracking them in the distance and then follow them until they are full-framed subjects within a camera's viewfinder. However, the cormorants coming in for landings at Sea Lion Island are fairly easy to acquire focus on because they start soaring without much variation in movement near eye level and the cliff edges. A nice even background of sky or water is often readily available and provides good compositional elements to focus attention on images of the birds themselves.

Having visited the Falklands on a prior trip, I knew that it could be overwhelming traveling to the different islands, getting lost in the sheer numbers of penguins and other birds around, and trying to capture as many images as possible. In hindsight I knew that images with unique and creative compositions often yielded the most memorable images. On my return trip I tried to take advantage of this lesson—I focused not only on getting some flight shots, but also on making images of tight headshots. I knew from past experience that images accentuating colors, patterns, and details of just a part of a bird can sometimes elicit more response than those of the everyday portraits.

Creating tight compositions focused on the eye area of the king cormorants revealed the purple eye ring and the orange-yellow nasal warts. This combination of colors and textures provided me with some interesting and unique images. Taking time to look for the details beyond the normal shots of flight and nest behavior took me in new photographic directions. While nothing beats the peak of activity during flights and behavioral interactions—which is plentiful for the birds in the Falkland Islands—looking for the different and unusual can be more rewarding and provided me with a much-needed challenge.

Another thing that can be nice about looking for the tight details is that the weather does not have to be optimal. In fact an overcast day, which is common in the Falklands, lends itself to being able to compose tight images with significant detail and even exposures.

Among the islands that can be visited in the Falklands, Sea Lion offers a good bit more variety than most with the numerous ducks and other birds available. Some of the species found here (besides the ever-present penguins) include wigeons, speckled and silver teals, Patagonian crested ducks, and quite a few wading and shore birds.

Magellanic snipe, a common visitor here, is another bird that can be photographed from a different perspective. As these small birds skirt the shoreline they put themselves in a position where they blend into the background due to their markings. Trying to accentuate their camouflage provided me with a gratifying challenge of capturing images of these birds within the clutter of their natural environment, and how well-adapted they are to their surroundings.

SAUNDERS ISLAND

The Neck on Saunders Island is a must-see destination for any visit to the Falkland Islands. The accommodations in the cabin here are not pristine, and the 10-mile journey from the airstrip to The Neck takes about an hour over rutted tracks through peat bogs, but once there the bird activity is worth all the effort.

Within a short walking distance from the cabin are all of the major attractions for photographers on a trip to the Falklands—Gentoo penguins, rockhopper penguins, Magellanic penguins, king penguins, and black-browed albatross. On occasion, giant storm petrel and macaroni penguins will join up with the others. Also ever present here are skuas, striated caracaras, and a couple varieties of geese and gulls.

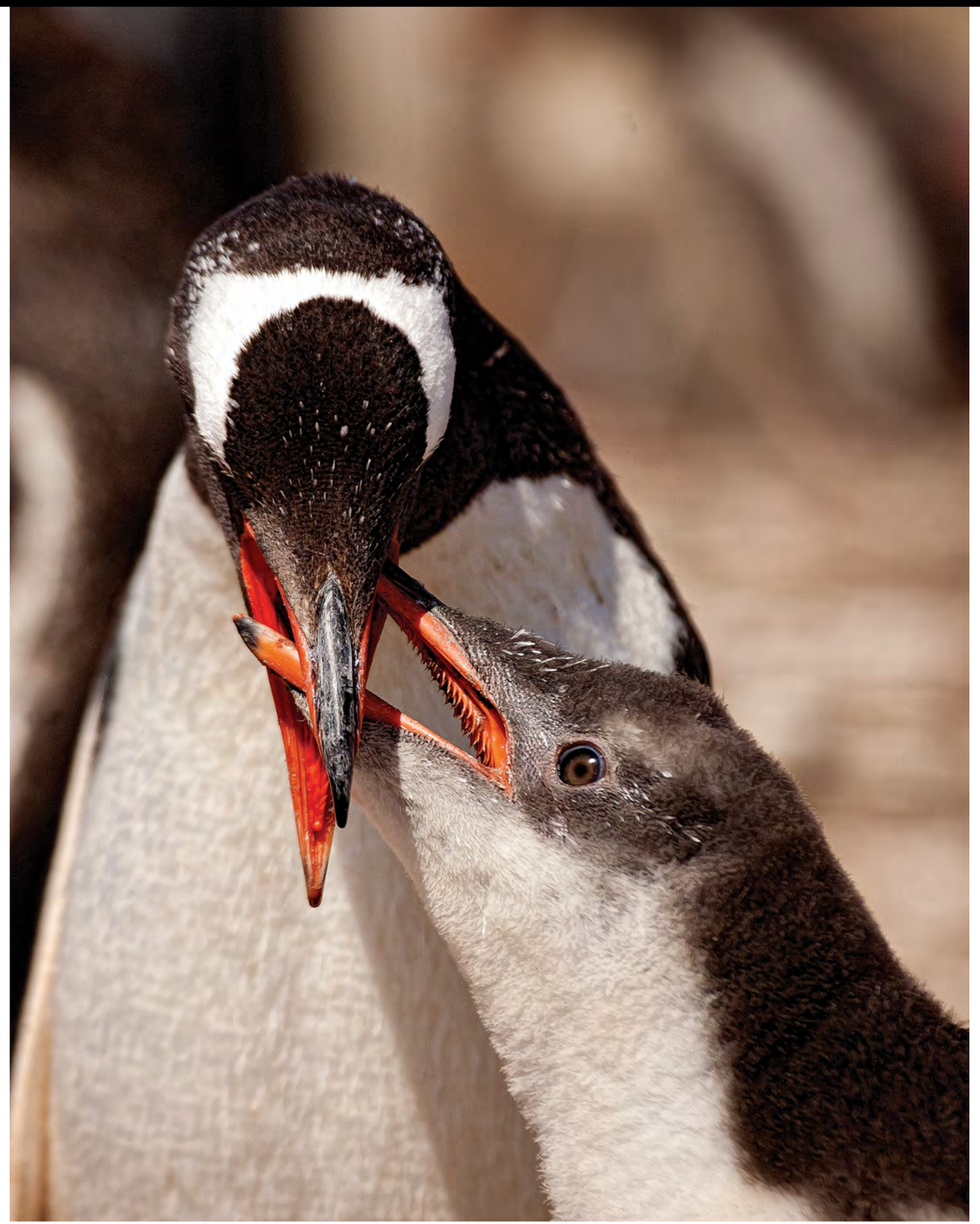
With so much variety just outside the door, it can be easy to get lost in the flurry of activity of everything going on. Again, my previous trip to the Falklands and to Saunders Island helped me to temper my approach in photographing birds. I focused on my plan to photograph specific subjects and to create some unique images instead of the shotgun approach of shooting anything that looked remotely interesting.

One of the best things about this area is the rockhopper penguins and the specific route they take into and out of the water from their cliff-top perches. The rockhopper penguins can be very active as they jump from the rocks to the water. This is a locale where hours can be spent enjoying the penguins' unique behavior and working on the timing of capturing images while the birds leap off of the rocks into the water.

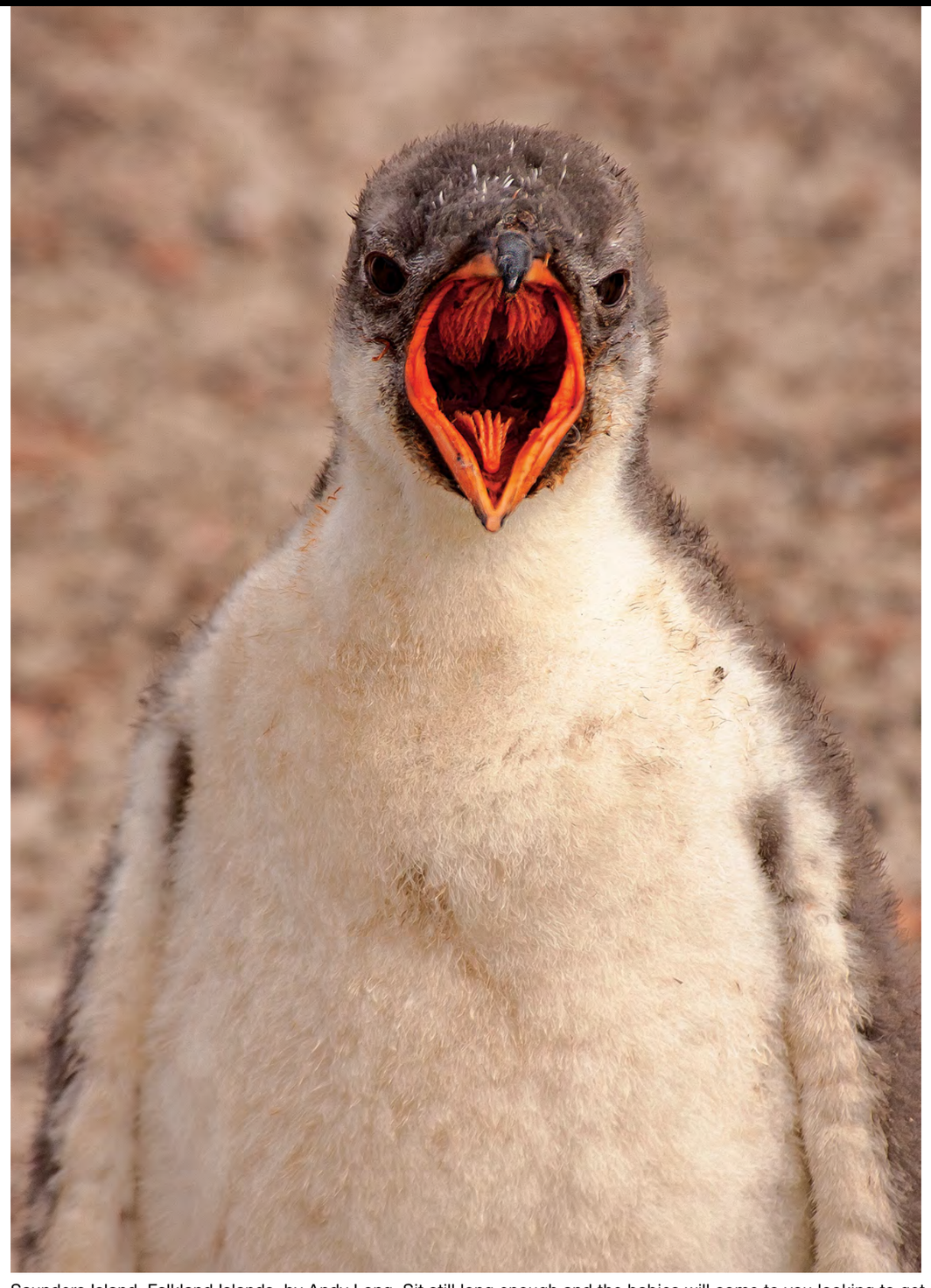
While some of my wildlife photography on my return visit to the Falklands benefitted from prior experience and trip planning, the opportunities to tell the story about the place by making images were often self-evident at the Neck at Saunders Island. Nevertheless, it required perseverance and patience for everything to come together for those perfect shots of peak activity.

If there's any consolation in not being able to make it to Carcass Island with the side trip to West Point, it is the fact that there are a good number of black-browed albatross on Saunders Island, though they are broken up into several smaller colonies as opposed to the large gathering at West Point Island.

When planning a trip to the Falklands during nesting season, nestling ages and interactions of adult and young birds will be different depending on when the trip is scheduled. My preference is late January, as albatross nestlings tend to be younger during this period and there is a strong likelihood of being able to observe and photograph tender interactions



After the others babies have dropped off, the adult feeds its baby Gentoo penguin, Saunders Island, by Andy Long. Canon 1D Mark II, Canon 100-400mm lens, focal length 310mm, f/5.6 at 1/3200 second, +1/3 EV, evaluative metering mode, aperture exposure mode, ISO equivalent 400.



Saunders Island, Falkland Islands, by Andy Long. Sit still long enough and the babies will come to you looking to get fed. Canon 1D Mark II, Canon 100-400mm, focal length 400mm, f/8 at 1/1250 second, +1/3 EV, evaluative metering mode, aperture exposure mode, ISO equivalent 500.

Images made on Saunders Island, Falkland Islands, by Andy Long.
Above: Black-browed albatross on the bluff getting ready for take-off with the wind blowing its feathers. Canon 1D Mark II, Canon 100-400mm lens focal length 400mm, f/8 at 1/2000 second, center-weighted metering mode, aperture exposure mode, ISO equivalent 400.
Below: Pulling out the tight details of a black-browed albatross as it rests. Canon 1D Mark II, Canon 100-400mm lens, focal length 400mm, f/11 at 1/4000 second, center-weighted metering mode, aperture exposure mode, ISO equivalent 400.

with their parents. The one thing that's a bit tougher at this location is getting flight shots of the albatross. There are a few potential areas where they take off, but the cliff position at West Point allows for some great soaring not far from the nesting area at eye level.

As with the cormorants on Sea Lion Island, I planned to get some nice tight shots of the heads of adult albatross. Though not as colorful as the heads of cormorants, the subtle shades of black, gray, and white contrasting with the colorful beaks made for some nice shots of these large birds. A bit of wind added some blowing feathers in front of the eyes at one point and added some character to the soft feel of the images.

While the baby albatross are quite small during this time in mid- to late January, the baby Gentoo and Magellanic penguins are a bit older. The penguins have lost their full cuteness but are still fun to see and photograph.

With the Gentoo penguins, the action begins when an adult comes out of the water and it's time for feeding. The antics of several young chasing an adult around the beach is a sight to behold but one by one the young drop off until just that adults' nestling is left trailing behind waiting to be fed. While some shots of the line of them can be interesting, especially if the light is right and there are long shadows, I particularly liked focusing on the interaction of the feeding between adult and young penguins.

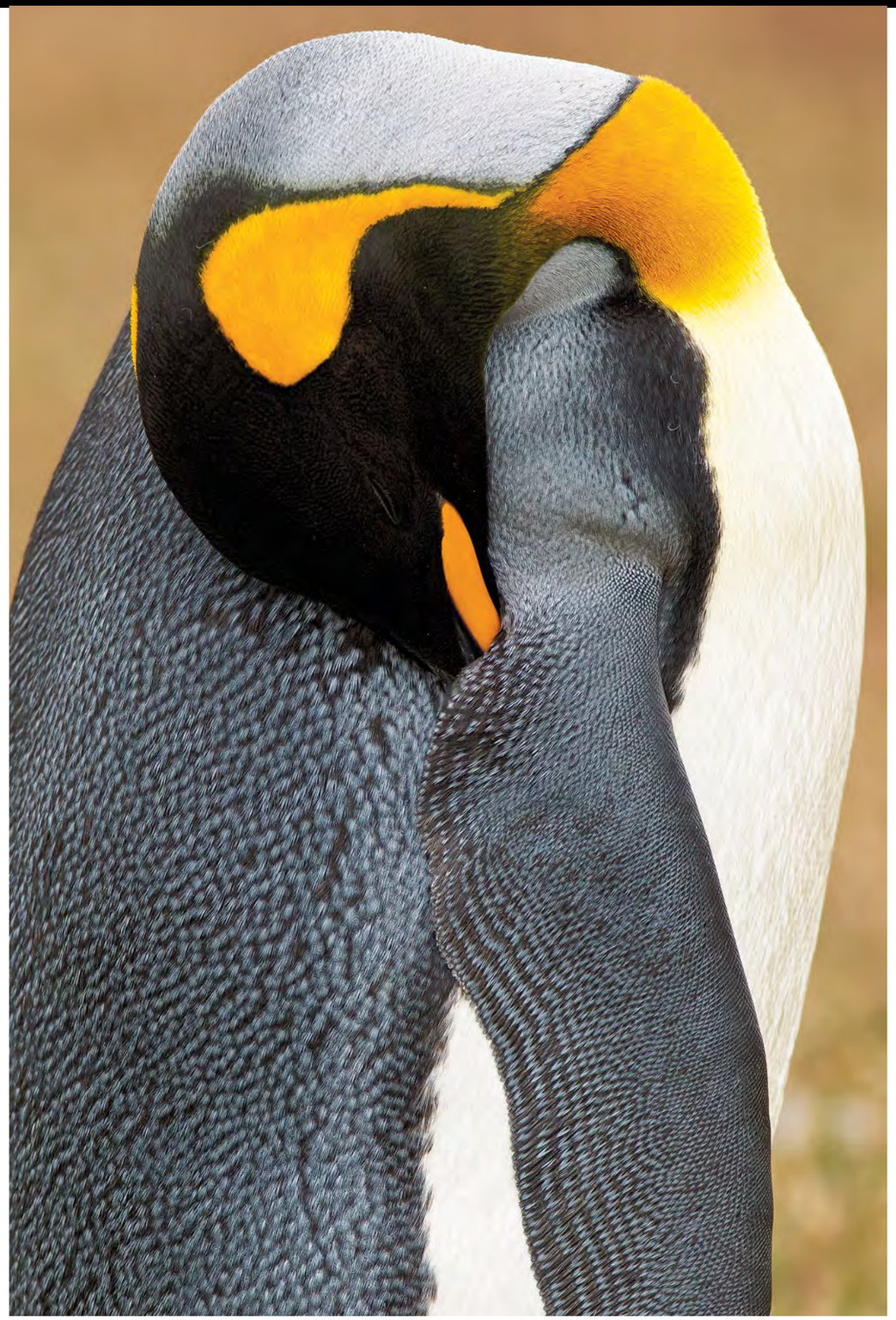
The young Gentoo penguins can offer endless opportunities for creative photographic compositions and intimate portraits because of their lack of fear of people and their inquisitiveness. Take a seat at the edge of a colony and within a few minutes numerous penguins can be within a few feet of you. Always wanting to be fed, they can even think of their human visitors as a food source and offer a wide-open mouth waiting for a morsel of fish.

VOLUNTEER POINT

Even when the hoped for schedule of visiting Carcass and other islands is not available, great things can still come from the available alternatives. While it is only 50 miles from Stanley to Volunteer Point, the two-hour drive over gravel and peat bogs is well worth the effort. There is nothing quite like the arrival at Volunteer Point and being met by close to 720 breeding pairs of king penguins, raising very small young or still incubating eggs in late January. Seeing wild king penguins at all, let alone as close as they allow, is an almost unheard of event except for here and near a small but growing group at Saunders Island.

These tall, majestic penguins provide some beautiful poses, colors, and patterns that provide many opportunities for creative and unique shots. Again, tight portraits were a main objective for me on this return trip. While a large telephoto lens is not generally needed for a journey to the Falklands, I nevertheless brought one with me to allow for a good bit of tight isolation of subjects. The added cost of the weight when flying around the islands was worth it when I knew that some particular images would benefit from getting tight compositions for the penguins and other birds.

When's the next trip? I will look forward to it as soon as I can return. NP



Images made at Volunteer Point, Falkland Islands, by Andy Long.
Above: King penguin resting on the ground showing off its colors and patterns by coming in tight. Canon 5D Mark III, Canon 600mm F4 lens, f/10 at 1/400 second, +1/3 EV, evaluative metering mode, aperture exposure mode, ISO equivalent 800.
Facing Page: With its head tucked under its wing a king penguin creates a very nice composition of lines. Canon 5D Mark III, Canon 600mm F4 lens, f/5.6 at 1/800 second, -1/3 EV, evaluative metering mode, aperture exposure mode, ISO equivalent 800.

Top 10 Tips for Tropical Bird Photography

Article and Photography by
Glenn Bartley and Gregory Basco,
Field Contributors

Glenn's web site: www.glennbartley.com (Click for Live Link)

Gregory's web site: http://www.deepgreenphotography.com/ (Click for Live Link)

Tropical forests are the pinnacle of evolution for birds. Spatial and temporal ecological niches, ecosystems in constant state of flux, plus a large geographical variance in relatively small areas have led to a stunning number of tropical bird species. Costa Rica, where Gregory Basco lives and works, has more bird species than the entire continental United States but in an area only the size of West Virginia. Ecuador, where Glenn Bartley travels and photographs extensively, is off the charts; you can see 15 hummingbird species on one feeder!

Capturing this glorious avian biodiversity with our cameras is very difficult. Many species are secretive and travel through the busy forest canopy and understory. While there are myriad species, there are very few individuals; just finding a bird to photograph can be difficult. And to top it off, the light often is either too harsh or too low to rely on traditional bird photo techniques. To help you make the most out of your bird photography trip to the tropics, we offer the following 10 tips!

REALLY KNOW YOUR GEAR AND FOUNDATIONAL CONCEPTS

Bird photography in the tropics is more challenging than in the open habitats that photographers commonly encounter in temperate zones and the African savanna. You'll have dappled light, harsh light, changing light, and low light on a daily basis. Knowing your gear will allow you to tackle these challenges and concentrate on getting the picture rather than fumbling with buttons.

You'll want to be adept at handling the relationship among aperture, shutter speed, and ISO to get the exposure you want. You won't have the luxury of good depth of field and plenty of shutter speed at a low ISO. Every choice made for one variable means a sacrifice in another. You want more depth of field? How far do you want to take your ISO in order to maintain a reasonable shutter speed? You want more speed? Be prepared to open up your aperture and deal with some noise in post processing. Now add flash into the equation and well, you get the picture. There is very little "set it and forget it" in the tropics!

PRAY FOR CLOUDS

The normal rhythm of shooting early and late doesn't apply in the tropics. While it is true that some birds can be more active early and late, cloudy/drizzly weather usually ensures activity throughout the day and provides good light for shooting. Because of the sun's nearly perpendicular position year-round in the tropics, there is virtually no sweet light, and most birds are in the forest anyway. Sun means dappled light, and even though dappled light, handled properly, can produce dramatic images, it usually is not what you want.

Digital capture by Glenn Bartley and Greg Basco

GET COMFORTABLE WITH HIGH ISO VALUES

Because the best light in tropical forest environments is overcast, you will have to deal with low light levels. Modern DSLR cameras vary in their performance, but all can handle high ISO values. We both have many clients who say they don't like to shoot higher than ISO 400. Well, good luck with that in the tropics! We would much rather have a slightly noisy but sharp picture rather than a cleaner file that is soft. Be prepared to push your camera two to three stops more in ISO than what you are likely used to. With a properly exposed file and good processing in the computer, noise can be dealt with quite easily.

Above: Great green macaw, Costa Rica, by Gregory Basco. Canon EOS 5D, Canon EF300mm F2.8L IS lens, focal length 300mm, f/2.8 at 1/1600 second, evaluative metering mode, auto exposure mode, TTL flash fill at -2, ISO equivalent 100.
Dappled light with a touch of fill-flash made for a portrait of this endangered great green macaw that I am pleased to have made. GB

Right: Giant antpitta, Ecuador, by Glenn Bartley. Canon EOS 50D, Canon EF300mm F4L IS USM lens, focal length 300mm, f/4 at 1/15 second, evaluative metering mode, auto exposure mode, ISO equivalent 400.
Notice the very slow shutter speed used to photograph this slow moving antpitta. GB

Facing Page: Red-necked tanager, Brazil, by Glenn Bartley. Canon EOS 7D, Canon EF600mm F4L IS II USM lens, focal length 600mm, f/5 at 1/125 second, evaluative metering mode, auto exposure mode, flash, ISO equivalent 640.
The tanager family exemplifies the incredible diversity of birds in the tropics. GB

USE SHALLOW DEPTH OF FIELD

Again, low light, even coupled with high ISO values will often necessitate the use of wide apertures. Don't count on shooting f/11 or f/8 all of the time. You'll need to open up to capture sharp images. As long as the important part of your subject is sharp, your images will be effective. And don't think of shallow depth of field as a hindrance. On the contrary, embracing wide apertures can help you to deal with disturbing foregrounds and backgrounds and open up new avenues for creativity!

DON'T BE AFRAID OF SLOW SHUTTER SPEEDS

Continuing the low light theme, there will be times when even pushing your ISO and opening up your aperture won't be enough. We hear lots of photographers say they don't shoot at shutter speeds slower than 1/1000th or 1/500th. Our goal for shutter speed in many instances is 1/200th. On occasion we'll be able to go faster, but not very often, at least without going to absurdly high ISO values. With good technique, wonderfully sharp images of forest birds can be made at 1/15th of a second.

USE FLASH AS FILL

We see a lot of people either embracing flash but in the wrong way or shying away from flash for the wrong reason. Many people simply underexpose the ambient light and crank up the flash when faced with a low light situation. This is a recipe for a horribly over-flashed-looking picture. Other people have an aversion to flash precisely because they've seen these types of pictures and don't like the way flash looks.

Positioning yourself and setting your exposure such that the ambient light can do most of the work is the key to successful fill-flash. Adding in just the amount of flash you need will help to maintain a natural look while allowing the flash to assist in solving harsh light and low light issues.

USE MORE THAN ONE FLASH

Using more than one flash can add accent, drama, and feather detail to a shot balanced with natural light. Using multiple flashes also can allow you to use flash as main light but in a much more pleasing fashion than if you had the flash mounted in your hotshoe or on a telephoto flash bracket.

Multiple-flash hummingbird photography is the classic example of this technique, but multiple flashes can be employed in any situation where the bird's arrival path is predictable. You'll want to study the way ambient light produces shadows to yield a natural look with your multiple flash work. Off-camera flashes as main light in high-speed sync on the subject helped eliminate harsh midday light but maintain a sunlit background.

KNOW YOUR SUBJECT

Aside from the technical aspects of photography in the tropics (such as shooting in low light and using fill-flash), photographers must also come to terms with the fact that they are now dealing with species and ecosystems that are unfamiliar. Because of this, when it comes to tropical bird photography, arming yourself with as much knowledge as possible is a tremendous asset and ultimately will lead to more opportunities to create exceptional images.

The difficulty of tropical photography can be attributed in large part to the fact that tropical ecosystems are extremely diverse and complex places. It is important for photographers and naturalists to realize that in such diverse communities the way that species behave, interact, and live their lives is often very different than in those that reside in more temperate regions. In tropical realms fruiting trees become a gold mine for images and it is useful to know what types of fruit various birds like to eat. Other species will follow army ants through the forest with the hopes of getting an easy meal. This too can yield spectacular photo opportunities. The more you know about the species and ecosystems that you are interacting with the greater chance you have at creating the images for which you are hoping.

GO HANDHELD

While we don't disagree with the fact that working with a long lens on a tripod is the best way to ensure sharp images, there are times when a tripod can be a hindrance. Imagine that you're stalking a bird through deep forest undergrowth.

Baltimore oriole, Costa Rica, by Gregory Basco. Canon EOS 5D, Canon EF300mm F2.8L IS USM lens, focal length 300mm, f/5.6 at 1/2000 second, evaluative metering mode, auto exposure mode, 3 flashes in TTL and HSS, ISO equivalent 640, tripod, portable blind, Photo Trap. Off-camera flashes as main light in high-speed sync on the subject helped eliminate harsh midday light but maintain a sunlit background. GB

Above: Spot-billed toucanet, Brazil, by Glenn Bartley. Canon EOS 7D, Canon EF600mm F4L IS II USM lens, focal length 600mm, f/4.5 at 1/125 second, evaluative metering mode, auto exposure mode, 3 flashes in TTL and HSS, ISO equivalent 400.
Knowing that this species of toucanet loves to eat palm fruits was the key to capturing this image. GB

Right: Long-tailed sylph, Ecuador, by Glenn Bartley. Canon EOS 7D, Canon EF500mm F4L IS USM lens with 1.4x teleconverter, focal length 700mm, f/5.6 at 1/100 second, evaluative metering mode, auto exposure mode, ISO equivalent 800.

Below: Barred forest falcon, Costa Rica, by Gregory Basco. Canon 1D Mark IV, Canon EF300mm f/2.8L IS lens, focal length 300mm, f/2.8 at 1/640 second, spot metering mode, manual exposure mode, 3 flashes in TTL and HSS, ISO equivalent 800, handheld, flash.
This barred forest falcon was on the move following an army ant swarm. GB

Above: Plush-crested jay, Bolivia, by Glenn Bartley. Canon EOS 7D, Canon EF500mm F4L IS USM lens with 1.4x teleconverter, focal length 700mm, f/7.1 at 1/160 second, evaluative metering mode, auto exposure mode, 3 flashes in TTL and HSS, ISO equivalent 400, handheld, flash on fill.
Setting up attractive branches in such a way that the perch is a part of the image is one of the keys to a good setup. GB

Continually setting up your tripod can be difficult because the legs get tangled up on vines and bamboo. By the time you get set up, your subject will be gone.

In addition, with all of that noise you're making, the subject probably won't stick around anyway. Working handheld can allow you to follow a bird more silently and to be more efficient in squeezing off a shot when things come together. Using a lens with IS/VR/VC/OS is a big help, and combining a wide aperture with a higher ISO will ensure a reasonable shutter speed for handholding a big lens. Finally, bracing yourself and/or your lens on a tree trunk or branch can aid in sharpness; just be careful of bullet ants and arboreal vipers!

DON'T UNDERESTIMATE SETUPS

The chance to attract birds to feeders with fruit, seeds, or sugar water can lead to photo opportunities simply not possible by hiking through the forest. We both work closely with different lodges and farmers in our tropical destinations to establish and maintain photography-friendly feeder setups. A well-done setup picture is not easy as many people seem to believe; a good shot still takes an eye for composition and light and knowledge of a target bird's habits and habitat. Setting up attractive branches in such a way that the perch is a part of the image is one of the keys to a good setup.

CONCLUSION

There is no question that photographing birds in the tropics brings a whole host of new challenges to any photographer. Nevertheless, we believe that capturing a stunning image of a tropical bird is well worth the obstacles and frustrations that may be involved. Learning what these challenges and limitations are and embracing them instead of fighting against them will inevitably lead to more successful image making. The tips provided in this article are intended to provide a base upon which to build. NP

Orange-eared tanager, Peru, by Glenn Bartley. Canon EOS 7D, Canon EF600mm F4L IS II USM lens with 1.4x teleconverter, focal length 700mm, f/5.6 at 1/125 second, evaluative metering mode, auto exposure mode, flash, ISO equivalent 400, handheld, flash on fill.
In this image flash was used as fill. Notice how there is still a small amount of natural shadow under the bird's belly and chin. GB

A Wetland Wildlife Oasis

Article and Photography by Thomas S. Parry, Field Contributor

Thomas's web site: http://www.thomasparryphotography.com (Click for Live Link)

INTRODUCTION

The Sacramento National Wildlife Refuge Complex, composed of the Sacramento, Delevan, Colusa, Sutter, Butte Sink, and Sacramento River Refuges, as well as the Llano Seco Unit, is located in northern California's Sacramento Valley. The Sacramento Valley is the most important wintering site for waterfowl migrating along what is known as the Pacific Flyway and attracts more than two million ducks and 750,000 geese each year. Surrounded by farmlands and flanked by the southern Cascade, northern Sierra Nevada, and Coast Ranges, the permanent ponds and seasonal marshes of the Sacramento refuges are a true wetland wildlife oasis. These marshlands, all man-made, are flooded in the fall and winter to mimic seasonal cycles and are among the nation's most intensively managed refuges. During peak migratory cycles, thousands of northern pintails and snow geese, together with tundra swans, mallards, grebes, herons, and long-billed dowitchers gather on the ponds and in the marshes. Migratory shorebirds and resident mammals attract more than a dozen species of birds of prey, including peregrine falcons and red-tailed hawks. At least 100 songbird species have been observed here, including warblers, finches, swallows, and several types of blackbirds. The refuges offer good year-round views of many mammal species, ranging from black-tailed deer and black-tailed jackrabbits to raccoons and muskrats.

The greatest numbers of migratory birds begin arriving in the refuges during the fall and spring migration cycles, with populations peaking in April when thousands of sandpipers pass through the refuges on their way to their northern breeding grounds. Many wading and diving birds visit the refuges year-round, utilizing the wetland and riparian habitats for foraging, roosting, and nesting. Raptor abundance is greatest in the winter because of the high numbers of red-tailed hawks that winter in the Sacramento Valley. It is not unusual for knowledgeable birders to log as many as 100 or more species in a full day of observation during the winter months.

A BRIEF HISTORY

The Sacramento National Wildlife Refuge Complex was created in an effort to resolve a long-standing conflict between the needs of migrating birds using the Pacific Flyway and those of a growing agricultural community.

Before the arrival of European settlers to central California in the 19th century, much of the Sacramento Valley was comprised of natural, seasonal wetlands and grasslands. By the beginning of the 20th century, as more settlers populated the valley, much of the natural wetlands and grasslands were gradually replaced by farmland, intended primarily for growing rice, and the rivers no longer created new wetlands because their flow was diverted by levees and the growing need for crop irrigation. By the early 1930s, less than ten percent of the original wetland area remained. Migrating birds continued to use the area and would frequently rest in the rice fields, consuming considerable amounts of the crop.

In 1937, the United States Fish and Wildlife Service, with the assistance of the Civilian Conservation Corps, began the process of creating a wildlife refuge within dry, alkaline lands between the towns of Willows and Maxwell. This area became the original Sacramento National Wildlife Refuge. From the 1940s onward, additional refuges were created so that the Sacramento National Wildlife Refuge Complex expanded to include territory located between 50 and 90 miles north of the city of Sacramento aligned roughly with the I-5 corridor. The total area of the refuges combined covers nearly 100 square miles.

Today, 90 to 95 percent of California's natural wetlands are gone. Constructed levees now confine the rivers for irrigation and flood control, preventing the natural flooding of wetlands. Establishment of the refuges enabled the construction of man-made marshlands and ponds with artificially controlled water flow. The vegetation is managed actively through irrigation and burning to ensure that the wetlands remain productive and provide adequate food and resting places for the birds. Despite the changes to their habitat over nearly a century, the birds continue to fly their ancient migration routes along the Pacific Flyway and crowd into the remaining wintering habitat. The Sacramento National Wildlife Refuge Complex provides a significant amount of the wintering habitat that supports waterfowl and

Digital capture by Thomas S. Parry

Images at the Sacramento National Wildlife Refuge Complex, by Thomas S. Parry, Field Contributor.

Left: Red-tailed hawk. Canon EOS 40D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 400mm, f/9 at 1/320 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

Below: Great egret. Canon EOS M, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 400mm, f/8 at 1/640 second, evaluative metering mode, auto exposure mode, ISO equivalent 100.

many other migratory birds in the Sacramento Valley and is a win-win solution for wildlife and mankind to be able to live together peaceably and in harmony.

HABITAT

Combined, the various refuges within the complex provide for and preserve a wide range of habitats including seasonal marshes, managed summer wetlands, unmanaged wetlands, grasslands, vernal pools, alkali meadows, uplands, permanent ponds, and riparian forests to support a very large and diverse array of wildlife species including migratory waterfowl, shorebirds, birds of prey and songbirds. The habitats also provide food, water, and shelter for threatened and endangered species including vernal pool plants, invertebrates, and giant garter snakes. Thanks in large measure to improved and effective habitat management, migratory waterfowl that were once part of declining populations are thriving and coming back in increasing numbers. Research studies going back twenty years have shown that continental waterfowl populations were at all-time lows due to habitat destruction and a series of drought years. Today, they're at near all-time highs when averaged over the past 70 years.

VISITING AND EXPERIENCING THE REFUGES

While I have traveled up and down the Sacramento Valley many times over the past several years, I had never concentrated on the Sacramento National Wildlife Refuge Complex until I learned, through my love of photographing birds, of the large number of migrating birds that descend upon the area during the fall and winter months each year. Eager to see for myself what the refuges had to offer, I made two trips there for the first time in late 2013. The first was several days prior to Thanksgiving in November and the second a month later at the very end of December. The images accompanying this article were all captured during these trips. I was overwhelmed by the sheer numbers of birds! In some places whole flocks would "blast off" and literally fill the sky with birds in every direction. I don't think I have been anywhere in my life where I have seen so many different species of birds and such vast numbers in one general location.

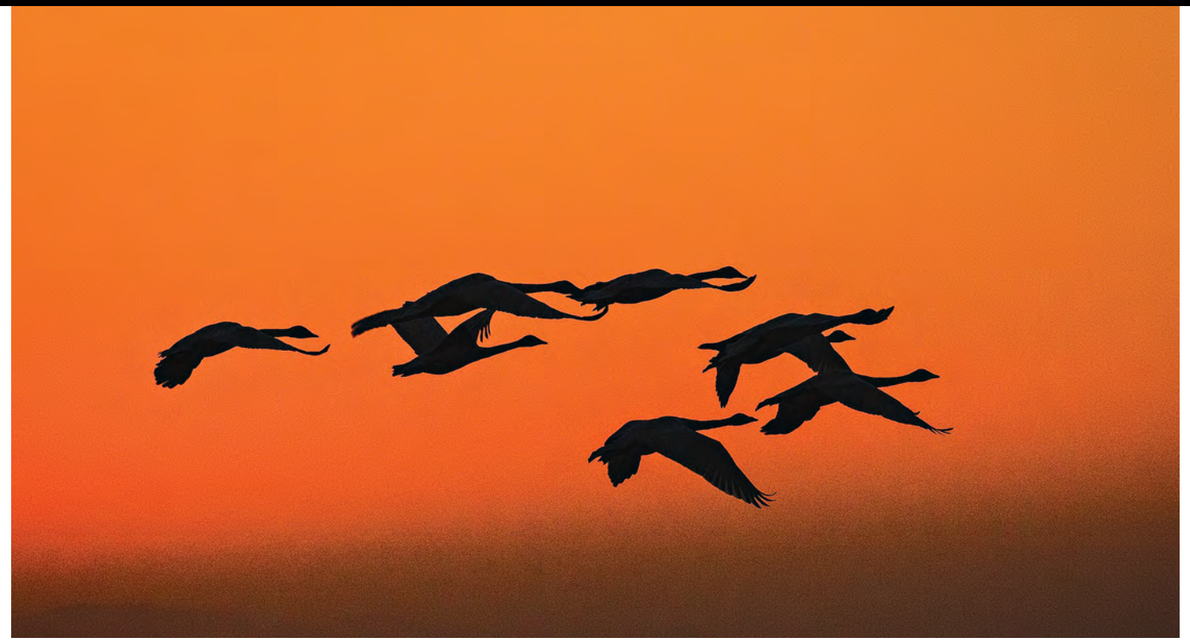
Because the various refuges comprising the complex are scattered at different locations around the valley and require travel time to get from one to the other, I highly recommend first stopping at the visitor center at the Sacramento Refuge just off Interstate 5 near the small farming community of Maxwell. It is the only visitor center for the entire complex and offers exhibits, educational programs, and expert advice on planning a visit and where to go for optimal wildlife viewing and photography on any given day. Also within the Sacramento Refuge is a six-mile long, one-way, low-speed auto tour route on a dirt levee road that wraps through the marshland in the shape of a horseshoe. Driving this route is an excellent way to get oriented to the habitat of the refuge and, through breaks in the vegetation, enables outstanding wildlife viewing without leaving your vehicle. In driving this route, you may take as long as you want and stop along the way but you are required to stay in your vehicle at all times except at three designated stops with viewing platforms that are marked along the route. While it is very tempting to get out of your vehicle and attempt to approach wildlife, you must remember that your car is your "blind" and will maximize your viewing success while preventing you from scaring wildlife and disrupting their natural activities. Birds are less fearful of slow-moving vehicles than humans because they see the human form as a predator. Thus, the best views are from your vehicle acting as a blind. The Sacramento Refuge also offers a two-mile long wetlands walking trail that provides a close-up and personal orientation to the habitat and allows excellent access to wildlife especially during the early morning and evening hours.

While driving the six-mile route on my second trip to the Sacramento Refuge in December of 2013, I drove very slowly, stopped often and scanned carefully around the vegetation and there were scores of birds visible everywhere. In one short sequence of this route, I counted more than a dozen different species of birds and then quickly lost track when, on several occasions, large "blast offs" of snow geese and Ross' geese filled the sky. The view is both awe-inspiring and overwhelming. When reaching the viewing platforms, these are the places to stop, get out of the car and plan to take lots of time. If there does not appear to be a great deal of activity at any one moment, hunker down and be patient as you never know what will arrive on the scene next.

I next traveled to Colusa National Wildlife Refuge located about twenty-five miles south of the Sacramento Refuge. Colusa is a smaller reserve but offers extraordinary beauty with the Sutter Buttes as a backdrop. The Colusa Refuge offers wildlife observation and photography from a three-mile auto tour route, one-mile walking trail and a photography blind available on an advanced reservation basis. There is also a large viewing platform overlooking a pond in which it is not unusual to see a variety of species of ducks at any one time and enables tripod and equipment set-up with minimal disruption to the wildlife. I found that Colusa offered some of the best views of snowy egrets, northern pintails, raptors, and scores of snow geese and Ross' geese.

Situated geographically between the Sacramento and Colusa Refuges is the Delevan National Wildlife Refuge. Of the various refuges within the complex, I found this one to offer the least accessibility to wildlife viewing as there are no hiking trails, no auto tour routes and no viewing platforms. Nevertheless, I was able to see large flocks of birds from a distance and was also able to photograph a beautiful flock of snowy egrets at fairly close range. I spent the least amount of my time in this location.

The Llano Seco Unit was, for me, a highlight of my visit to the Refuge Complex. Located in Butte County about 10 miles to the southwest of the city of Chico, California, Llano Seco comprises part of the historic Llano Seco Rancho, the last intact Mexican land grant in California. This historic area is bounded by the Sacramento River to the west and is bisected by Angel Slough in the center and Little Chico Creek to the east. This diverse landscape includes riparian floodplains, uplands, and wetland basins. There is a one half-mile walking trail and two observation platforms open to the public one hour before sunrise to one hour after sunset from which excellent photographs can be made with minimal disruption to wildlife. Llano Seco is a little more distant to reach but I was told at the Sacramento Refuge visitor center that the best sunset and sunrise imagery was possible in Llano Seco as well as the highest concentration of sandhill cranes during peak migratory periods. So I timed my explorations of the refuges so I could make the trip to Llano Seco in time for sunset on my first day. I was not disappointed. All of my best late-day flight and sunset shots as well as those of beautiful colored skies with cloud formations were made at Llano Seco. Sunrises were beautiful there and almost any of the refuges will enable viewing of snow geese "fly-ins" in pre-dawn hours.



Above: Snow geese fly out at dusk, Llano Seco Unit. Canon EOS 40D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 285mm, f/10 at 1/800 second, evaluative metering mode, auto exposure mode, ISO equivalent 640.

Below: Marshland, Llano Seco Unit. Canon EOS 40D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 400mm, f/13 at 1/800 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

Images at the Sacramento National Wildlife Refuge Complex, by Thomas S. Parry, Field Contributor.

Above: Blast off of snow and Ross' geese, Llano Seco Unit. Canon EOS 40D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 180mm, f/14 at 1/1600 second, evaluative metering mode, auto exposure mode, ISO equivalent 640.

Below: Greater white-fronted goose, Colusa National Wildlife Refuge. Canon EOS 40D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 400mm, f/10 at 1/320 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

Facing Page: Northern pintail, Colusa National Wildlife Refuge. Canon EOS 40D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 400mm, f/10 at 1/250 second, evaluative metering mode, auto exposure mode, ISO equivalent 200.

PHOTOGRAPHING IN THE REFUGES

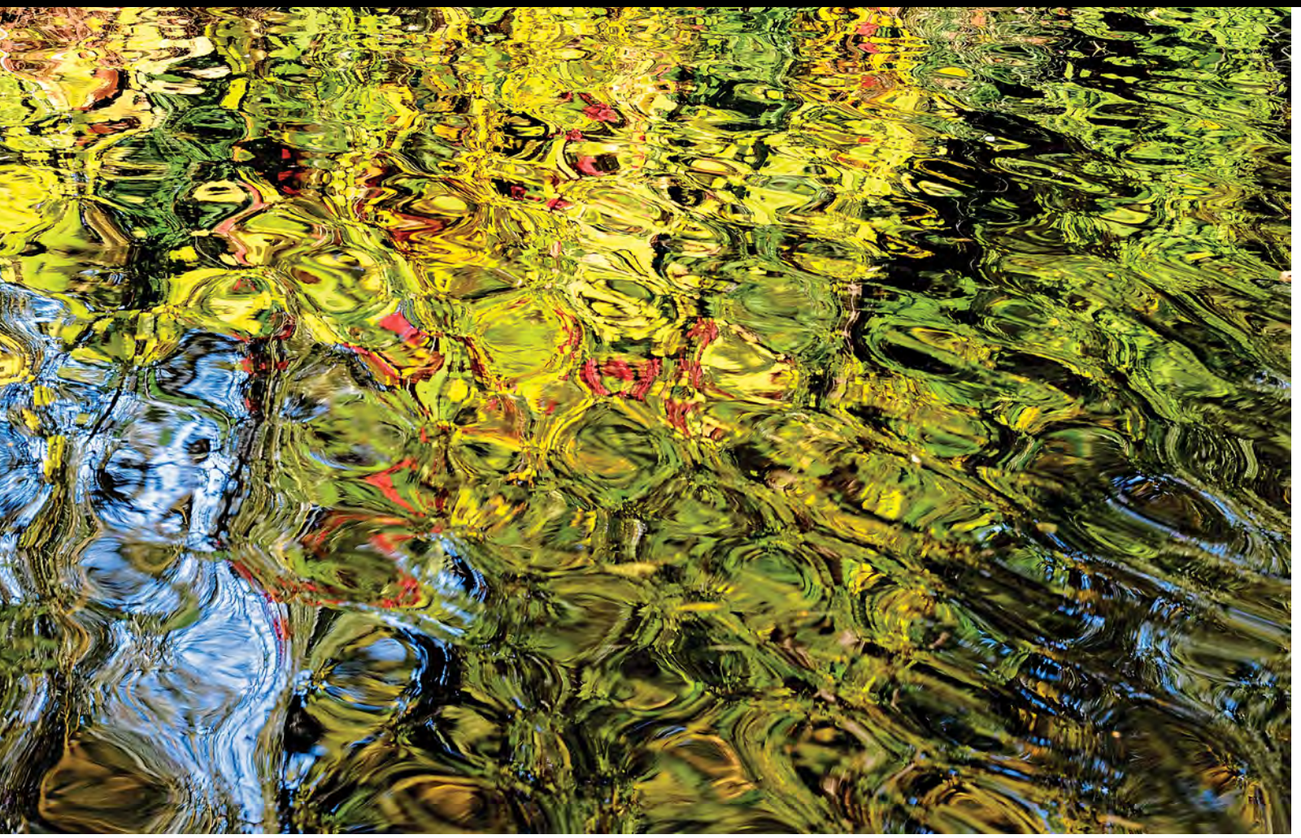
Although I was not able to plan far enough in advance to make use of any of the three photography blinds in the refuges, which offer extraordinary access to wildlife, I found that driving the auto tour routes slowly and stopping frequently along the way provided many beautiful and very satisfying photographic compositions with minimal disruption to the natural activity of wildlife. Most of the images accompanying this article were made hand held from my car using 70-200mm and 100-400mm telephoto zoom lenses. I strongly recommend the use of a circular polarizer, especially when the sun is high in the sky, as it will remove unwanted glare and reflections from the water and enhance color saturation. It is best to have two camera bodies with the lenses mounted and ready at all times. Action happens very quickly and there is no time for lens changes. Because most photography will be done from your car, you will need to either hand hold your camera equipment or use a specially-rigged door mount with a gimbal head should you use a very large lens. If hand holding your gear in lower light conditions, consider using higher ISO settings with faster shutter speeds, especially when using a polarizer, to ensure sharp captures. Birds are in constant motion and I found shutter speeds of 1/250 second or faster with mid-range apertures of f/5.6 to f/11 to be effective in getting sharp captures. Because visitors are restricted to their cars except for designated locations, equipment movements will be restricted and some shots will be lost. But realize that for every shot lost two more will appear before your eyes. There are plenty of great images waiting to be made.

That said, the keys to successful photography in an environment such as this are patience and perseverance. Nature never cooperates with us and does what we want when we want her to so we need to "wait her out." Sometimes it means driving the auto tour routes several times at different hours of the day or patiently "hunkering down" at a viewing platform with equipment ready to go. Almost certainly and often very suddenly our patience is rewarded with incredible and memorable encounters with wildlife and spectacular imagery. It doesn't matter what time of the day one explores the refuges; there is action going on all the time and there are no undesirable times during the day to take photographs. Sunrises and sunsets offer the advantage of capturing "blast offs" and "fly-ins" with the backdrop of a magnificent sky. But blast-offs and fly-ins of large numbers of birds happen all day long and can be captured beautifully at any time of day.

SOME FINAL THOUGHTS

The Sacramento National Wildlife Refuges should be on every nature and bird photographer's bucket list of places to visit and photograph. The sheer numbers and varieties of birds are overwhelming and awe-inspiring and it is not that hard to capture spectacular images especially when migratory populations peak in November and December. In one sweep of the eye over a single marsh area, I must have seen no less than 30,000 snow geese crowded together. From a distance, they appeared almost as a solid blanket of white upon the water. As I approached, the squawks and cackles echoed loudly across the marshland and, in some areas and depending on how close I was able to approach, were almost deafening. It is hard to describe in words and there is no photograph that can do justice to experiencing first-hand and close-up a "blast off" or flight of thousands of snow geese at one time. The sound of this many beating wings in unison was as if a rocket were lifting off. As they lifted off together, they created their own wind that felt like a 15 mph breeze sailing though. It is one of the most awe-inspiring sights I have ever experienced. There are other refuge sites within the complex that I have not yet visited. I plan to do so in late 2014 and I hope to begin a tradition of visiting the Sacramento National Wildlife Refuge Complex each year during the winter. It truly is an incomparable wetland wildlife oasis.

NP



Water Reflections

Article and Photography by Robert E. Gantner, Field Contributor

INTRODUCTION

Autumn is one of four seasons where any area containing deciduous trees transforms from many shades of green to a cornucopia containing dazzling other colors. This noticeable phenomenon happens in just a few short weeks during the autumn season. Green-leafed deciduous trees and shrubs perform a process causing their leaves to develop various shades of orange, yellow, red or brown. Bright, sunny and cool autumn days along with chilly but above freezing nights help this transformation process develop the brightest colors.

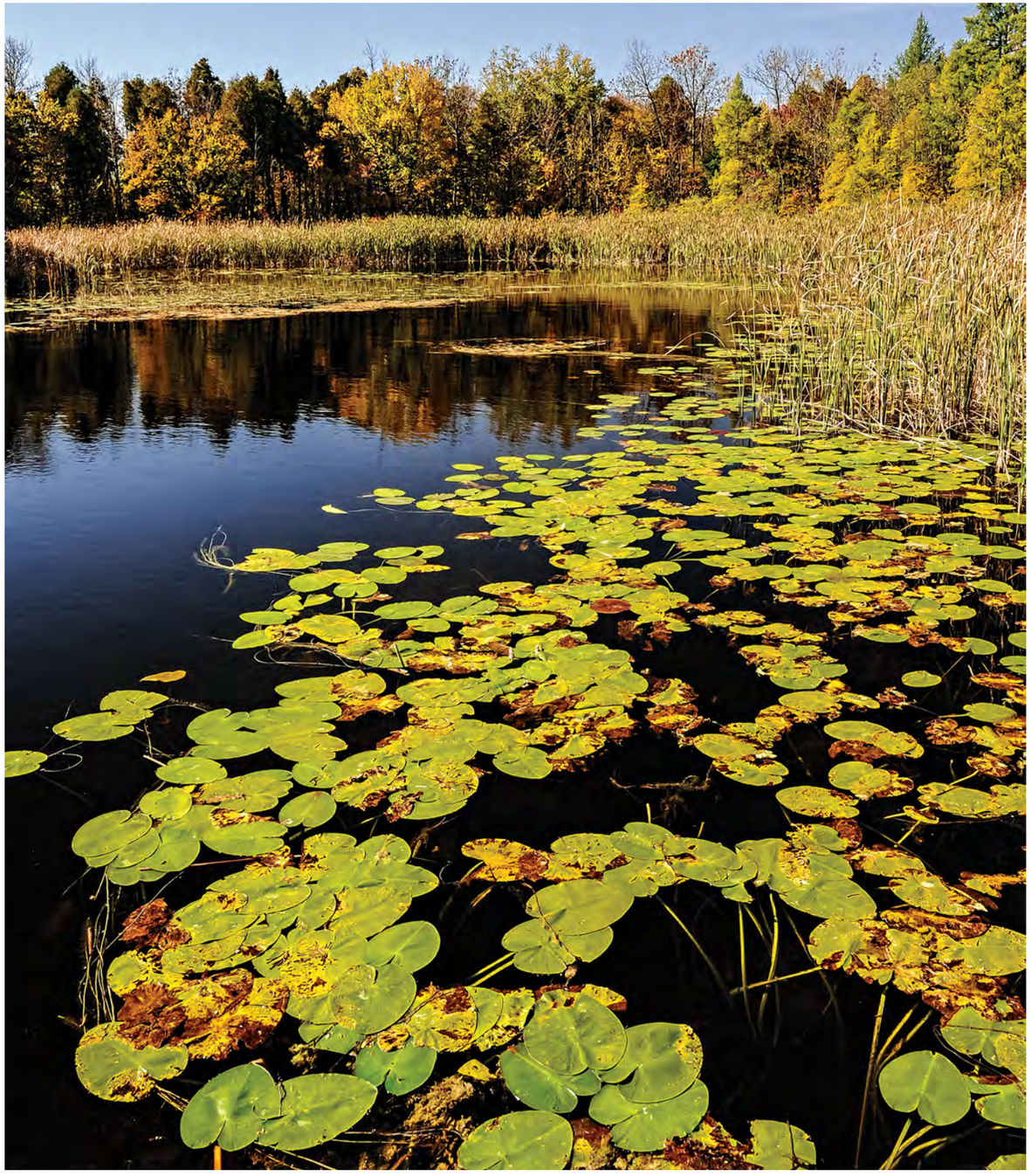
When autumn colors arrive, there usually is no shortage of leaf color for cameras to capture. Leaf color in and of itself can provide pleasing and interesting camera subject matter. Nonetheless, adding another element to the leaf color can offer unbelievable, stunning dynamics that enhances each colored subject photographed.

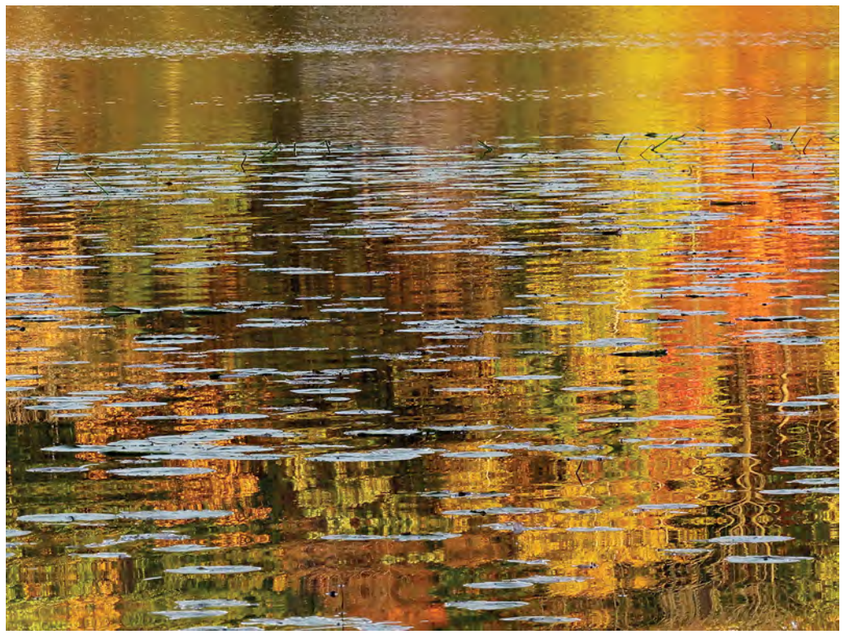
WATER REFLECTION

A reflection is defined as something that shows the existence or nature of something else. A reflection is also defined as an image that is seen in a mirror or on a shiny surface. By using the characteristics of what a reflection is, photographers can utilize a reflection along with autumn leaf color to add a dimension of zest to the many fall colors displayed from deciduous trees and enhance their created image. That can be accomplished by searching for places where those colors are reflected in water. By using a combination from brilliant leaf color and a reflective surface of water, images captured can well up anyone's searching eyes to the magnificence and magic splendor found within a short-lived autumn season. For instance, I have never been a fan of wind during my many photographic nature journeys except perhaps when air temperatures are blistering hot. However, one day I was look-

Digital capture by Robert E. Gantner

Images by Robert E. Gantner.
Below: Watt's Lake, Cedarburg Bog State Natural Area, Ozaukee County, Wisconsin. Nikon D700, Nikkor 24-120mm F4 AF-S G ED VR lens, focal length 24mm, f/16 at 1/160 second, +0.3 stop, matrix metering mode, auto exposure mode, ISO equivalent 1600, Manfrotto tripod.
Facing Page: Autumn leaves reflection, Lower Mayville Millpond, Mayville, Wisconsin. Nikon D700, Nikkor 24-120mm F4 AF-S G ED VR lens, focal length 120mm, f/8 at 1/250 second, -0.3 stop, matrix metering mode, auto exposure mode, ISO equivalent 1600, Manfrotto tripod.





Images by Robert E. Gantner.

Above: Kellings Lake, Northern Kettle Moraine State Forest, Sheboygan County, Wisconsin, Nikon D700, Nikkor 24-120mm F4 AF-S G ED VR lens, focal length 24mm, f/16 at 1/160 second, -0.3 stop, matrix metering mode, auto exposure mode, ISO equivalent 1600, Manfrotto tripod.

Left: Forest Lake reflection and lily pads, Northern Kettle Moraine State Forest, Fond du Lac County, Wisconsin. Canon PowerShot SX50 HS, focal length 54mm, f/8 at 1/125 second, -0.3 stop, pattern metering mode, auto exposure mode, ISO equivalent 800.

ing for a grouping of trees that would contain a substantial color variety, would be near some water where those colors would be reflected and that the water would be glass-like due to a lack of wind. Most photographers know that what you wish for does not always happen especially when weather elements are involved. In this instance described above I located two out of the three elements I was looking for. Much to my surprise, there was sufficient wind that created a colored mosaic of painterly, exaggerated patterns across a tiny cove on the mill pond. By focusing on and photographing just the water with all its brilliant color I was able to capture a very unique and stunning image.

In another instance, I again sought to locate special leaf color and a place where that color could be reflected in water. When I arrived I sat and admired what was being displayed. For me it was just breathtaking to be in that moment of created splendor. In addition to brilliant leaf color the calm air allowed the glass-like lake to perfectly mirror all adjacent trees dressed in their colorful best before they dropped to the ground below. And even though that was sufficient for any image, a deep blue sky with some cirrus clouds added a third dimension to this gorgeous panoramic scene.

It is not just colored leaves of deciduous trees that can use this enhancement technique utilizing water reflection. In Canada and in northern mid to eastern United States a tamarack tree grows where summers are cool and winters are cold. This tree sustains itself in swampy and boggy areas. Interestingly, it is a coniferous tree with needles that turn a brilliant yellow before being dropped just before winter. When a slow-moving creek, a hidden bog or a more extensive swamp is lined at its edges with yellow tamarack trees, golden grasses and brown weeds, a spectacular photographic scene surely needs to be recorded.

CONCLUSION

Some images can simply be trees displaying their autumn leaf colors and incorporating a water reflection. Other images may be able to incorporate autumn leaf colors, a water reflection and an exceptionally colored sky with or without clouds. And still another image type may only be a color leaf reflection and its various patterns formed by breezes skimming across an adjacent water body. In all cases, it is the water reflection that complements and contributes to providing an exceptional image captured of beautiful autumn color. NP

Tamarack reflections In Cedar Creek, Washington County, Wisconsin, Robert E. Gantner. Nikon D700, Nikkor 24-120mm F4 AF-S G ED VR lens, focal length 24mm, f/16 at 1/40 second, -0.3 stop, matrix metering mode, auto exposure mode, ISO equivalent 1250, Bogen tripod.

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"All that God requires of us is an opportunity to show what He can do."
A.B. Simpson

Coyote, by Bob Watson, Field Contributor. Nikon D70, Nikkor 80-400mm F4.5-5.6 lens, focal length 400mm, f/5.6 at 1/500 second, spot metering mode, auto exposure mode, ISO equivalent 200.

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"Beauty is God's handwriting."
Charles Kingsley

Slot canyon, Arizona, by Satish Menon, Field Contributor. Nikon D300, Nikkor 17-35mm F2.8 lens, focal length 17mm, f/22 at 10 seconds, spot metering mode, manual exposure mode, ISO equivalent 200.

"Find ecstasy in life; the mere sense of living is joy enough."
Emily Dickinson

"If God is your partner, make your plans BIG!"
D.L. Moody

Answering the Door

This column was given birth in the Fall/Winter 2013/2014 issue.
Thank you for your letters, emails, and phone calls. Your beautiful words and prayers touch me deeply.

Article by Marty Saccone and Helen Longest-Saccone, Editors
Photography by Marty Saccone, Editor

Marty's web site: marty-saccone.artistwebsites.com (Click for Live Link)

Aurora borealis (the northern lights), Quoddy Head State Park, Lubec, Maine, by Marty Saccone. Nikon D800E, Nikkor 24mm F2.8 lens, f/4 at 20 seconds, matrix metering mode, manual exposure mode, ISO equivalent 1100, Manfrotto tripod.

Announcement:

A PDF titled *Answering the Door* is available on our website at http://www.naturephotographermag.com beginning December 2014. The PDF includes messages by Pastor Dale (Courtney Dale Hupp—deceased), together with *Answering the Door* articles and a variety of images made by Marty along the Bold Coast in Lubec. Pastor Dale's wife, Bea, and his daughters, Brenda and Judy, together with other members of the West Lubec United Methodist Church present his meaningful sermons at services. We hope that everyone who chooses to read the PDF enjoys it and finds peace in Pastor Dale's thoughts.

The PDF will also include live links to inspirational web sites and sometimes also to YouTube presentations.

Digital capture by Marty Saccone and Helen Longest-Saccone

SEEING THE NORTHERN LIGHTS

by Marty Saccone

It caught my attention on the radio early this past September that intensive solar flare activity was occurring on the sun at that time. Reports were that the radiational energy field emitted from these solar storm activities could possibly cause disruptions on earth to various radio communication systems as it neared and interacted with the earth's magnetic field. I was somewhat familiar with this phenomenon from similar occurrences that have occurred in the past.

However, what really caught my attention was the information that followed.

There was a very high likelihood for sighting the Northern Lights and seeing aurora activity. The northern hemisphere would provide excellent vantage points, particularly at locations that have low levels of light pollution. My own backyard in east Maine provides remote, dark, and spacious skies for viewing the Northern Lights. It was a perfect photo opportunity to try something new, and I was psyched.

Conditions were forecasted to be best on the evening of September 12th.

I did a little research, noting sky conditions, moon phase, and time of moonrise.

Predictions were for clear skies but with a near full moon rising at 8:13 p.m. Hum, "bad news" I thought, full moon, too much visible light to see anything. I was up for giving it a try anyway, figuring I could do a bit of astro photography or moonscape images if nothing materialized.

Arriving early that night, I occupied myself with shooting some dusk images until darkness set in. A high tree line obscured the direction of the oncoming moonrise. The stars were like jewels on a black velvet backdrop, beautiful. I saw no hint of the Northern Lights or aurora though.

It was now about 8:45 p.m. and I could see a faint glow of the moon rising below the high tree line to the east. The sky and stars remained bright but with no hint of aurora to be seen. I decided to stay for awhile anyway, figuring it was worth the opportunity to potentially see the Northern Lights.

While I waited, the very bright Big Dipper constellation was directly behind me and to the north, just above the trees begging to be photographed. Nothing much was happening so I turned my tripod and camera toward the Big Dipper and casually took a 20-second exposure at f/5.6 on my 24mm lens at an ISO of 1100.

When the exposure completed and the image appeared on the camera LCD screen, I couldn't believe what I was looking at. The Big Dipper and surrounding stars were suspended in a bright red aurora plasma sky. I took another image and achieved the same result.

I quickly moved to another position, turning the camera a bit more easterly and took another 20-second exposure. This time I was gifted with a green and red aurora sky hanging above silhouetted trees.

I couldn't believe it; my naked eye saw nothing yet the camera was seeing this wonderful variation of the aurora's colors.

I tried a 30-second exposure of the aurora; it was a bit brighter but the colors were beginning to fade and within minutes almost nothing was visible. It was now 8:59 p.m. and there was no further aurora activity that evening.

In essence my camera captured images of the aurora that evening, but I did not see the Northern Lights or aurora activity with my own eyes.

Now when I venture out and wonder if the Northern Lights are present, I take several quick images, facing north, east, south, and west and then delete them, satisfied that "Seeing the Northern Lights" is not as it implies. NP

WITHOUT SEEING

by Helen Longest-Saccone

Just as exposure revealed the aurora borealis to Marty so too does exposure to love reveal the light of God.

God's love is exhibited daily and we do not need a camera's exposure to see His love. Just look at a mother embracing her child or a grandfather walking down a lane holding the hands of his grandchildren. Witness an act of kindness for a stranger in a store or a person with their dog or cat. What about a woman with her horse or someone making a contribution to a food bank for the needy—are these acts of love? Yes. And acts of love are God working through us, and we do not have to see God to see love.

Jesus said in John 13:34 "A new commandment I give unto you, That ye love one another; as I have loved you, that ye also love one another."

This is a tough commandment for me to follow, to love everyone without judgment—those who are near and far, those who I agree with, and those who live differently. But if God loves me just as I am, why can't I love everyone just as they are? Why would I choose the negative emotions of hate, judgment, or fear over love, peace, and faith? If Marty headed out in faith to photograph a possible aurora borealis, why can't I approach each day with faith that I will love everyone—that I will have a day filled with God. I may not be able to see Him with my human eyes but His love and blessings are ever present in my life.

God's gifts are abundant. In Matthew 7:7 Jesus said, "Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you." It sometimes takes me more than the time of a 20-second exposure to recognize God's gifts, but when I stop and truly look I see all He gives me. And His greatest of gifts is His love.

In recent months God's gifts have been so numerous and so generous that I have been overwhelmed with gratitude. Jesus is always correct—when I ask it is given, when I seek I find, when I knock God showers me with abundance in so many different ways. For all He gives I feel blessed and thankful. Believing has given me a life I never dreamed of before.

I now approach life with faith—I give my thanks, troubles and joys to God. As a result He gives me great gifts, including His love and peace. NP

There is an announcement on the facing page about a PDF titled *Answering the Door* which has evolved at the request of some readers. It will be available on our website at www:naturephotographermag.com beginning December 2014. A new version of this PDF will be posted approximately every three months. A portion of the sales from the PDF will be donated to food banks, churches, and other groups.

Blog That Mountain!

Article and Photography by John W. Wall, Field Contriutor

John's blog at http://jwallphoto.blogspot.com (Click for Live Link)

I like to think of nature photography as a cross between Henry David Thoreau's *Walden* and Paul Nicklen's *Polar Obsession.* That's why I blog. I want to experience a place as deeply as I can and share what I find.

Having a good blog project means never having not anything to photograph. Forget about waiting for inspiration. Just get out there and get started.

Although I started blogging in 2007 with travels around the entire state of California, I decided to dial it back a notch as gas prices pushed ever higher and my driving expenses started to run hundreds of dollars a month. I know photography is an expensive obsession, but those expenses—and the long drives—eventually got to me. I needed a project that was closer to home.

Living in San Francisco, I'm blessed to have the benefit of lots of open space, and I still give thanks to the people who successfully fought to keep it open and accessible to the public. After all, plenty of people look at miles of unbroken forest and rolling hills and see only "wasted space." With a little luck, my blog, my portrait of a place, will remind some of them of the less tangible value that wildness imparts to our spirits, our psyches, our souls.

I'm lucky to have lots of nature relatively close by. The biggest impediment for me isn't finding a worthy place to make the subject of my hybrid of *Walden* and *Polar Obsession.* It's traffic!

Yes, it's true. I realize there are ladies and gentlemen out there who only shoot jpegs because they think the most tedious part of photography is processing the images. For me, the most tedious part of photography is being stuck in traffic between the city and the great outdoors. I rarely photograph late afternoons and sunsets for my blog because I can't face the traffic. Make a date for sunrise and early morning, though, and I'm there.

When I get home from a day of shooting I can't wait to download my images and start sorting them out, like a kid opening birthday presents. I was the same way back in the film days, eagerly opening my box of slides and sorting them out on the light table. A big difference now is being able to share my work with everyone I know, almost immediately.

I say "almost" because I might spend hours sorting and processing a day's worth of pictures. I will often have numerous images that not only require the usual processing, but also have to be combined into focus stacks, stitched into panoramas, or blended for an increased range of tones. I don't understand why anyone finds the final crafting of his or her images to be tedious. It's all part of the process and the joy of photography.

Besides the obvious benefit of getting to know a place much better than you otherwise would, there are other good reasons to pick a place and create a blog around it.

Some people pursue nature photography for years, always wishing they knew the names of the wildflowers, the birds, the trees—maybe even (for the more adventurous souls) the fungi. It's kind of sad to see their beautiful photos captioned: "bird" or "flower." They might go on that way forever if they don't focus on learning something new.

If you pick a place to photograph and write about, the focus on learning is built right in. You can't create a portrait of a place without wanting to know something about it. There's no need for scientific precision. Learning the common names of things is fine. It will lead you toward a deeper experience of a place.

The naturalist Jon Young, founder of Wilderness Awareness School, suggests that new students find a "sit spot," somewhere they can visit every day to quietly observe nature. That simple exercise lays the foundation for a whole world of learning and eye-opening experiences. Similarly, you can be out photographing a landscape while letting your observations lead you to questions that will entice you into a broader and deeper view of the world.

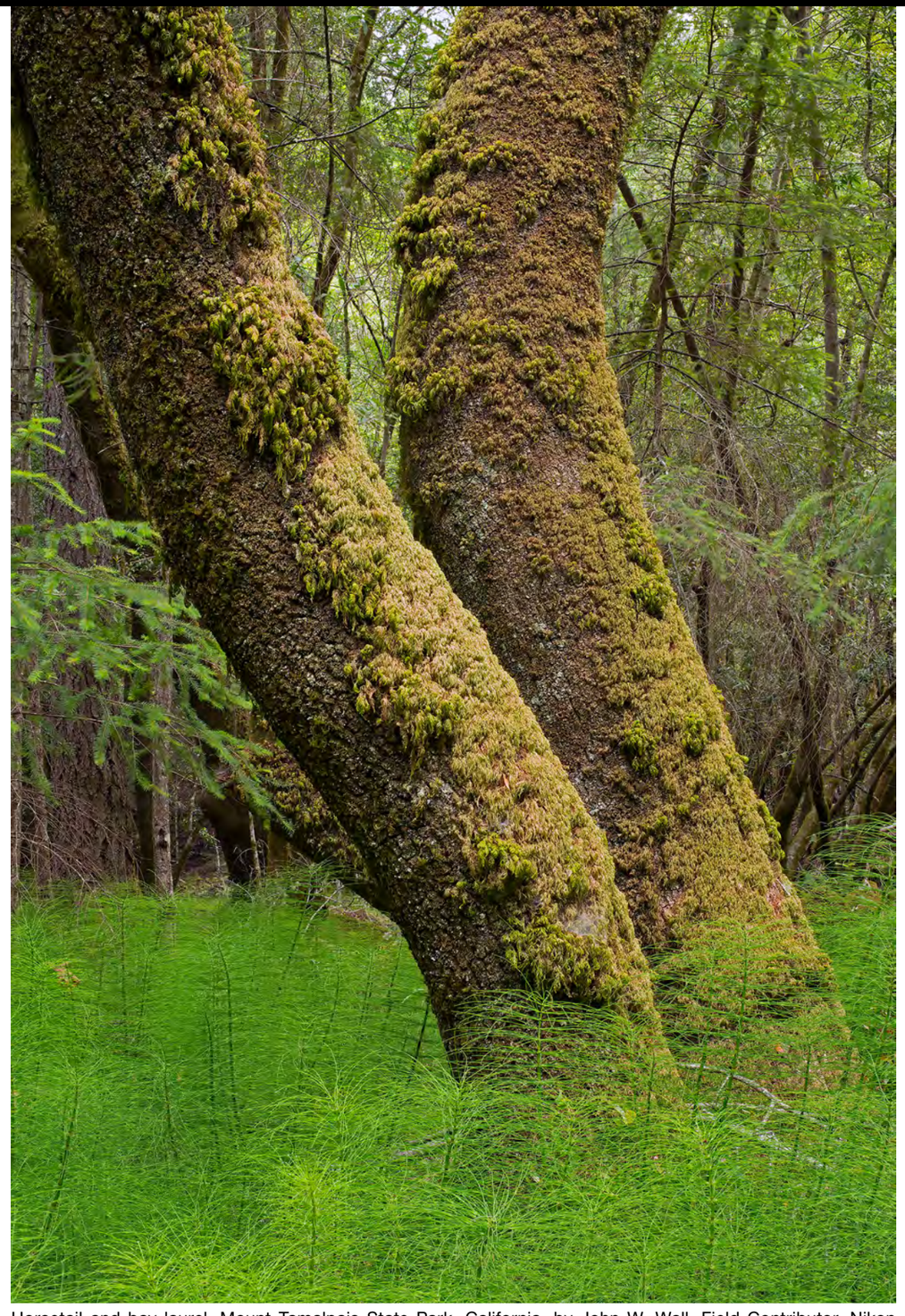
The things you learn about your local natural area will carry beyond your home range. Once you can recognize that a plant is a member of the mint family in your own place, you'll be able to spot them all over the place. Once you learn the sound a varied thrush makes in your own woods, you'll know them throughout their range. I'll never forget hiking on Mt. Tamalpais with a friend from Maryland who was able to identify a young plant that hadn't even blossomed yet because he'd learned its characteristic leaf shape.

When I chose to focus my blog on a year in the life of Mt. Tam, I had already spent years getting to know it. Although I started with an advantage of knowing a fair amount about my subject, I found that familiarity has its own pitfalls.

Even from the start I wasn't sure I wanted to spend a year photographing a place I felt I already knew so well. I'm only halfway through the project as I write this, and I admit I've thought about quitting and doing something else. But the

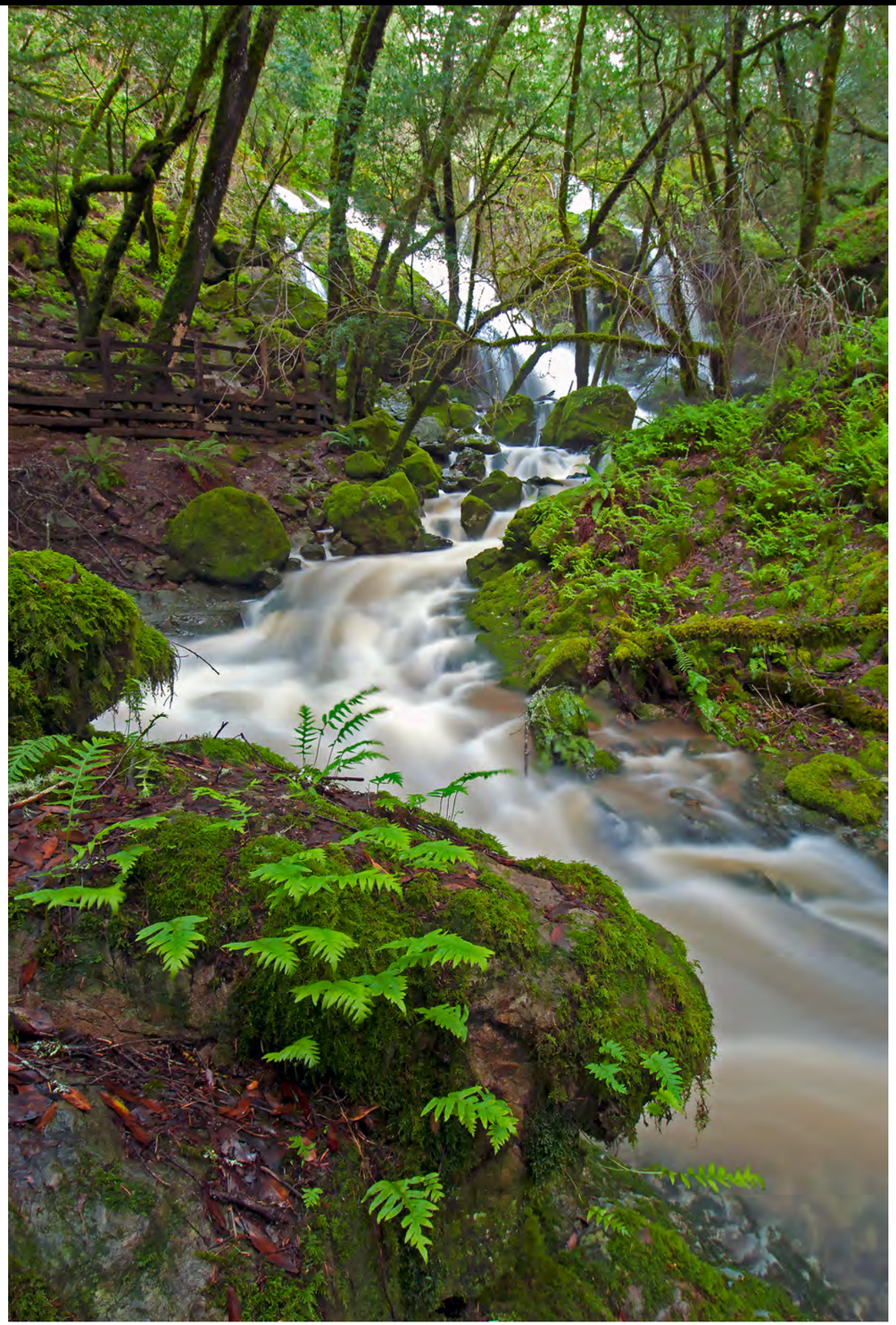
Mount Tamalpais, Mount Tamalpais State Park, California, by John W. Wall, Field Contributor.
Above: Nikon D800E, Nikkor 16-35mm F4 lens, focal length 16mm, f/22, center-weighted metering mode, manual exposure mode, ISO equivalent 100.
Below: Coyote. Nikon D200, Nikkor 300mm F4 lens with teleconverter, focal length 500mm, f/6.7 at 1/160 second, matrixmetering mode, auto exposure mode, ISO equivalent 400.

Digital capture by John W. Wall



Horsetail and bay laurel, Mount Tamalpais State Park, California, by John W. Wall, Field Contributor. Nikon D800E, Nikkor 50mm F1.8 lens, focal length 50mm, f/16 at 1.3 second, center-weighted metering mode, manual exposure mode, ISO equivalent 200.

Mount Tamalpais State Park, California, by John W. Wall, Field Contributor.
Above: Bobcat. Nikon D300S, Nikkor 300mm F4 lens with teleconverter, focal length 500mm, f/6.5 at 1/125 second, matrix metering mode, auto exposure mode, ISO equivalent 400.
Below: Bobcat. Nikon D300S, Nikkor 300mm F4 lens with teleconverter, focal length 500mm, f/6.7 at 1/800 second, center-weighted metering mode, manual exposure mode, ISO equivalent 800.



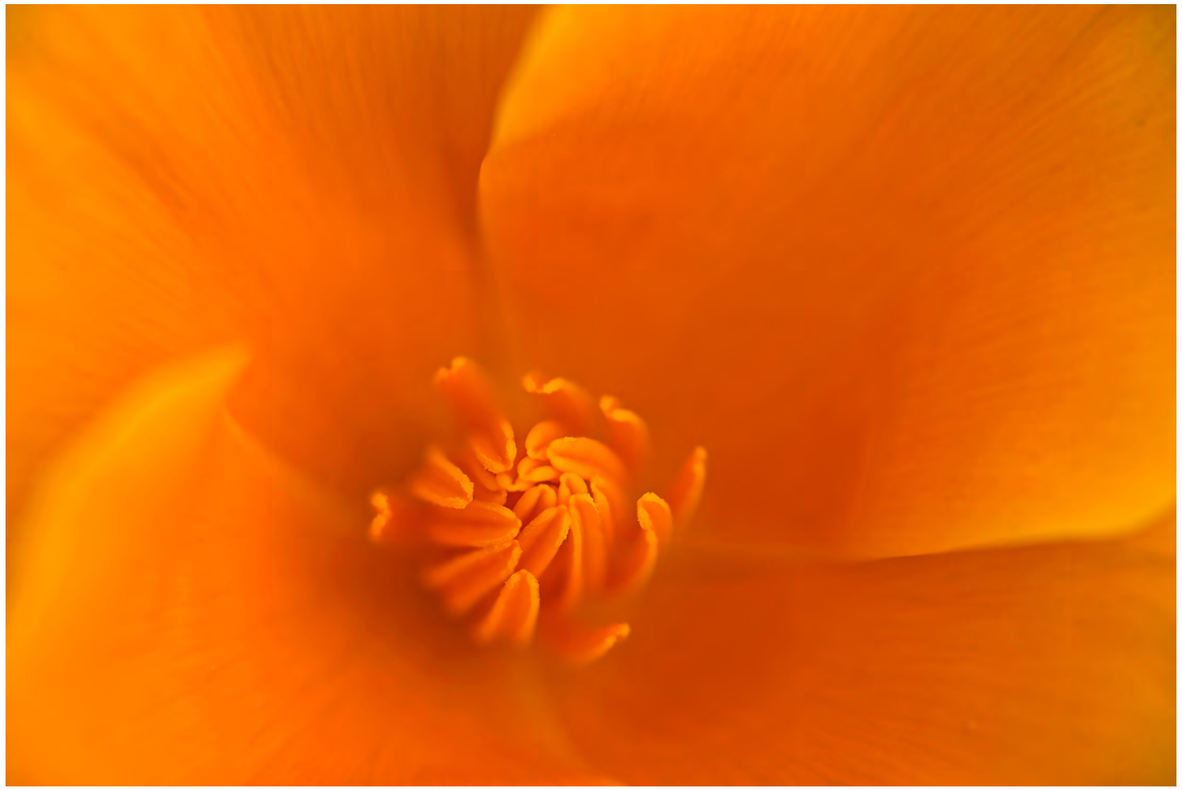
Mount Tamalpais State Park, California, by John W. Wall, Field Contributor. Nikon D300S, Nikkor 12-24mm F4 lens, focal length 14mm, f/11 at 4 seconds, matrix metering mode, manual exposure mode, ISO equivalent 100.

Mount Tamalpais State Park, California, by John W. Wall, Field Contributor.
Above: Nikon D300S, Nikkor 300mm F4 lens with teleconverter, focal length 500mm, f/6.7 at 1/3200 second, matrix metering mode, auto exposure mode, ISO equivalent 400.
Below: Deer. Nikon D800E, Nikkor 300mm F4 lens with teleconverter, focal length 500mm, f/6.7 at 1/640 second, center-weighted metering mode, manual exposure mode, ISO equivalent 200.

Rainbow, Mount Tamalpais State Park, California, by John W. Wall, Field Contributor. Nikon D300S, Nikkor 300mm F4 lens, focal length 300mm, f/11 at 1/160 second, center-weighted metering mode, manual exposure mode, ISO equivalent 200.

Full moon, Mount Tamalpais State Park, California, by John W. Wall, Field Contributor. Nikon D800E, Nikkor 300mm F4 lens, focal length 300mm, f/8 at 1/6 second, center-weighted metering mode, manual exposure mode, ISO equivalent 100.

I'm going to go out on a limb here and call this a wood pewee. Whatever it is, it's a baby. I heard it being fed and watched one of the parents feed it. The tiny fellow did not seem to mind my presence for quite a while. It even preened its feathers while I made photographs, using the built-in flash to try to fill in for the avalanche of sunlight falling into the background. Mount Tamalpais State Park, California, by John W. Wall, Field Contributor. Nikon D800E, Nikkor 300mm F4 lens with teleconverter, focal length 500mm, f/6.7 at 1/80 second, center-weighted metering mode, manual exposure mode, ISO equivalent 400.



Poppy, Mount Tamalpais State Park, California, by John W. Wall, Field Contributor. Nikon D800E, Nikkor 105mm F2.8 lens, focal length 300mm, f/8 at 1/400 second, matrix metering mode, manual exposure mode, ISO equivalent 200.

blog is also an experiment. I've never spent a year working on a single photography project. I have questions to answer about the value of committing to a process whose result has an unknown value. In the end, the only thing I'll be able to say for sure is, "It took me a year to make this." I can only hope I'll be happy with it, but that's a risk with any creative project.

By going out to shoot just about every weekend, I've gained a more intuitive feel for my camera and lenses. My gear doesn't sit unused in a bag for weeks or months at a time. My ability to scout the landscape for images remains fluid and tuned. I think of that scene in *Apocalypse Now* where Martin Sheen is squatting on the floor of his hotel room trying to stay strong instead of going soft from too much R&R.

As an amateur, I could tell myself it doesn't matter. It's not like I'm doing field expeditions for the International League of Conservation Photographers, right? Nonsense! There are plenty of amateurs doing excellent work in all areas of the arts. For me, the ultimate craft is to tell a story about nature, and to create a portrait of a particular place. It isn't going to make me rich, and museums aren't going to fight over it. I share it for what it's worth to anyone who comes across it.

Another benefit to doing a project like this is that focusing on a particular place means you get a chance to specialize in birds and flowers and macros and animals and landscapes. You get to learn it all.

You could go on forever with a project like that, but doing a "year in the life" blog seems like a good way to make the project finite. Once the blog is finished, it can remain as a time capsule and an artwork for people to use and enjoy for years.

To get started on the Mt. Tam project I picked a place with a varied landscape and good biological diversity. It also had to be close enough to home that I could easily get there on the weekend. How I envy Jim Brandenburg for being able to walk out his door at Ravenwood and into a landscape like the one he depicts in Chased by the Light, an amazing 90-day project that he did for his own enjoyment.

I try to work on the blog every weekend. Even though it's completely voluntary and done for my own enjoyment, I nevertheless feel a certain amount of pressure to deliver—not so much to others, but to myself. Whether the blog has six readers or sixty thousand, I do not feel I'm getting into the spirit of things if I don't keep the fire lit.

So many times I've visited photographers' blogs only to see a few random posts made over the course of a few years, or nothing at all in the last six months. I prefer to think of a blog as an opportunity to create something, an art installation on the Internet. If you're a nature photographer looking for a way to do something that gives focus to your work—and free gallery space—a blog is an excellent way to do it. NP

Love

"If I speak in the tongues of men and of angels, but have not love,
I am only a resounding gong or a clanging cymbal.
If I have the gift of prophecy and
can fathom all mysteries and all knowledge, and
if I have a faith that can move mountains,
but have not love,
I am nothing.
If I give all I possess to the poor and
surrender my body to the flames,
but have not love,
I gain nothing.
Love is patient, love is kind.
It does not envy, it does not boast, it is not proud.
It is not rude, it is not self-seeking, it is not easily angered,
it keeps no record of wrongs.
Love does not delight in evil but rejoices with the truth.
It always protects, always trusts, always hopes, always perseveres.
Love never fails.
But where there are prophecies, they will cease;
where there are tongues, they will be stilled;
where there is knowledge, it will pass away.
For we know in part and we prophesy in part,
but when perfection comes, the imperfect disappears.
When I was a child, I talked like a child, I thought like a child, I reasoned like a child.
When I became a man, I put childish ways behind me.
Now we see but a poor reflection as in a mirror; then we shall see face to face.
Now I know in part; then I shall know fully, even as I am fully known.
And now these three remain:
faith, hope and love.
But the greatest of these is love."
1 Corinthians 13:1-13

White-tailed deer by Fay M Beaupré Widmark, Field Contributor. Canon EOS 20D, focal length 300mm, f/10 at 1/2000 second, evaluative metering mode, auto exposure mode, ISO equivalent 400.

"What is love?'
Most searched Google query of 2012

"Spread love everywhere you go:
first of all in your own house.
Give love to your children, to your wife or husband,
to a next door neighbor.
Let no one ever come to you without leaving better
and happier.
Be the living expression of God's kindness;
kindness in your face,
kindness in your eyes,
kindness in your smile,
kindness in your warm greeting."
Mother Teresa

"What does love look like?
It has the hands to help others.
It has the feet to hasten to the poor and needy.
It has eyes to see misery and want.
It has the ears to hear
the sighs and sorrows of men.
That is what love looks like."
Saint Augustine

"God loves each of us
as if there were only one of us."
Saint Augustine

Love takes up where knowledge leaves off.
Saint Thomas Aquinas

"Lord, grant that I might not so much
seek to be loved as to love."
Saint Francis of Assisi

"The things that we love tell us what we are.
Saint Thomas Aquinas"

Gallery of Images by Craig Malburg

"Every particular in nature,
a leaf, a drop, a crystal, a moment of time
is related to the whole, and
partakes of the perfection of the whole."
Ralph Waldo Emerson

"Be happy for this moment. This moment is your life.
Omar Khayyam

Fall colors, Eastern Sierra Nevada, California, by Craig Malburg. Nikon D200, focal length 18mm, f/16 at 1/13 second, matrix metering mode, manual exposure mode, ISO equivalent 100.

"Every moment and every event of every man's life on earth
plants something in his soul."
Thomas Merton

"With a strong hand, and with a stretched out arm:
for his mercy endureth for ever."
Psalm 136:12

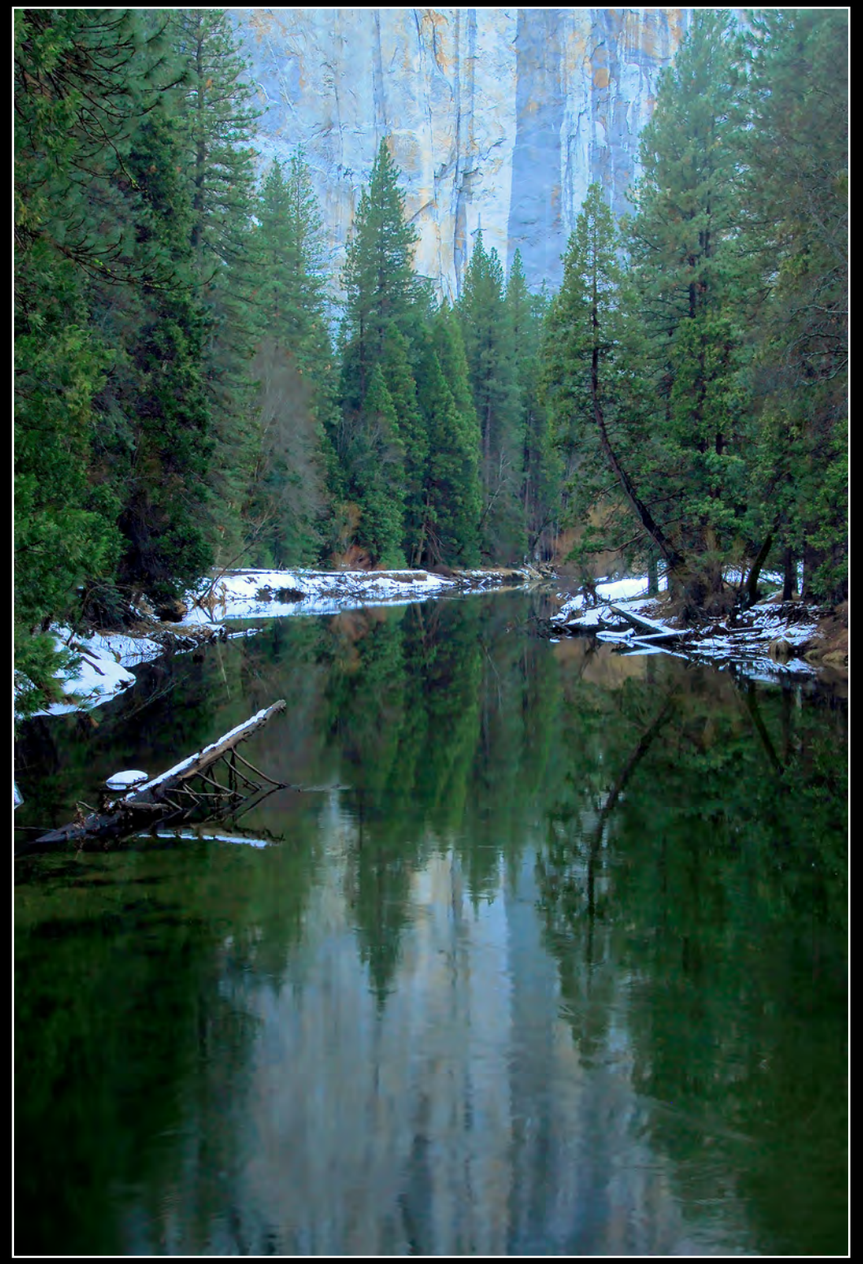
Lundy Creek, Eastern Sierra Nevada, California, by Craig Malburg.

Conway Summit and Dunderberg Peak, Eastern Sierra Nevada, California, by Craig Malburg.

Autumn color, McGee Canyon, Eastern Sierra Nevada, California, by Craig Malburg.

Dawn, Bishop Creek Canyon, Eastern Sierra Nevada, California, by Craig Malburg.

Black oak and conifer saplings poised against a granite backdrop, Yosemite National Park, California, by Craig Malburg.



Granite and pines reflected in the Merced River, Yosemite National Park, California, by Craig Malburg.

Yosemite Falls, Yosemite National Park, California, by Craig Malburg.

El Capitan materializing from the clouds, Yosemite National Park, California, by Craig Malburg.

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Henry David Thoreau

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When They Brought These Wolves
Into The Park,
They Had No Idea This Would Happen

http://themetapicture.com/when-they-brought-these-wolves/
(Click for Live Link)

Challenging Nature Photography and ALS
by
Angelo Sciulli

https://www.youtube.com/watch?v=uouFmwKGc0w
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The story of life in photographs
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http://www.ted.com/talks/frans_lanting_s_lyrical_nature_photos
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How to make healthy eating unbelievably easy
by
Luke Durward

https://www.youtube.com/watch?v=Q4yUIJV31Rk
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A rich life with less stuff | The Minimalists
by
Joshua Fields Millburn and Ryan Nicodemus

https://www.youtube.com/watch?v=GgBpyNsS-jU
(Click for Live Link)

"Love is not ill-mannered or selfish or irritable; love does not keep the records of wrongs."
1 Corinthians 13:5

THANK YOU FOR READING NATURE PHOTOGRAPHER MAGAZINE

&

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- Summer 2015 single issue—Please look for it in the bookstores and magazine outlets or, for subscribers, in your mailbox in July.
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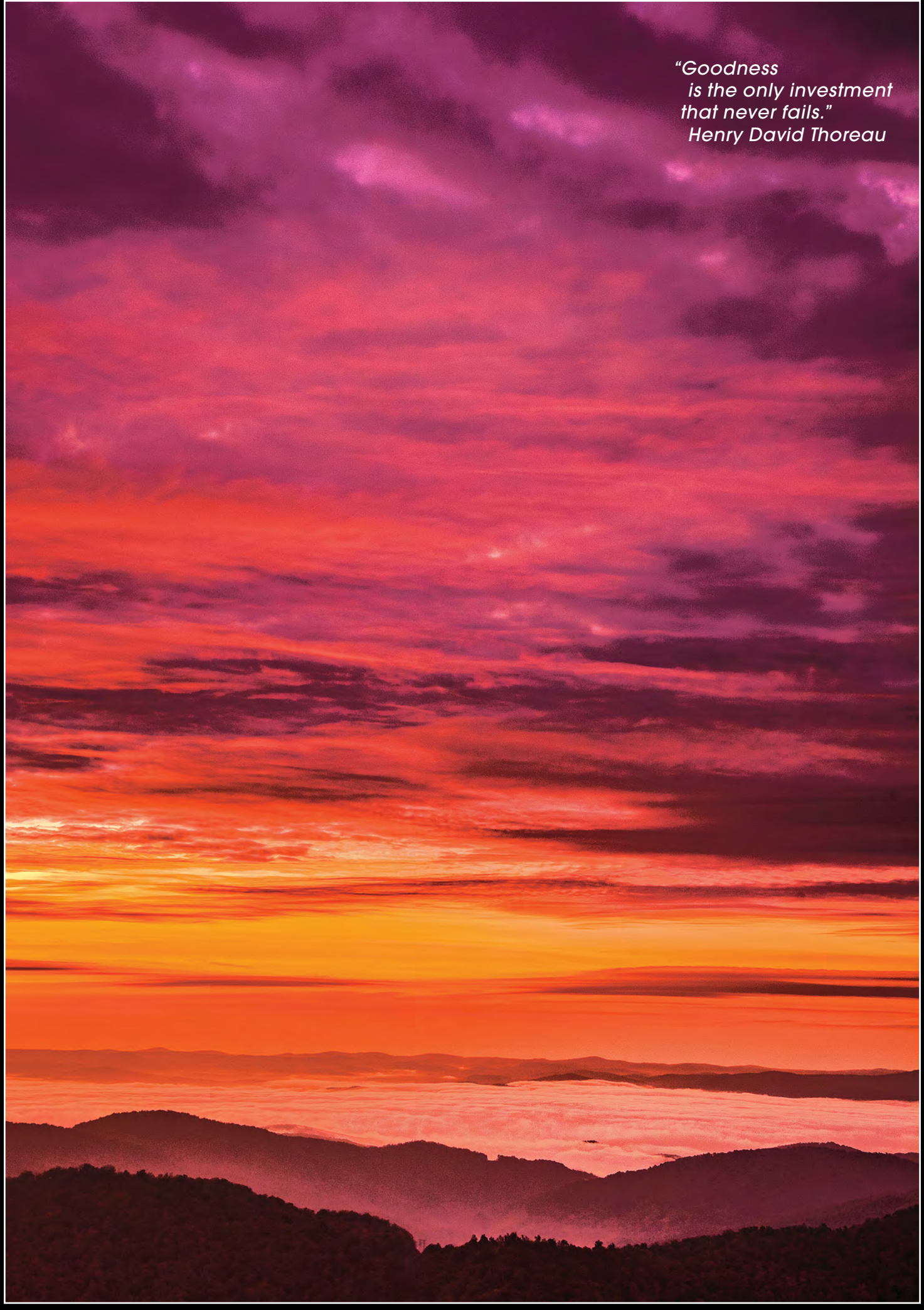
IT IS OUR HOPE THAT EVERYONE'S LIFE IS FILLED WITH LOVE, PEACE, & JOY! MAY ALL LIFE STAND IN LOVING LIGHT.

Facing Page: Images by David Watts, Field Contributor.
Top Facing Page: Bald eagle with fish. Canon EOS 7D, Canon EF300mm F4L IS USM lens with 1.4x teleconverter, focal length 420mm, f/8 at 1/1600 second, evaluative metering mode, manual exposure mode, ISO equivalent 400.
Bottom Facing Page: Great blue heron. Canon EOS 7D, Canon EF100-400mm F4.5-5.6L IS USM lens, focal length 400mm, f/10 at 1/2000 second, spot metering mode, manual exposure mode, ISO equivalent 1600.

Back Cover: Sunrise along the Blue Ridge Parkway at the Looking Glass Overlook in North Carolina, by Jay OBrien, Field Contributor. Nikon D7100, Nikkor 18-250mm F3.5-6.3 lens, focal length 38mm, f/16 at 0.8 second, matrix metering mode, auto exposure mode, ISO equivalent 100.


"Goodness
is the only investment
that never fails."
Henry David Thoreau