

Sixty Photographs

EVANESCENT LIGHT

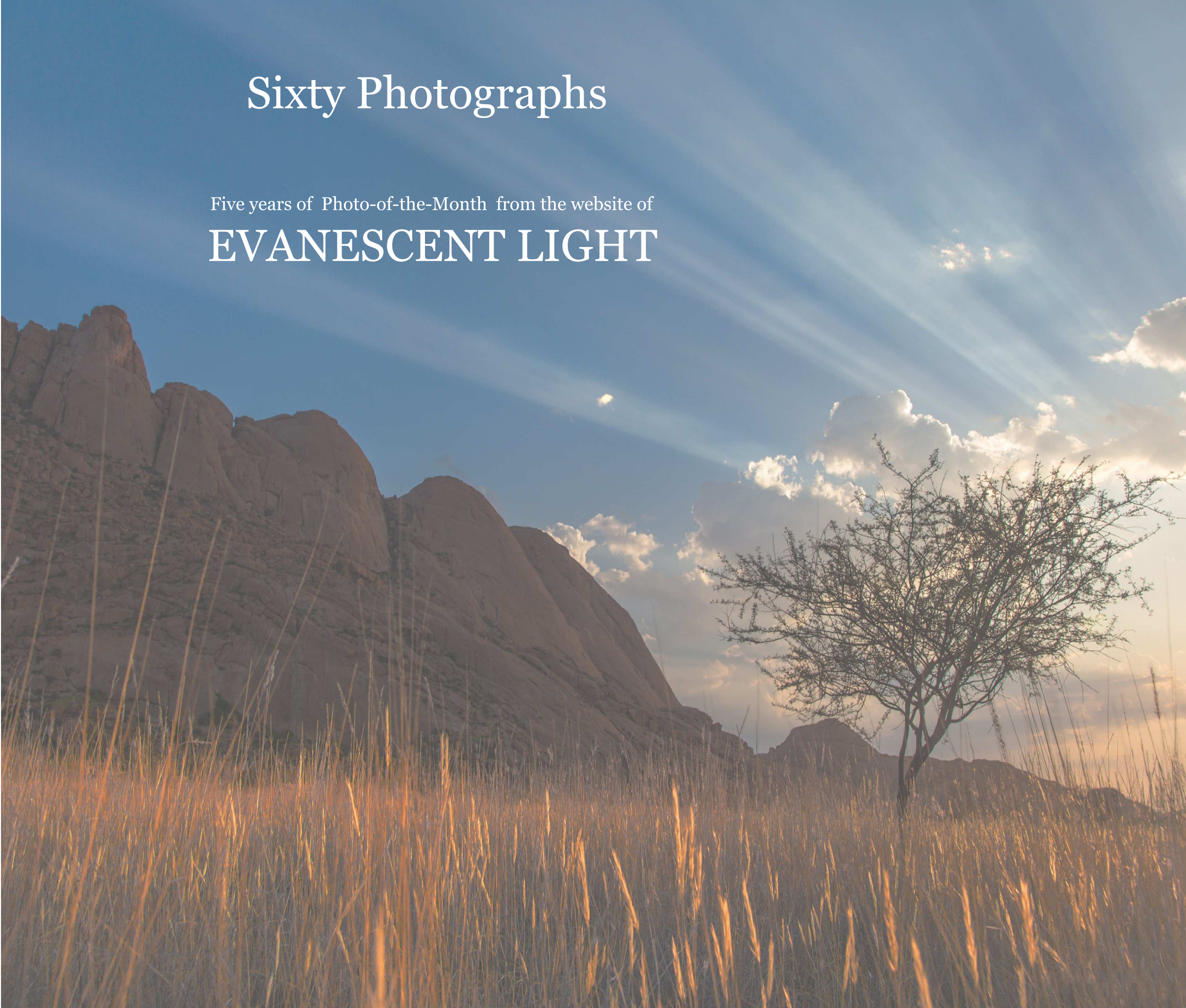
Ian Parker



Sixty Photographs

Five years of Photo-of-the-Month from the website of

EVANESCENT LIGHT



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Dedicated to Annie, my photographic elph.



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INTRODUCTION

Sixty 'Photographs-of-the-Month'

Some eight years ago I began a website - the *Evanescent Light Galleries* - to showcase my landscape and wildlife photography. I soon realized that most online visitors to photography websites do not go there to actually look at photographs, but instead want to read about photography. Aiming to increase the number of 'hits' my website received, I thus started a 'Photo-of-the-Month' section, featuring a new photograph each month together with a brief essay on its making. That was about five years ago, so there are now 60 photographs. That seemed a good number to compile into a more permanent form as a book. The photographs are not presented here in chronological order, but rather are grouped under loose thematic headings. The accompanying essays have been edited for style and content from the originals, and I have further included some 'bonus' photographs to introduce each grouping.

My aim is to convey through photographs the beauty of the natural world. The images in this book span five continents, and bring back fond memories of travels together with Annie, my 'photographic elph'. What I hope to capture and communicate in them is not simply a direct representation of a scene, location or animal, but something more. Guy Tal (<http://guytal.com>) has expressed this better than I can:

"Your images should provide viewers with an experience they could not have had, and would never have seen or felt, if it were not for your sharing it with them. If someone could have produced an identical image to yours by simply being there at the same time, it also cannot be considered art (as in the product of an artist rather than a craftsman)... No matter how beautiful or powerful the feats of nature you photograph, if all you do is record them using photographic media without introducing your own sensibilities into the final product, they are not art."

Given that a camera is a mechanical/optical/electronic device that merely records those photons that enter the lens, how is it possible to introduce 'sensibilities' into the final image? That is what distinguishes a snapshot from an image with deeper meaning, and it has been a long and ongoing learning experience to find ways to achieve this. The essays describe some of the means I have discovered, as well as simply telling stories about particular places and events.



Elephant dusting
Etosha National Park, Namibia

WILDLIFE

(1) "ZEBRA DUST TRAILS"
Etosha National Park, Namibia

To be effective, a photograph needs to have at least two distinct elements. One is (usually) the subject of the photograph - what you are photographing. But to have any deeper meaning, or 'wow' factor, there needs to be something extra. In the case of wildlife, a photographer tends to go through a natural progression. At first it is satisfying merely to capture a decent static portrait of a new bird or animal. After all, that is difficult enough as the subject is inclined to fly or run away. Soon, however, there is an urge to shoot more interesting pictures; for example, the challenge may become that of catching interesting behaviors or composing to place the subject in the context of its environment. And, as exemplified by the title of my website, a common theme in my photography is to capture a chosen subject under optimal light.

During our visit to Etosha National Park in 2012 there was no shortage of spectacular Namibian wildlife, but the lighting was problematic. Access to the park is strictly regulated, and everyone has to remain within the fenced camps at night. The gates open and close strictly at sunrise and sunset, so we always seemed to be spending the times of golden light waiting for the gate to open, or driving frantically back to camp before it shut. One evening though we returned early, and went down to the viewing area by the waterhole before sunset. The main attraction here is watching animals approach at night under floodlights, but the waterhole at Okaukeujo also gave a good view across the surrounding plains, looking directly toward the setting sun. As animals walked toward the waterhole they kicked up dust cloud, which caught the light as the sun sank to a red orb in the thick African air.



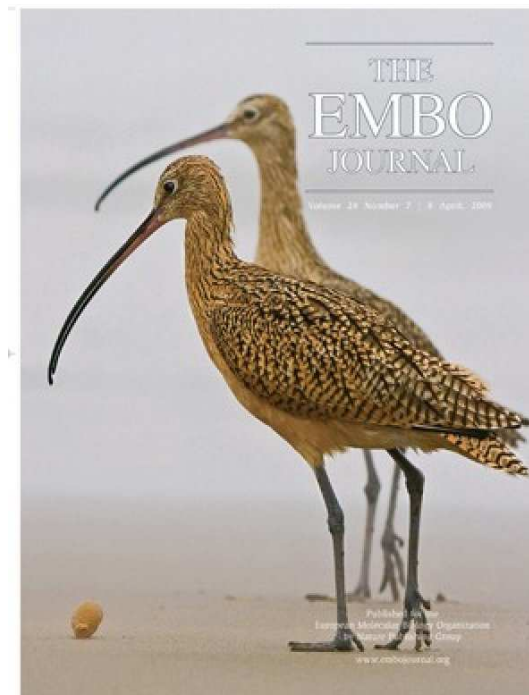
(2) "TWO LONG-BILLED CURLEWS"

Morro Bay, California

Photographing birds is mostly a matter of getting close enough, and then firing off numerous shots in the hope of capturing some interesting composition or action. To eliminate distracting clutter it helps if the birds can be isolated from the background. A good way to achieve this is to get the camera right down to the ground. Using a long telephoto lens at full aperture then ensures a nice blurring of the background, as this will now be a long way behind the subject. However, when shooting from a beach toward the water the downward slope of the sand means that the background will be filled with surf, which can mar the picture even if well out of focus. In the case of the photo here, I was fortunate to be at Morro Bay during a heavy fog, which provided a featureless backdrop giving almost a 'white-screen' effect. I was also lucky in that the curlew that I was originally photographing was joined by another, and for a brief moment the two lined up in a nice composition, accentuated by the tasty morsel (whelk?) on the beach that the foreground bird was about to eat.

The photo on the facing page shows my final image, after some fairly strong tonal adjustments to bring out the color and texture in the feathers, because the raw camera file showed the birds only as dark silhouettes against the brighter fog.

Each year, the Journal of the European Molecular Biology Organization (EMBO) holds a photo contest, and chooses images from among their top selections for use as cover illustrations. They do a very good job of reproducing the selected photos, which are printed full page with minimal overlying text. I thought my curlews shot might have a good chance of being selected, but first needed to make some adjustments to match the orientation and aspect ratio of the Journal page. So, a little Photoshopping was called for. I moved the whelk in to allow for a tight vertical crop around the birds, and flipped the image horizontally to leave a blank space at top right for the Journal masthead. The image at right shows the final result as published on the Journal cover.





(3) "SNOW GOOSE BLAST-OFF"

Bosque del Apache National Wildlife Refuge, New Mexico

While attending a meeting in Albuquerque in early February, I took the opportunity to visit Bosque del Apache, a wildlife refuge by the Rio Grande about 100 miles south of Albuquerque. The reserve is famed for the vast numbers (tens of thousands) of snow geese and sandhill cranes that overwinter from around November through to late February. The photography opportunities are remarkable. From almost an hour before sunrise until well after sunset, this is a bird photographer's paradise. The highlight of the day, however, comes early. Before sunrise great flocks of geese erupt simultaneously after roosting overnight in the ponds and take to the air with a beating of wings as loud as approaching freight trains on the nearby railroad. This is an amazing spectacle, but one that is difficult to photograph because it usually happens while still quite dark.

On one morning, though, I was lucky. The geese took off in the twilight, but soon after landed and congregated in one corner of the pond by the 'flight deck' observation platform. They then stayed there, contentedly bobbing in the water for the next hour, despite being surrounded by a gaggle of photographers. Like everyone else I was positioned along the bank, armed with a long telephoto lens waiting for the eventual eruption. I don't know what was the final trigger, but a few of the geese at the edges of the mass started to swim outward and suddenly, within a couple of seconds, thousands of birds were airborne. Everything happened so fast there was no hope of deliberately composing a picture. I had set the camera on fast motor-drive and servo auto-focus, and filled up the camera memory buffer with a burst of shots aiming roughly into the mass of birds.

All but one of the resulting images were unusable - a blurry mess of wings and cut-off necks. By luck, however, I count this photo as a good success. The heads of two geese are nicely framed and are in reasonable, if not tack-sharp focus. And, the closely packed motion-blurred wingtips contrast with 'frozen' splashed water droplets convey a sense of the dynamics and sheer density of this unique event.



(4) "SANDHILL CRANE IN FLIGHT"

Bosque del Apache National Wildlife Refuge, New Mexico

The image was captured during a subsequent visit to Bosque del Apache, where the over-wintering sandhill cranes take pride of place on the wildlife reserve. My visit coincided with the annual Festival of the Cranes, so the photographer count was also very high - and the density of white super-telephoto lenses correspondingly great. My longest lens is a 100-400mm, and I was feeling quite out-gunned by massive 600 and 800mm rigs on gimbal mounts. However, I took advantage of my much lighter set-up by concentrating on hand-held shots of birds in flight. I had both 7D and 5D MkIII cameras with me, and was interested to compare their respective merits for this type of photography. The crop-factor 7D gave me an equivalent 640mm lens for tighter framing, but the focus on the 5DIII is much nicer, and its lower noise allowed use of higher ISO settings corresponding to about a 2-stop faster shutter speed.

Cranes are elegant, if gangly birds, and although they are somewhat skittish and difficult to approach closely, they compensate for that in sheer size, having wingspans up to 7 ft. Nevertheless, among the many hundreds of shots of cranes I took I ended up with only a few 'keepers'. Other than choosing a location from which to shoot, relative to the wind direction and the pond or field to which the birds are approaching, there is not much you (or, at least, I) can do in terms of deliberately composing a photo. Everything is happening too fast, and it is just a matter of firing off a burst of shots and seeing later what I might have captured. Any editorial and artistic input comes afterwards in terms of selecting the best images and processing them.

Two features of this photo appealed to me. Firstly, the bird was positioned against a uniformly white sky. Often, it works well to include some (out-of-focus) background for perspective, but here I liked being able to abstract the crane and present it against a pure white backdrop simply by tweaking the highlight levels. Secondly, I liked the graceful curves of the nearest wing and feathers. The exposure and sharpness were good straight out of the camera, and the only other processing I applied was to lighten the underside of the far wing to bring out more detail, and to subtly increase the color saturation and warmth.



(5) "EGRET BLUR"

Bolsa Chica Ecological Preserve, California

My selection of this photo was prompted by an article by Mike Johnson in The Online Photographer blog.

"Who says an image has to be sharp? Some are, some aren't. Some sharp images look like crap and some sharp images look great. Unsharp images, ditto—sometimes that can look good, sometimes not. It depends. Sharpness is a property that suits some pictures and not others. Some photographers treat it like a virtue, as if possessing more of it confers ever more glory and honor upon them. Granted, it's somewhat more difficult to make a photograph work when it suffers from unvirtuous properties—you have to be sensitive to the effect those properties have, the way they function visually, and how well they suit a particular picture and its message, instead of being just plain clueless about all those things. And in order to achieve the virtuous properties, your equipment, materials, and techniques need to be capable of it. There is a certain—slight—honor in that, I suppose."

Here is an image that is almost completely blurred: deliberately unvirtuous in quality, but I think virtuous in properties. At least, I like the final result - but you can decide whether there is honor to be attributed.

As is often the case, the actual taking of the shot was a mix of planning and serendipity. Being an action shot of a bird, the balance was shifted toward the latter. I had set off well before dawn to drive to Huntington Beach, intending to photograph the offshore oil rigs at sunrise before continuing on to the bird reserve at Bolsa Chica. However, the parking along Pacific Coast Highway was blocked off, so I arrived at Bolsa Chica earlier than intended. The light was still dim, requiring a high ISO setting and long shutter speed to get any photos at all. Of necessity I thus decided to try for motion blur photographs of the birds. Happily, a snowy egret obliged by coming in to land in front of close by dark foliage. I was able to pan my camera along its approach, and grabbed a couple of shots of its final approach.

While looking through the viewfinder at birds in flight everything is changing too fast to know what shots you are going to get, but reviewing the image afterwards on the camera screen showed one promising frame. The RAW file was thus a good starting point, but it was going to need a good deal of processing to yield the final result I wanted. The egret was far over to the right, and framed a little too closely top and bottom. I began by cropping out the left of the frame, then increased the canvas size along the bottom and right edges and used the context-aware function in Photoshop to fill in the blank areas to give the bird a little more 'breathing space'.

Then it was time to deal with the most troublesome problem, the egret's head. Blurred photos are most effective when something - even a tiny detail - is sharp. Unless you are really talented, it otherwise looks as if you messed up the focus rather than making a deliberate choice. In the case of birds (and people) it is the eyes that need to be sharp; and that was not the case here. So I cheated. I had another (sharp) photo of a perched egret from later that morning. I made a copy of the head and, after many tweaks of levels, sizing and puppet-warping, adjusted it as a new layer aligned on top of the blurred bird. Using a layer mask I then painted through with a transparency brush, keeping about 80% opacity around the eye and beak while fading to complete transparency toward the back of the head and neck.

Finally, some finishing touches. I applied some selective local contrast enhancement to enhance the edges of the wings. And, to remove the background color and some color casts in the wings I desaturated the entire image, masking off only the orange feet and yellow region around the eye. The final result is thus an almost monochrome portrait, giving added emphasis to the small splashes of bright color.



(6) "FLAMINGO TAKE-OFF"
Lake Chaxa, Atacama Desert, Chile

This image was captured during a 'Photo Safari' to Chile and Bolivia, led by Joe van Os. One of the first locations we visited was Lake Chaxa, a shallow saline lake in the Atacama desert fed by water from the Andes. The lake itself is not very attractive, but it is home to three of the World's six species of flamingos. Our visit began with an early morning breakfast at 5:30 am, so as to drive to the lake and be first in line at the gate to the National Park when it opened at 7:00am. I had presumed that this was simply to get us in position during the golden light around dawn. But, it turned out that there was a further motive...

Flamingos are quite skittish, and even at Chaxa, where the birds are well accustomed to people, they need to be approached with care, otherwise they fly off, never to return that day. As Joe instructed us, the trick is to stay together in a tight group, advance a little way, stay in position for a few minutes, then keep repeating this process. We eventually got to a good distance and set up our tripods ready to photograph. At this point another tour group arrived and, possessing only point-and-shoot cameras rather than our collection of long telephoto lenses, naturally wanted to get closer. However, the fact that we were physically blocking the narrow path, together with Joe's strong moral influence, deterred them for a while, allowing us to get good shots of the feeding birds. Eventually, though, the level of frustration grew too great, and one of the newcomers set off on his own toward the flamingos, making them visibly restless.

That turned out to be the opportunity for my favorite shot of the morning. There was plenty of advance warning, allowing me to focus on the birds and prepare for them to take flight. My object was to try to capture the dynamics of flamingo takeoff. As with other large birds, this takes a lot of energy; long legs frantically striding to gain speed, and wings flapping to gain lift. Feeling that a fast shutter speed would merely freeze this action, I selected a slow speed of only 1/60 s, and panned the camera as a pair of flamingos took off, shooting a sequence of captures at 8 fps until the camera buffer filled. Only one of the resulting 15 frames came out well - but one is enough. The bird's heads were decently sharp, but with legs and wings blurred by their motion, and with the background similarly smeared into a uniform abstraction by the camera movement as well as by the narrow depth of field. Just a couple of Photoshop manipulations remained to produce the final image. The two flamingos were a little too far apart in the original shot, so I moved them closer together. And, a salt bar introduced a distracting background streak at the very top of the frame, so I cloned that out, replacing it with an extension of the pastel reflections of the lightening sky.



(7) "ONE GOOD TERN...."

Bolsa Chica Ecological Preserve, California

For several weeks in spring, the Bolsa Chica wetlands are taken over by Forster's terns. They are attractive and lively creatures, but are not the easiest birds to photograph, given their relatively small size and highly erratic flight patterns. I do most of my bird photography hand-holding a 100-400 lens to be able to more easily track birds in flight. I noticed that the terns often landed to perch on a wooden post sufficiently close to the pedestrian bridge to frame a tight photo. On one weekend I thus spent most of the time focused on the post, waiting for something to happen. The problem, though, was that I needed to keep looking through the viewfinder to keep the post in the frame, and could not anticipate when a bird might be approaching until the last minute when it entered the frame. And, my arms were getting tired from holding the heavy lens.

On my next visit the marine layer was socked in, and the light was too dim and grey for effective flight photography. I decided to try a different ploy and set up the camera on a tripod, pre-aligned and focused on the top of the post. Then, I stood patiently next to the camera, holding a remote release ready to fire off a burst of shots when I anticipated a bird might be approaching to land. Two hours of waiting were rewarded with a one-second sequence as a tern approached his mate, who was already perched on the post, to feed her a tasty smelt in a courting ritual. The panels on the right show the entire sequence of eight shots. The photo on the facing page is the one frame out of eight that I thought best captured the 'decisive moment'.





(8) "TWO EGRETS"

Bolsa Chica Ecological Preserve, California

Egrets are easy birds to photograph. They are white, elegant and most importantly, big! Moreover, photography at Bolsa Chica is facilitated because the birds are well acclimated to people, and allow you to approach quite closely without becoming spooked. Mostly, I like to capture birds in action - flying, landing, feeding... But sometimes a simple, 'posed' portrait is nice.

The photo on the facing page resulted when two snowy egrets landed together on the railing of the bridge and perched companionably side by side. It was a quiet morning in terms of human visitation, and the birds let me slowly advance and get a well-framed composition with a 400 mm zoom, backed out to around 300mm. The sun was low in the morning sky, catching the birds with a warm light slightly diffused by thin clouds, while the far bank of the wetlands remained in shadow. I positioned myself to get a fairly high angle, so as to contrast the bright plumage against a dark and non-distracting background. To further blur the background, and maintain a fast shutter speed, I kept the aperture wide open. But that then introduced the complication that the depth of field was too shallow to have both birds in sharp focus at the same time.

A way around this problem is to take two shots at different focus settings, and blend a final image in Photoshop or Helicon Focus. This is easy enough with a static subject and a tripod, but more difficult with live subjects and a hand-held camera. My technique is to first frame the composition as I finally want it, and select a single focus point that lines up with one subject (the nearest bird in this instance). Then I move the camera to reposition that focus point on the second subject (the more distant bird), half-press and hold the shutter button to lock focus, move back to the original, desired composition and capture a shot. Next, I fully release the shutter button, briefly half-press to lock focus now on the second subject and then fully press to take the second shot. Provided that the birds have not moved in the interval between the two shots, and that I held the camera steady, all should be well when merging the two images.

For this approach to work, it is best that the interval between the shots be as short as possible, and doing this manually it is difficult to get much faster than a second or so. Instead, it seems that it should be possible to automate a 'through-focus' function in the camera, analogous to the way in which it is possible to obtain a bracketed sequence of three different exposure settings in very short time using the motor drive function. For example, after enabling a custom menu function, a half-press on the shutter button would cause the camera to determine the nearest and furthest focal distances among the array of focus points (or on a previously selected subset of points). A full-press would then expose two shots in quick succession at these two focus settings - or even a sequence of shots at intermediate focal distances, interpolated taking into account the aperture setting. As far as I can see, current generation DSLR cameras already have all the requisite hardware. Implementing such a through-focus function should merely be a matter of firmware programming.





Ice-rimmed trees
Richfield, Utah

TREES

(9) "ZION CHRISTMAS TREE"
Zion National Park, Utah

Sometimes you go to a location with a definite image in mind, and come away with something entirely different.

In this instance I was driving with my family through Zion National Park on our way home after a rather unsuccessful Christmas vacation trip through Utah. Our plan to visit Anasazi ruins on Cedar Mesa had been thwarted by unusually deep snowfall and storm. Of course, having given up and started heading home the weather then turned beautiful, and I was on the lookout for subjects to salvage some photos. There had been a fresh snowfall the previous night and as we drove through Zion National Park the deep red rock faces were attractively patterned with snow. Given the harsh mid afternoon sunlight shots of shadowed faces catching reflected light seemed the best bet, and I stopped just after passing through a narrow canyon section on the eastern plateau leading to the tunnels down to the main canyon. I got some images of the shadowed canyon walls, which turned out not to be very special. But on walking back to the car I spotted some trees far away on a high ridge that were intensely backlit by the sun hitting ice rime and snow on the trunk and branches. By good chance the angle of the sun was such that the shadow of the ridge exactly intersected with the road, and by walking up and down to get the correct alignment I could hide the sun behind the ridge, while preserving the backlight on the most photogenic tree.

The photo was taken using a 100-400 mm zoom at 400mm, handheld as the tree was so bright as to allow a 1/2000 shutter speed at f8. Very little post-processing was needed - the image is very much as captured by the camera. But, as with any photograph, it is impossible to convey the intensity of the original scene.



(10) "BRISTLECONE PINE BY REFLECTED LIGHT"
Bristlecone Pine Forest, White Mountains, California

Bristlecone pines are the oldest living organisms on the planet, and can be found in abundance at altitudes around 10,000-11,000 ft in the White Mountains of California. Indeed, the White Mountain Bristlecone Pine Forest includes both the largest and the oldest individual living trees. Photographically, however, it is the dead trees that hold most attraction for me. The exposed branches are gnarled and twisted as if expressing the thousands of years of harsh conditions they have endured. Moreover, the wood weathers over the millennia to a beautiful orange sheen. Often I find it is the color and texture of the trees that I try to capture, rather than just the shapes.

This point was brought home a few years ago, when I met up with a husband and wife team photographing Patriarch Grove, at the very upper altitude limit of the bristlecones. He was photographing on medium format black and white film, and was interested only in shapes. He got to sleep late in the mornings, and was out mid-day wandering around at leisure to scout out the best compositions. In contrast, she was up well before dawn, scurrying in below-freezing temperatures to make best use of the transient golden light before and just after sunrise.

Sunrise is, in fact, usually better than sunset at Patriarch Grove, because the setting sun is obscured by a high hillside early in the evening before it takes on much color. Given a clear sky to the east, sunrise on the other hand brings a deep red glow to the trees for a fleetingly brief few minutes. But there are still some possibilities in the evening, and on a recent visit I was primarily on the lookout for the quality of light on the bristlecones, with their shapes only a secondary factor. Direct sunlight was uninteresting, but sunlight reflected from the ground onto the shadowed side of the trees created a much warmer glow. This technique of using reflected light is standard for photographing in narrow slot canyons, where the aim is to avoid direct light at all costs, and frame the picture so the only illumination comes from light reflected and diffused from the canyon walls. Not so easy, though, for isolated trees on an open landscape.

To create this month's photo I took advantage of the shaded face of the opposite hillside as a background, and gradually worked my way up the opposite slope, staying just above the advancing shadow line while moving from side to side to intersect interesting trees along the way. The bristlecone pictured here had both an interesting and complex form, and was catching beautiful light reflected from the hillside above and behind me. Although dim as compared to direct illumination, by getting very low to the ground I could frame the tree to stand out well in contrast to the deep shade of the opposite hillside and the already fading sunlight on the near foreground. Technically, the only problem was that I was shooting straight into the sun, which was only just above the top of the frame. For once, I remembered to first remove the (flare-inducing) polarizer that usually lives on my lens, and used my hand to shade the lens from the sun. That, together with the remarkably good flare-resistance of the Canon 24-105L lens gave an excellent, high contrast final result.



(11) "DEADVLEI"

Sossusvlei, Namib Naukluft National Park, Namibia

Any photograph can be analyzed in terms of four essential elements: subject, composition, lighting and post-processing. Their relative importance may vary enormously. Sometimes, as in much journalistic photography, the subject is all-important, and any manipulation after the fact is strictly taboo. Sometimes the lighting is the main point, and the subject is merely secondary. Sometimes a striking alignment or geometry in the composition takes precedence. As for post processing, I would rank that last. I am suspicious of attempts to generate a striking image in Photoshop starting from an unpromising original capture. Although an outstanding image might capitalize on only one of the above elements, it obviously helps if all four contribute in their different ways. Which brings me to this photo, taken during a trip to Namibia. The subject is clearly the star attraction, but I hope I have been able to add more by careful choice of lighting conditions, composition and processing.

Subject. The photo is of the Deadvlei ('dead lake') within the Sossusvlei sand dunes of Namibia. This is a clay pan, formed during an earlier time when ephemeral rainwater pools allowed camel thorn trees to grow. When the climate changed, drought hit the area killing the trees, which are estimated to be about 800 years old. The dry conditions preserved the wood, but it has become blackened by the intense sunlight. Surrounding the pan on three sides are enormous red sand dunes, said to be among the highest in the world. The contrast of black skeletal trees against the red dunes and white clay creates an iconic subject for photographers: easily ranking with the Grand Canyon and Delicate Arch among the 'top-ten' worldwide landscape photo locations; but with the advantage of being remote and less well known.

Composition. The Deadvlei already has an otherworldly feel about it, and my aim was to create an almost abstract image, sufficiently detached from reality that it had the appearance of a painting or Japanese woodblock print more than a photograph. My main artifice was to use a telephoto lens to compress the perspective and photograph at some distance from the trees so that the dune on the far side of the pan towered over the trees, allowing the sky to be excluded from the frame and thus exclude that reference to reality. Then, there was the matter of choosing which particular trees to include. The highest density of trees is found at the northern end of the pan where the hiking trail enters, but I favored the opposite side of the 'forest' where the trees are more sparse and allow for a simplified composition. In particular, there is a small grouping that includes some wonderfully sinuous trunks. By moving around, sideways, toward and back from this group I was able to find an angle where the trees were attractively arranged, and which gave a good separation without their branches appearing to overlap. A final choice was the height from which to take the shot, which determined the ratio of dune-to-pan in the final image. I took several captures, ranging from holding the camera overhead to lying flat on the ground. Among these I chose the composition you see here, taken from normal standing height, which gives a sense of depth and three-dimensionality to the spacing between the trees. I wanted the dune to provide a colored backdrop, but without detail that might distract from the trees. It is not apparent from the photo, but the dune lies quite a long way behind the trees. Thus, by using a relatively wide aperture (f 5.6) I could slightly blur the dune (and the plants growing on it - the small yellow dots), while keeping all the trees in good focus.

Lighting. The orange/red of the dune is a major part of the image, contrasting with the slightly blue-white of the clay pan. The intense color comes from both the red sand itself, and the warm sunlight shortly after dawn. The sun rose behind a large dune immediately at the back of me, casting a shadow line that descended down the opposite dune. I took the photo just before the shadow reached the clay pan, when the distant dune was evenly illuminated, but the pan remained in shadow. This took some logistical planning, because the entrance gate to the National Park opens only about one half hour before sunrise, and it is 60 km from the gate to Deadvlei, with the last section involving a 4wd drive in low-ratio first gear through deep sand followed by a hike across the dunes. On our first morning I missed the best light having got lost on the walk in, but was able to scout for locations and on the second day was in place with a little time to spare.

Post-processing. The image already looked great straight out of the camera, but I applied a couple of subtle tweaks to provide further enhancement. The first was to deal with the texture of the clay pan, which has a blocky, hexagonal appearance, rather like the Racetrack of Death valley. I felt this was somewhat distracting, and introduced a mundane reality into my intended abstraction. After experimenting with selective Gaussian blurs, I discovered a better treatment by applying a negative 'clarity' setting in Adobe Camera Raw. This gave a mistlike appearance over the pan, but needed careful adjustment to avoid creating obvious halos around the trees. Secondly, reflected light from the dune was warming the pan, whereas I had hoped for a marked color contrast between the dune and shadowed areas illuminated by the blue sky. The final photo is thus a blend of two image files, separately processed in Camera Raw to bring down the color temperature and add 'negative clarity' in the lower half of the frame.



(12) "ENTWINED OAKS"
Capitol Reef National Park, Utah

On a spring-break trip over the University holiday I journeyed through southern Utah. I was hoping that spring would already have arrived by the end of March; that the cottonwoods would be fluorescent green with new foliage and the fruit trees in Capitol Reef in blossom. But no. The tail end of winter lingered on, and all the trees were bare. However, that still left possibilities for some attractive photographs, particularly in redrock country where backlit branches stand out against the dark, shadowed canyon walls.

The subjects in this photo are a pair of ancient, wonderfully twisted and intertwined oak trees, growing in a meadow close to the old barn in Capitol Reef National Park. I was there early in the morning, soon after the sun had risen above the canyon wall. Looking directly into the sun, the backlighting accentuated the tangles of small branches, while reflected light made the trunks positively glow. I wanted to frame the scene in an almost abstract manner, and wandered around exploring various combinations of position and focal length to find a composition that would eliminate everything apart from the trees themselves. Flare from the sun shining directly into the lens was a problem, but easily fixed by removing my usual in-situ polarizer and using a hand as a shade.

The end result is a rather complex photograph, without any single focal subject, but I feel it succeeds as an interesting mix of textures and colors, and as a sort of visual maze. The trees are so intertwined, that it is fun to try to trace out which branch belongs to which tree!





Lenticular cloud at sunset
Mono Lake, California

SKYSCAPES

Sometimes the sky puts on such a dramatic show that the location becomes merely incidental.

(13) "POLYCHROMATIC CLOUD"
Hidden Dunes, Eureka Valley, Death Valley National Park, California

Sometimes you go to a place with a definite image in mind, and come away with something entirely different.

The publication of a new and extensive guide to hiking in the backcountry of Western Death Valley National Park had provided some inspirational reading over the summer while waiting for temperatures in the desert to drop enough to make actual exploration comfortable. Among the many remote locations described in the book, at the top of my list to visit was the 'Hidden Dunes', located behind a mountain range on the west side of Eureka Valley. I had made several trips to photograph the better-known dunes at the south end of the valley, but the Hidden Dunes appealed as it seemed likely that they would be infrequently visited, and that the sand ridges would be unmarred by the usual trails of footsteps.

Getting there required a two mile drive over a rough and inconspicuous 4wd trail, ending at a dry well on the wilderness boundary. From there a three mile hike across the desert floor and up a gradually rising alluvial fan led to a low notch in the mountains, above which the top of a dune was just visible. Passing through the notch was an 'Alice through the looking glass' experience, as the vast open panorama of the valley changed abruptly to a close-up view of a dune rising steeply ahead. Once on top, the dunes spread out for a mile or more, along a ridge line paralleling the mountains.

My initial aim was to photograph shortly before sunset, when the low angle of the light would accentuate ripple patterns on the sand. But it turned out that the Hidden Dunes are not good for that, as high mountains to the west throw them into shadow early before the angle and color of the sun are optimal. Instead, my hike in and back out in darkness navigating by GPS was salvaged by the sky. A storm was forecast to arrive later that evening, and was preceded by wonderful cloud formations. The photo here shows a 'polychromatic' cloud, refracting multiple colors from the sun. This effect arises from hexagonal ice crystals in high cirrus clouds, and gives rise to related photogenic phenomena including rainbow clouds and sundogs.

And, yes... The colors in the cloud are real, not a Photoshop artifice. But a photograph cannot convey the intensity of the light, so the colors appear much more muted than in actuality.



(14) "FLEETING DAWN COLOR OVER THE MOVING
ROCKS"

Racetrack Valley, Death Valley National Park, California

Racetrack Valley is not the easiest of places to get to. Even the most straightforward approach involves nearly 30 miles of driving along an extremely washboarded dirt road notorious for flat tires. Just getting to the start of the road involves a 50 mile drive north through Death Valley from the visitor center at Furnace Creek. The reward is the other-worldly experience of the racetrack itself - a vast, completely flat lakebed, dotted with the famous moving rocks. It is not uncommon to find a few photographers scouting for the most appealing rock trails, but as the sun falls behind the mountains casting the racetrack into shadow visitors tend to disappear, heading back for the long drive to the comfort of a distant motel. I prefer to camp out through the cold night, as the best photographs are to be found at the edges of dusk and dawn light. Indeed, it is quite an experience to lie out in a sleeping bag in the middle of the playa, watching for meteors and satellites crossing under the milky way.

This photo was taken before sunrise, during a fleeting minute when wispy clouds lit up in red striations. Fleeting indeed, but I was lucky to be close to a good rock, and quickly lined up a shot so that its 'snail trail' nicely mirrored the curve of the clouds. The shot was taken looking due south, at right angles to the sun, so a polarizing filter greatly enhanced the contrast between clouds and sky. An undesirable side-effect in a wide-angle view like this is that, because the polarizing effect varies with angle, the sky appears very uneven. That was mitigated here since the clouds filled most of the frame, and some post-processing in Photoshop served to even out the blue tones. A separate problem was the extreme contrast range between the lakebed and the brightly lit sky. A graduated ND filter would have worked well given the perfectly linear horizon, but there was no time to retrieve a filter before the light faded. Again, Photoshop to the rescue.



(15) "ANVIL CLOUD OVER THE MIRROR OF THE SKY"
Salar de Uyuni, Bolivian Altiplano

Another photo taken during our trip to Bolivia with Joe van Os Photo Safaris (see also pages 15, 49). The undoubted highlight of the tour was the Salar de Uyuni. The Salar is the largest salt flat in the world, encompassing some 40,000 square miles. It is rather similar to the Badwater Basin of Death Valley, but on a large dose of steroids and at an elevation higher than the summit of Telescope Peak. Our visit was timed to coincide with the end of the rainy season, when the Salar is flooded to a depth of a few inches creating a huge 'mirror of the sky'. We stayed for three days, based at a remarkably luxurious hotel built of salt, and ventured onto the Salar each day for sunrise and sunset shots. As it transpired, our first evening was the best. Arriving at the hotel, the sky was largely cloud-covered, with thunderstorms over the mountains to the west. At first I was not optimistic about photo possibilities, thinking that the clouds would block the sunset. But as we drove out in land cruisers onto the flooded Salar, I realized that the sun would set clear of the clouds and, indeed, that the spectacular sky and its reflections were likely to yield spectacular images.

Journeying on the inundated Salar presents some practical problems. Although the water is only ankle deep, it was very salty and very cold, necessitating a pair of Wellington boots. And, it seemed best to decide on exactly what gear to take before leaving the land cruiser, as dropping a spare lens was not to be contemplated. Given the expansive clouds, I set off with a single camera, ultrawide zoom and tripod, wading slowly toward a promising group of salt cones well clear of other photographers and their tripods.

The giant anvil-shaped cloud, together with the color contrast of blue sky and lower clouds catching the setting sun make this one of my favorites out of many other shots taken that evening. The only improvement I could have wished for was still water to provide sharp reflections, but a stiff breeze was raising ripples. To make the best of this, I used a strong ND filter to give an exposure time of several seconds, blurring out the ripples to give an aetherial feel to the reflections.



(16) "APOCALYPTIC CLOUD"
Kryusevik, Iceland

The landscape features in Iceland - waterfalls, glaciers, larva fields etc. - are usually the main attraction. But sometimes the sky becomes the subject, and the land plays a secondary role. Although situated far to the north and only just below the arctic circle, the Gulf Stream ensures a relatively temperate climate. But westerlies bring a continuous succession of storms directly across from Greenland, so the weather is highly changeable and unpredictable, with strong winds common. There is a saying that "if you don't like the weather in Iceland, just wait a few hours". That is great for photographers as "bad weather makes for good photographs". Many times I have found during storms that it is the sky that is the main subject of my images: brooding black clouds sometimes appear almost to explode apart; shafts of sunlight diagonal down through small breaks; vivid double rainbows contrast against grey sky; the underside of clouds glow red from the low-angled sun.

This month's photo was taken as we drove over a back road crossing over the mountains of the Reykjanes peninsula on the way to the gastronomic Christmas buffet at the Blue Lagoon. A small sign pointing along a snow covered dirt road pointed to an abandoned church site. Wandering round the fenced site failed to reveal any sign of a church, excepting for a lone cross partly buried in a snowdrift. Nothing much to photograph from a landscape perspective, but the rapidly forming cloud formation was something else. I waded through the snow to line up with the cross, taking a circuitous path to avoid footprints that might mar the composition I envisaged. Once in place, it became apparent that the cloud was too vast to fit in a single frame with even my widest lens, so the final photography is a composite of two shots, for the ground and the sky, using a 30s exposure to blur the cloud movement and enhance the otherworldly feel.

'Apocalyptic' seemed a good title for the forbidding squall, but in fact it was quite innocuous, and heralded the clearing of a storm, not its onset. By the time we reached the Blue Lagoon the sky was clear, and we bathed under the stars in the geothermal waters before a sumptuous dinner.



(17) "DICHOTOMOUS ALOE UNDER GOD RAYS"

Namib Nakluft, Namibia

The main attraction in this photo is the light: the crepuscular rays ("God-rays") radiating out into the sky. The rays, streaming through gaps in clouds or between other objects, are columns of sunlit air separated by darker shadowed regions. To make them visible, there must be something in the air (e.g. mist, particulate matter) to diffract and scatter the sunlight. In this case, the dramatic rays were created by the thick, hazy layer of dust that was continually present during our visit to Namibia. Most of the time I regarded this as a nuisance, because it rendered sunrises and sunsets very muted, and robbed long-distance views of contrast. But on one day the sky filled with clouds, and the haze redeemed itself by bringing these rays into being.

Crepuscular rays are, in fact, parallel to one another (the sun is a long distance away!), but because of perspective appear to diverge from a vanishing point; an effect that becomes more pronounced when the sun is near the horizon. I had been watching the rays through the afternoon as they became more dramatic and colorful with the approach of sunset, and was on the lookout for a suitable foreground to supply a terrestrial reference. That is not so easily found in the arid Namib desert, but fortunately we were close to an excellent example of an *aloe dichotema* (quiver tree), with its exposed forking branches forming a nice mathematical series.

In terms of composition I usually like to keep things very simple, and that was easy here because, apart from the one tree, there was absolutely nothing else for miles around in the barren desert to clutter up the photo. I used a 24 mm lens to encompass a wide swath of the sky and got low to the ground to silhouette the tree against the light. The only remaining issue was then the framing and positioning of the tree in relation to the rays. Given the radial symmetry of the light the obvious solution was to place everything dead center, though I did take other shots as insurance in case I later preferred an offset composition. (I could have wished for a reflecting pool below the tree to create a perfectly circularly symmetrical image: but as this was the dry season in one of the most arid countries in the world, that was not a possibility!). Of course, one of the first 'rules' of composition states that you should never place the main subject in the center, but my experience is that it gives extra emphasis when a subject enables rule-breaking.

The taking of the photo was straightforward, as the sun was hidden behind the clouds and attenuated by the haze, so there was no need for a graduated neutral density filter. But, on opening up the RAW file, the image looked too 'flat', failing to capture the vivid scene as I remembered it. Even after some global tweaking to apply an 'S' curve to enhance contrast it still did not 'pop'. As a final step to bring out the rays I duplicated the image, applied a quite strong unsharp mask with wide radius to bring up the local contrast on the background layer, and then selectively painted through transparency on the top layer using a soft brush to bring out the rays without exaggerating the clouds or tree.



(18) "MISTBOW"
Bandon Harbor, Oregon

The pair of images on the facing page are a good example of a case where the light is more important than the subject. A relatively mundane scene of old wooden pilings in a harbor is transformed by unusual lighting.

I was in the small town of Bandon on the Oregon coast to photograph the famous sea stacks at sunset; but sunset was hours away. More to pass time than with any hope of getting good shots I went down to the end of the harbor, where there is a view of the lighthouse across on the far jetty. Well, that would be more correctly phrased as 'there should be a view', as the entire scene was enveloped in thick mist, with visibility down to a few yards. However, after a while the mist started to thin to a 20 foot band above the water, with blue sky above, and the sun at my back broke through to refract as an aetherial mistbow. The apparition did not last long, but I had time to frame several compositions using the sharply defined pilings as a contrasting foreground to the softly outlined light. I like both of the two images, but perhaps prefer the more complex composition of the second. The slanting pilings form a tangent leading the eye to the arc of the mistbow, and their angularity counterbalances and contrasts with the light-bow.

A curious feature of mistbows and fogbows is that they appear completely white, entirely unlike the spectrum of colors revealed by rainbows where sunlight refracts from raindrops or from the spray of waterfalls. Wikipedia confirmed my intuition that the lack of color results because of the exceedingly small size of the suspended water droplets, and according to a NASA explanation "the fogbow's lack of colors is caused by the smaller water drops ... so small that the wavelength of light becomes important. Diffraction smears out colors that would be created by larger rainbow water drops." Further, a Google search pulled up a charming letter on the subject of mistbows published in 1888 in the journal *Nature*. (As a research neuroscientist, I can only wish that it was as easy nowadays to get a letter published in *Nature*!)

" IN a letter to the Times of January 12, Prof. Tyndall calls attention to a white mist bow, which he has seen on one or two occasions, and mentions its rarity of occurrence. It may therefore be of interest to record that I witnessed a similar phenomenon on January 9 last. My point of view was an elevated band-stand at the head of Weymouth Pier; the time 11 a.m. The air, as on the occasions mentioned by Prof. Tyndall, swarmed with minute aqueous particles, i.e. was foggy, and on looking away from the sun, which was shining weakly, I saw a well-defined white bow cast upon the mist. The bow appeared to be about 60 feet distant. My point of view being high, a full semicircle was visible. It was, as may be imagined, a beautiful and graceful object. "

The lack of color in the mistbow prompted me to present the final images in black and white. The only real color in the original shots was the blue sky, and I felt this detracted from the image rather than adding, with the color contrast drawing attention away from the main subjects. I processed the images using a simulated orange filter to darken the sky; providing a greater contrast to the mistbow and distancing the scene from reality to enhance the eerie mood that I felt at the time.



(19) " TUFA UNDER LENTICULAR CLOUD"
Mono Lake, California

The tufa towers in Mono Lake were created underwater, and have become visible only because much of the water flowing into the lake is diverted to the thirsty mouths of Los Angelinos. By themselves the tufa formations are intriguing, but in harsh sunlight photographs come out looking very mundane. Around dawn and dusk it is a different matter, and the lake can take on a very otherworldly appearance. Even then, however, the lighting matters very much, and a dramatic sky really helps complement the tufa as a strong second subject. On a recent trip to the lake I was thus heartened to see a classic 'Sierra Wave' cloud formation developing over Owens Valley. I arrived at the South Tufa area in the late afternoon, when the bright edge of the cloud provided nice silhouettes against the tufa pinnacles; but the palette was almost monochrome. The real action would have to wait until close to sunset, and I had good hopes as the sky to the west was completely clear.

The photo on the facing page took some pre-planning. I wanted to make the cloud an equal co-star with the tufa, but its north-south orientation did not line up well with the most attractive formations. After some wandering around I settled on the formation pictured on the facing page, waded out into the lake (having thought to bring my wellies) to get clear reflections without the clutter of stones and mud at the lake edge, and set up camera and tripod. I took several shots as the light changed toward sunset, but at that time the tufa appeared as just a black silhouette. So, I waited as the light faded until it was dark enough to be able to use a powerful Maglite flashlight to 'light-paint' the tufa. An orange gel over the flashlight nicely warmed the color of the rock, and a 30s exposure gave time to both evenly illuminate the formation and blur the waves in the lake into a silken, reflective sheen. The final image is thus a blend of two shots, taken from exactly the same location but taken about an hour apart and manually merged in Photoshop.



(20) "GRAND CANYON LIGHTNING"

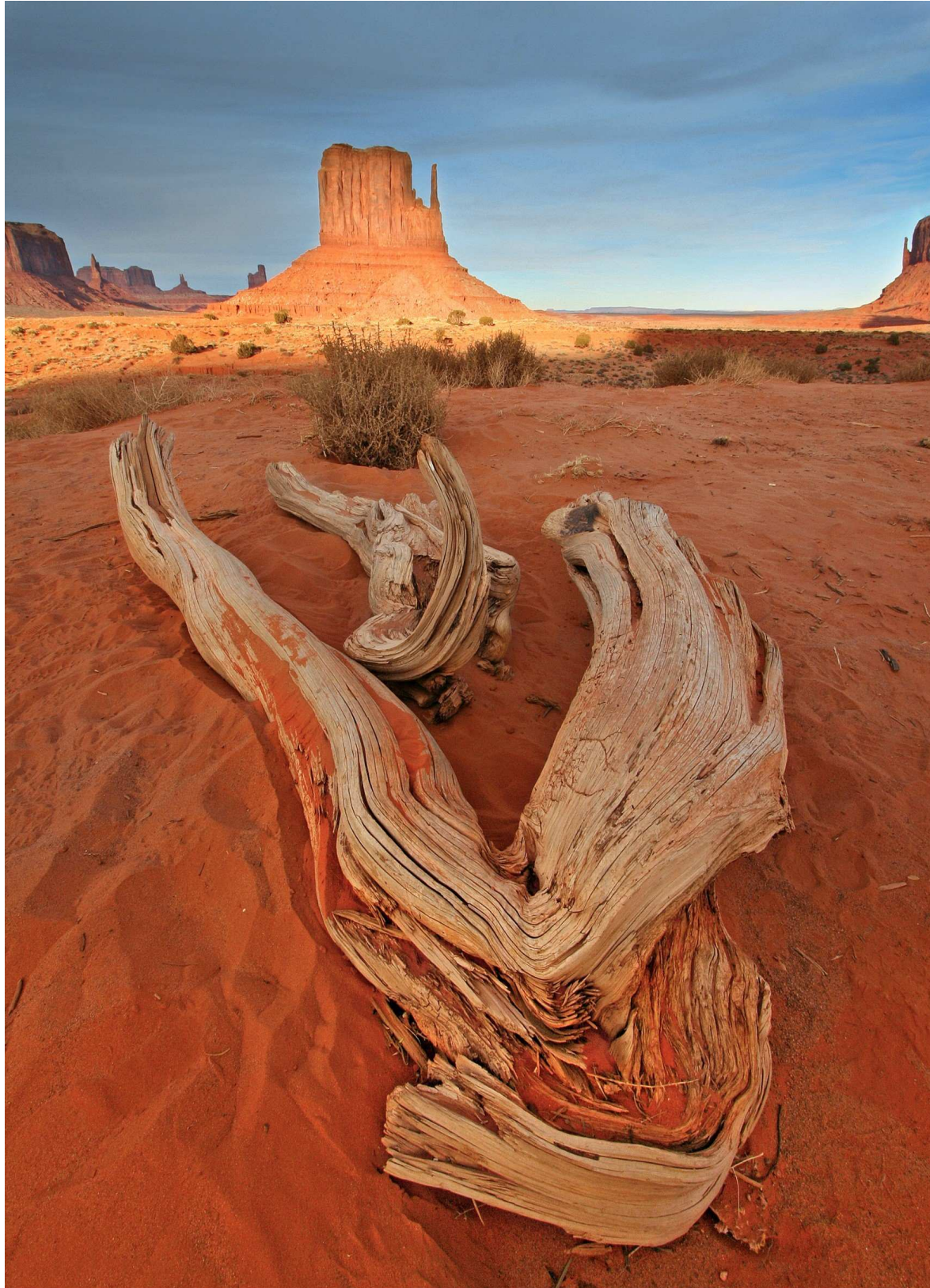
Grand Canyon National Park, Arizona

This photo was taken while returning from a trip to capture the shadow of the Monument Valley Mittens (see page 116). On my last day at Monument Valley the dawn brought grey, overcast skies. I had been wondering whether to remain until that evening to get an even better alignment of the shadow on the East Mitten, but thought there was little chance of a clear sunset and, having already spent two days in the tribal park, decided to start traveling back home. My original plan was to stop at Coal Canyon on the Navajo reservation for sunset photography, but when I got there the sky was still black, and I did not want to intrude on a Navajo farmer herding cattle near the overlook. My plan B was to continue on, and stop for the night in the forest just outside Grand Canyon National Park. I was in no hurry, as the chances for good light that evening continued to look slim. Indeed, rain set in as the road climbed higher into the forest. However, about 30 minutes before sunset, the clouds started to clear from the west. As I reached the park entrance station the underside of a great arc of dark storm clouds suddenly lit up bright pink, and a vivid rainbow appeared to the east. Too late! The sun was just touching the horizon, and by the time I got to the first canyon overlook at Desert Tower, the light had faded. As I walked down to the rim, everyone else, including many photographers carrying tripods, was heading back to their cars. Overheard snippets of conversation were along the lines of "...miserable wet day; but that rainbow sure made up for it!"

But, maybe all was not lost. A fading red glow from the sunset bathed the cliffs in a diffuse, warm light, and flashes of lightning played out across the distant Painted Desert. I stayed, the only person remaining at the overlook, as the light faded, the night grew cold, and shutter times lengthened enough to give a reasonable chance of catching a lightning strike. I took about 40 shots, most of which failed to capture a strike. The photo above is a composite of two 30s exposures, selected from the time when the balance of light from the sky and the lightning was optimal.

I am happy with this image - but often wonder what I might have been able to capture if I had been just 15 minutes earlier.





Mitten and log
Monument Valley Navajo Tribal Park

NEAR-FAR

A photograph of even the most spectacular subject can generally be improved by setting it off against a secondary point of interest. By using an extreme wide-angle lens it is possible to juxtapose very small foreground objects with broad scenic views to add extra interest and provide a heightened sense of depth.

(21) "FLAMINGO FEATHER IN THE ALIPLANO
Laguna Colorado, Bolivian Altiplano

In a blog post, Guy Tal wrote "Your images should provide viewers with an experience they could not have had, and would never have seen or felt, if it were not for your sharing it with them. If someone could have produced an identical image to yours by simply being there at the same time, it also cannot be considered art (as in the product of an artist rather than a craftsman)... No matter how beautiful or powerful the feats of nature you photograph, if all you do is record them using photographic media without introducing your own sensibilities into the final product, they are not art!"

That pretty well sums up what I try to achieve in my photography – though, of course, whether I succeed with even a few images is another matter. This photo is one example where I deliberately set out to create an image that might convey more than a simple snapshot of a spectacular scene.

We were traveling on a photo safari with Joe van Os, and stopped by a lagoon high in the Altiplano on our first day in Bolivia. The obvious subjects were the hundreds of flamingos feeding in the shallow waters, set against the backdrop of snow-capped volcanoes. But, the birds remained far out in the lagoon. Too far for even a long telephoto lens; and in any case the world already has an ample supply of flamingo photographs. My usual approach when arriving at a new location, particularly those which do not seem immediately promising, is simply to wander around slowly, scanning for interesting features and compositions. In this instance, my meanderings turned up a lone feather, a discovery which prompted the idea of using it as a metaphor to convey the immense scale of the landscape in which the flamingos live.

Super-wide lenses are good at conveying scale, but only if a close foreground object is included in the frame. Thus, I carefully floated the feather in the shallow water, and lay flat out in the gunky mud of the shoreline to position the front of the lens just a few inches from the feather and almost touching the water. Two separate shots were clearly going to be needed to compose the final image – both to focus separately on the feather and distant background, and to encompass a sufficient span of the dramatic sky, which I envisaged as a complementary part of the composition.

In capturing the initial shots and subsequently blending and post-processing them to create the final image I had several themes in mind: to communicate an immense scale of distance from the feather, through the distant birds, to the mountains and overarching sky; to contrast the blue sky with the complementary ocher of the lake bed, and the red tip of the feather; and to create a visual simile between the down of the feather and the soft feathery clouds.

But a picture should not need written explanation. You can decide whether the image succeeds on its own merits, and whether it meets Guy Tal's criteria.



(22) "LINDISFARNE CASTLE AND PEBBLE BEACH"

Lindisfarne Island, Northumbria, U.K.

Lindisfarne (Holy Island) is a small island off the east coast of Northumbria in the north of England. At least it is an island some of the time, being connected to the mainland by a causeway that becomes flooded as the tide rises. It is thus necessary to schedule day trips to the island with some care, and in summer the island becomes overrun with tourists when the tide is out. The opportunity of an overnight stay provides a very different perspective. A tranquility settles over the island, and it becomes possible to feel some of its ancient history dating back to the founding of the eponymous priory in 635AD and the role of Lindisfarne in spreading the Christian message throughout the world.

In addition to the Priory, Lindisfarne boasts a castle. This is not as ancient as the priory, being originally built around 1550 during wars between the English and Scots and subsequently much remodelled, but it is spectacularly situated on an isolated whinstone hill, the highest point on the island, making a most obvious subject for photography. My photographic elph and I were staying for a night in a small B&B in the village, and the previous afternoon I had reconnoitered the island looking for promising vantage points. My favorite for a potential morning shot was a location on the coast where a pebble beach curved gracefully toward the east, leading the eye naturally to the distant castle. Early the next morning I tiptoed quietly out and through the village, under a largely overcast sky broken by thin gaps holding promise of color during sunrise.

The tide was well out, exposing a wide swath of attractive brightly hued pebbles. I set my tripod low and fitted a super-wide (10 mm EFS) lens for a near-far effect to exaggerate the closest pebbles and lined up the beach to form a diagonal from the corner of the frame toward the castle. A small lens aperture achieved a wide depth of field and gave a slow shutter speed to blur the small waves. I waited patiently (but shivering) for the light. Soon some nice red streaks appeared in the sky, whilst the sea and pebbles remained largely illuminated by diffuse grey/blue light from the clouds. An extreme range of intensities between the sky and the beach needed taming with a 3-stop graduated ND filter aligned along the horizon line, which is why the castle appears dark and almost a pure silhouette. However, even though artificial, I think the dramatic contrast with the bright sheen on the sea adds to the mood of the photo.



(23) "CANYON DWELLER"
Antelope Canyon, Page, Arizona

Antelope Canyon is a narrow, deep and sinuous slot canyon located on the Navajo reservation near Page, Arizona. It has become an icon among photographers because of the way sunlight bounces from the sandstone walls to create a wonderful yellow-red glow and abstract patterns. Given some care with exposure settings (and a day when the canyon is not packed with tourists!) it is easy to come back with a collection of great photographs. The trouble is that the canyon long ago became a photographic cliché. The first time you see an Antelope Canyon photo it is stunning; but after a while all the images - even those taken by the photographic greats - start to look rather alike. I can only envy the pioneers, including Galen Rowell and Alain Briot, who first 'discovered' the canyon and could present their work to a fresh and unjaded audience. Antelope canyon thus falls into a category - together with other icons such as Delicate Arch and the view from Deadhorse Point - of locations which are fun to photograph, and are a requisite addition to the repertoire of a photographer of the American Southwest, but from where you don't expect to achieve more than the classic 'trophy' shot.

That said, Antelope canyon (the lower canyon in particular) is a fun place to explore, and offers a welcome opportunity of a subject where the lighting is good for photography in the middle of the day. While driving from Zion to Cedar Mesa I stopped off to break my journey and spent a few hours wandering up and down the canyon looking for the 'glow'. I was getting cold (this was mid-November) and starting to think about mole enchiladas at the Mexican restaurant in Page, but rather than climbing out by the ladders leading from the bottom of the canyon I decided to take a last trip back up through the canyon. One section had rather nice light, and as I squeezed behind a boulder to get a wider view I discovered that I had company - a startlingly green preying mantis. I suspect he did not want to be there, and had been blown down by strong winds the previous day. But there he was, sitting on the boulder, presenting a remarkable foreground for a unique shot of the canyon.

How then to get the photo? That presented several, interrelated problems. It is dark in the depths of the canyon, requiring exposures of around a second that really need a tripod for sharp results. But space was tight. Not enough to set up my tripod properly, so I ended up with just two tripod legs jammed against the boulder. Next, a preying mantis is small, the canyon is big, and I had only a wide-angle lens with me, which needed to be within just a few inches of the green guy to get the proportions and composition right. That raised the issue of depth of field; how to get both insect and canyon in sharp focus? I could not stop down the lens very far while keeping a reasonable exposure time, and I suspect that even the smallest aperture would not have sufficed. So my ploy was to take two exposures, focused separately for the preying mantis and the canyon, aiming to blend them later in Photoshop. This is not cheating! Just a means to overcome a technical limitation. A final problem was that my subject would not keep still. Although I used a mild fill-flash to highlight the mantis, I wanted him mostly illuminated by the natural light filtering down from the sky overhead to avoid that unnatural 'caught in the headlights' appearance. Digital to the rescue. I took about 50 shots, and ended up with two where he stayed still enough to come out acceptably sharp. Luckily, one of those two also gave a nice composition, with the green guy appearing to admire the view of the canyon. He was probably getting fed up with me by then. He kept scurrying over the top of the boulder, but I found I could get him to where I wanted by putting my hand an inch ahead of him so he would back up. At the end I wondered about trying to take him back out to a more hospitable above-ground environment, but decided not given the difficulty of safely transporting him up narrow ladders while also carrying camera and tripod. I hope he may have found some insects to snack on down there...



(24) "PROXY FALLS AND FERN"
Proxy Falls, Oregon

Waterfalls are one of the main attractions of Oregon for a photographer, but I found it surprisingly difficult to capture good shots of most of the falls I visited. A large part of the problem arose because most waterfalls in Oregon are tucked at the bottom of very steep, densely forested gorges. Although good trails lead to the falls, there is usually just a single viewpoint, looking directly across to the fall, and often partly obscured by tree branches. Robust fences, steep, loose and muddy terrain and impenetrable vegetation all conspire to make it almost impossible to seek out any composition beyond the most obvious.

I thus found it a refreshing change to discover that the gorge leading to Proxy Falls opened out into a wide, boulder-filled bowl, providing - at the expense of cold wet feet - many photographic possibilities. And, by good fortune, I had timed my hike so that the falls were still in shade, but shafts of sunlight were starting to pass through trees on the far rim. The falls cascade over a wide area of basalt shelves, but my favorite images came from close up details, abstracting just small parts of the cascade.

Photographing at the base of waterfalls presents a couple of practical difficulties. One is the constant spray, which can quickly deposit water drops on the front of the lens. I use a protective filter, and carry several dry cloths to wipe this immediately before taking a shot. The problem, though, is compounded by the need to use fairly long shutter speeds, of the order of a second or so, to blur the water flow and create an attractive 'angel hair' appearance. Drops may catch on the lens during event this time, and make fuzzy spots on the image. My solution is to take several exposures, cleaning the filter between each. With luck, at least one shot will be clear; and if not, two images can be blended to mask out blurred areas.

In the photo opposite, I composed using a sharply delineated fern growing on moss-covered rocks to provide a foreground to the wispy water flow, while sunshafts playing at the top of the frame gave both a color contrast to the vivid green and an orthogonal directional contrast to the diagonals of the rock and main cascade of the water. I took duplicate shots, focused for foreground and background, anticipating the need to do a focus blend to get sufficient depth of field. But on reviewing the images on the computer screen, it turned out that a single shot at *f*13 worked just fine.



(25) "ROCK PINNACLES FIVE THOUSAND MILES APART"

LEFT- Devil's Garden, Escalante National Monument, Utah

RIGHT - The Old Man of Storr, Isle of Skye, Scotland

Two photos making a pair. Both have groups of rock pinnacles as the main subject; both have plants as foreground subjects; and both are examples of extreme near-far compositions. They were captured within a month of each other, but at locations nearly 5000 miles apart. As exam questions during my undergraduate studies in Britain often used to begin "Compare and contrast...".

First, a similarity. Both photographs have interesting landscape features as their main subject. But a photograph that contains only a single subject is likely to be dull unless that subject is truly exceptional. Something in addition is needed to make an interesting image - for example, spectacular lighting, a complementary foreground/background, or striking composition. At the times I took these shots the lighting was merely meh (as our youngest son would put it), and the skies were either boringly perfect (left) or just passable (right). So I went looking for foreground interest, deliberately seeking small, attractive subjects that would allow an extreme near-far effect. This is something of a contrivance: you don't normally go around looking at things with your head on the ground and eyes a few inches from spiky cacti! But with care to avoid a totally artificial appearance the effect can be dramatic. A technical problem then is achieving a sufficient depth of field to encompass the scene. Here I used a tilt/shift lens; specifically the Canon 17 mm TS-E L lens. The foreground plants are just a few inches from the camera. With a conventional lens on a DSLR camera it would not have been possible to maintain sharp focus to the much more distant rocks, but by tilting the lens down relative to the sensor I could obtain a gradient of focal plane from bottom to top of the image to match the progression of the scene into the distance.

The photo on the left is of an iconic group of sandstone pillars in the Devil's Garden, located in Utah's Grand Staircase/Escalante National Monument. I call them the Four Kings, though they may have some other 'official' name. I had photographed the Kings before at sunrise, when they take on a beautiful orange glow, and on a recent trip to hike the Escalante canyons stopped off to scout out other possible compositions. A group of flowering prickly pear cacti stood out as a nice foreground, but as the mid-day light was harsh I resolved to come back after my hikes for a sunrise shot. On returning, I found one error in my planning - the flowers had closed up during the night. But it still seemed worthwhile to continue. I mounted the camera (5D mkIII) on my tripod, lowered almost to ground level, and used the live-view display to roughly frame the composition. Setting up to use a tilt/shift lens is a fiddly business. Adjustments include the tilt angle, shift, focus and camera angle; all of which interact in non-intuitive ways with one another. Using a magnified image to check focus made it much easier, but I was glad I had allowed plenty of time before the sun was due to rise. The first rays of sunlight then revealed a second error in my planning. My previous visits had been in winter, when the rising sun casts an even light on all four Kings. But now it was late May, the sun was rising much further to the north, and the leftmost two monarchs were in shadow. Nothing much I could do about that, and even a return visit in January would be to no avail as the cacti would not be in bloom! To make the best of it, I brought up the shadow detail on the rocks in post-processing to reduce the contrast differential. In the end, not quite the photograph I had planned for, but one I am happy with.

The photo on the right is of another iconic group of rocks; the Old Man of Storr and his pointy neighbors on the Isle of Skye. I had got out of bed at 3:00 am hoping to photograph the rocks silhouetted against the sunrise (which comes early that far north), but after much scurrying up and down steep, muddy paths, failed to find a good angle. Before heading back to our B&B for a full Scottish breakfast (with local black pudding), I hiked round to the other side of the Old Man to a viewpoint that placed him before the distant sound and hills of Raasay. Although the cloudy sky provided a chiaroscuro effect contrasting with fleeting light from the now well-risen sun something more was still needed to make a good image, so I scrambled up the steep hillside looking for a suitable foreground. A boulder covered in orange lichen fit the bill, and as a bonus there was a plant with vivid green leaves and purple flowers just in front. Again, an extreme near-far composition, and I had my tilt/shift lens with me to accomplish this. What I did not have was my tripod; lost, along with all our other luggage, when our flight to the UK was delayed, cancelled, rescheduled and delayed yet again. (Thank you, American Airlines!) So, it had to be a hand-held shot. Not easy, lying on my tummy trying not to roll down a steep slope of wet grass, adjusting the little knobs on the lens while keeping the camera level and the composition composed. Most problematically, there was no way I could use live-view to critically set the focus, so I took my best guess through the viewfinder, and hoped that a small aperture ($f/18$) to maximize depth of field would accommodate any errors. Also, I took many shots, slightly varying focus and position, so I could later select the optimal image.

In conclusion, neither photograph is quite what I had envisaged when setting out for these locations, but you have to go with the flow and accept what you are given. Both images have some failings, and individually I am not sure I would have chosen either as a 'photo of the month'. However, together they make a nice pair, with remarkable similarities yet contrasting two utterly different environments of desert and wet moorland.

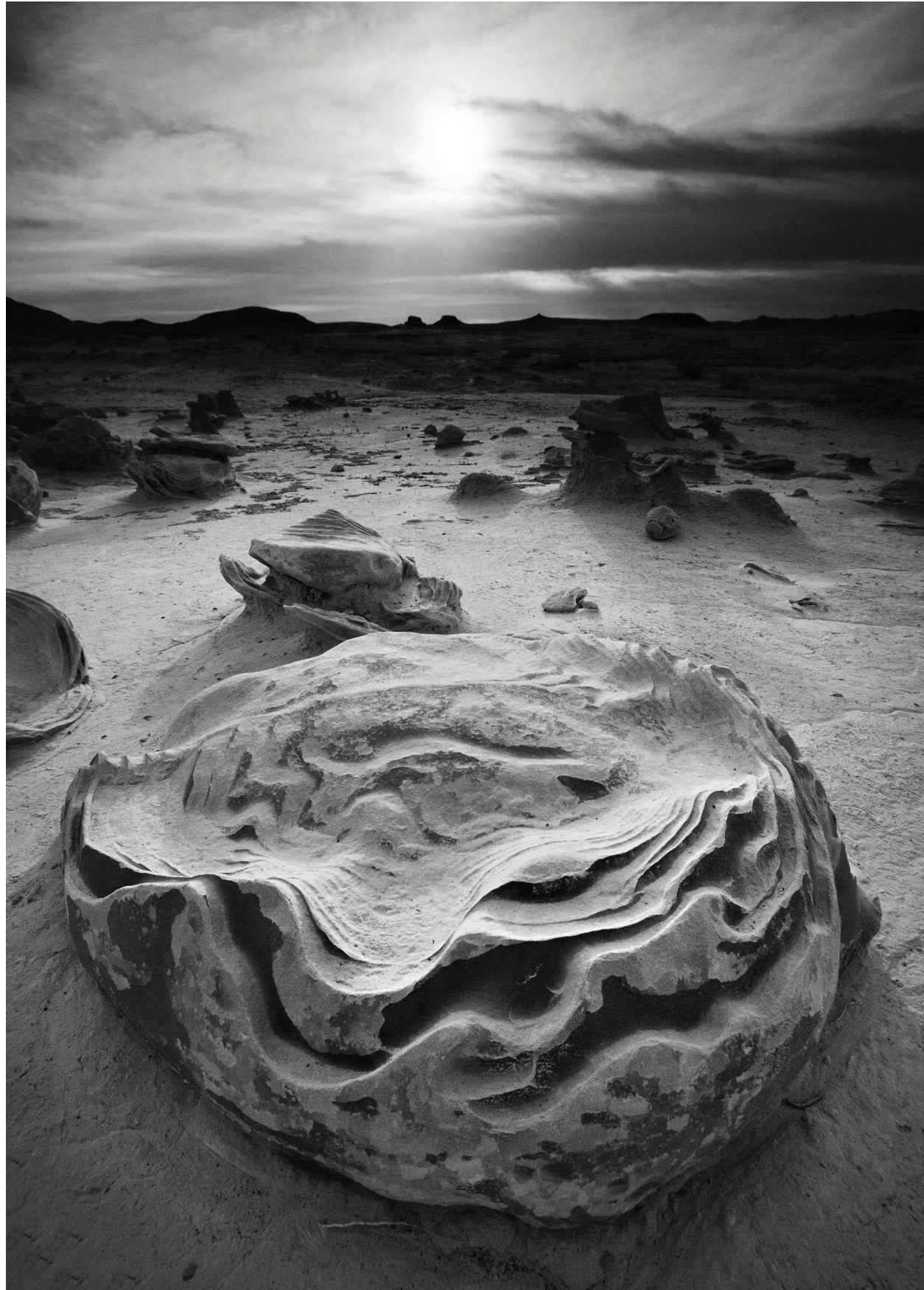


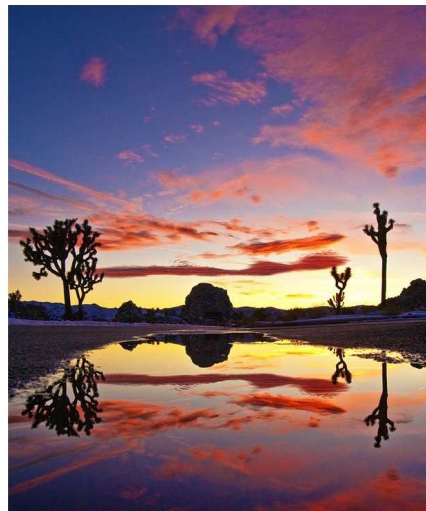
(26) "DINOSAUR EGG"
Bisti Badlands, New Mexico

An effective photograph should convey more than merely a depiction of what is in front of the camera. A distinction between a photograph and a mere snapshot is that the former should give a sense of emotion; what it felt like to be at that place at that time. One way to help achieve this is by use of black and white imagery. By throwing away color information the image is immediately abstracted - it becomes more of an interpretation and creation of the photographer than a realistic depiction of a scene. Following from that the photographer can indulge in tonal manipulations that would appear artificial and exaggerated in a color image. Moreover, and in keeping with the near-far theme of this grouping of photographs, the main subject can be emphasized by getting close-up with a wide-angle lens.

The scene on the facing page is of a remote area known as the 'egg factory', deep within the Bisti/De-Na-Zin wilderness in northern New Mexico. The wilderness is an extensive badlands of eroded, often exceedingly muddy clay soils. It is beloved by photographers on account of its fantastical rock formations, but likely holds little attraction for other visitors. Indeed I have usually found myself to be the only person there.

The rocks and clay are a dull brown, so most photographs of Bisti are taken right at sunrise or sunset when they pick up a nice warmth, contrasting with blue/magenta shaded in shadow area. However, on my most recent visit the light was not cooperating, and thin hazy clouds masked the sun right down to the horizon. Together with a biting cold wind and the two mile, trail-less hike back to my car, the gloomy light added to a sense of foreboding. To capture this feeling, I selected a feature that truly resembles a giant, desiccated reptilian egg, lined it up with the position of the sun, and waited until a thinning in the cloud let a little sunshine penetrate to cast faint shadows. A three stop graduated ND filter tamed the bright sky, and I deliberately set this a little below the horizon line, so that the distant landscape would be darkened to give a sense of mystery. The texture and ripples in the 'egg' are accentuated and distorted by the wide angle lens, and in this instance there really is no background subject as such to compete for interest; just enough of a view of other silhouetted rocks to give a sense of place.





A Bestiary of Joshua trees - variations on a common theme
Joshua Tree National Park, California

REPEATS

Just because you have already good a good shot of a particular location, that is no reason not to return. The same scene can appear very different under different conditions of light and weather. Even under similar conditions, I find that I often approach even a familiar subject with a new 'eye' as to possible compositions and interpretation.

(27) "TOWERS OF THE VIRGIN - MOONSET BEFORE SUNRISE"
Zion National Park, Utah

The Towers of the Virgin are one of the iconic photo locations in Zion National Park. The red sandstone rock walls face almost due east, and light up beautifully with the rising sun. The classic view is from the back porch of the Zion museum, and it is usual to find a small cluster of tripods lined up there before daybreak each morning. But there are two problems with this viewpoint. First, everyone takes their photo from here, so how do you create anything different from hundreds of other images? Second, the foreground is downright uninteresting. Two low ridges stay in shadow for a long time after sunrise and make a nice frame for the Towers, but below them is only an open scrubby area, without much in the way of discernable, yet alone interesting features. The two photos on pages 69 and 71 are my attempts to come up with something a little different.

The image on the facing page was captured before sunrise on a very cold early January morning. A big storm had cleared only the previous day, leaving a nice dusting of snow on the rock. I try to get to sunrise locations well ahead of the time when the sun will actually crest the horizon. That allows time to scout for good compositions. And, as was the case here, the light was actually better before than after sunrise. A red glow in the east provided a nicely subtle and diffused light, coloring the sandstone a deep red without creating harsh shadows. Better still, the moon was near full, and was setting directly behind the Towers. When I first arrived the moon was still quite high, and in my initial shots was far too bright in comparison to the rest of the scene. However, as it approached the horizon the moonlight began to be dimmed by some low, hazy cloud, and of course the rocks brightened with the approach of sunrise. With a digital camera it costs nothing to take photos, so I took shots every minute or so, while moving the tripod to line up the setting moon with a notch between two of the Towers. My favorite was when the moon had just started to be eclipsed by the rocks, taming its brightness and producing a nice 'moonstar' effect with the lens stopped down.

I like this image; but still there was the problem of the nondescript foreground...



(28) "TOWERS OF THE VIRGIN WITH SACRED DATURA"

Zion National Park, Utah

Thus, following on from photo #27, I returned to the same location for another sunrise. This time in September - so no need for gloves, shivering, and warming the camera battery against my stomach to keep it alive. But what to do about the dull foreground? I left the usual huddle of photographers by the museum, and set out to explore.

No success at first, just scrubby brush everywhere, and a cluster of park service buildings among the trees at the far end of the open area. Then I came across a small burn area, and in the middle a single cluster of datura; striking (but toxic!) flowers that bloom in the evening and wilt with the first rays of the rising sun. A foreground subject at last, suggesting a composition with the white flowers contrasting with the yellow/red of the Towers catching the early sunlight. But not so easy to set up, representing an extreme case of a near-far composition with a rather small foreground subject and a very big background subject. I wanted the flowers to really fill the frame, and collapsed my tripod flat on the ground, with a super-wide (10 mm) lens just a few inches back from the closest flower. Next, how to deal with two technical problems? There was no way to get enough depth of field to have both flowers and rocks in sharp focus, even with such a wide lens fully stopped down. And in any case a strong breeze was blowing the flowers vigorously, so a wide aperture would be needed to get a fast enough shutter speed to freeze the motion. My solution was to make multiple exposures, focusing first on the Towers, and then on the flowers. That also allowed use of different exposure settings to better capture the wide contrast range between the sunlit rock and the shaded foreground. I took many shots of the flowers, to increase the chance of a sharp capture between wind gusts, and to have some choice among slightly different positions of the flowers.

Compositions with wide lenses like this change enormously with very slight movements, and it was hard to judge what might work best when the camera was only six inches above the dirt. The photo here was created in Photoshop by blending a background shot with a shot of the flowers when they lined up nicely with the outline of the trees in middle distance. I also like the beetle on the closest flower, though I had not noticed it at the time. In retrospect, my only regret is that I should have taken an additional exposure focussed to blend in the middle distance, which is confusingly blurred in contrast to the sharp foreground and background.



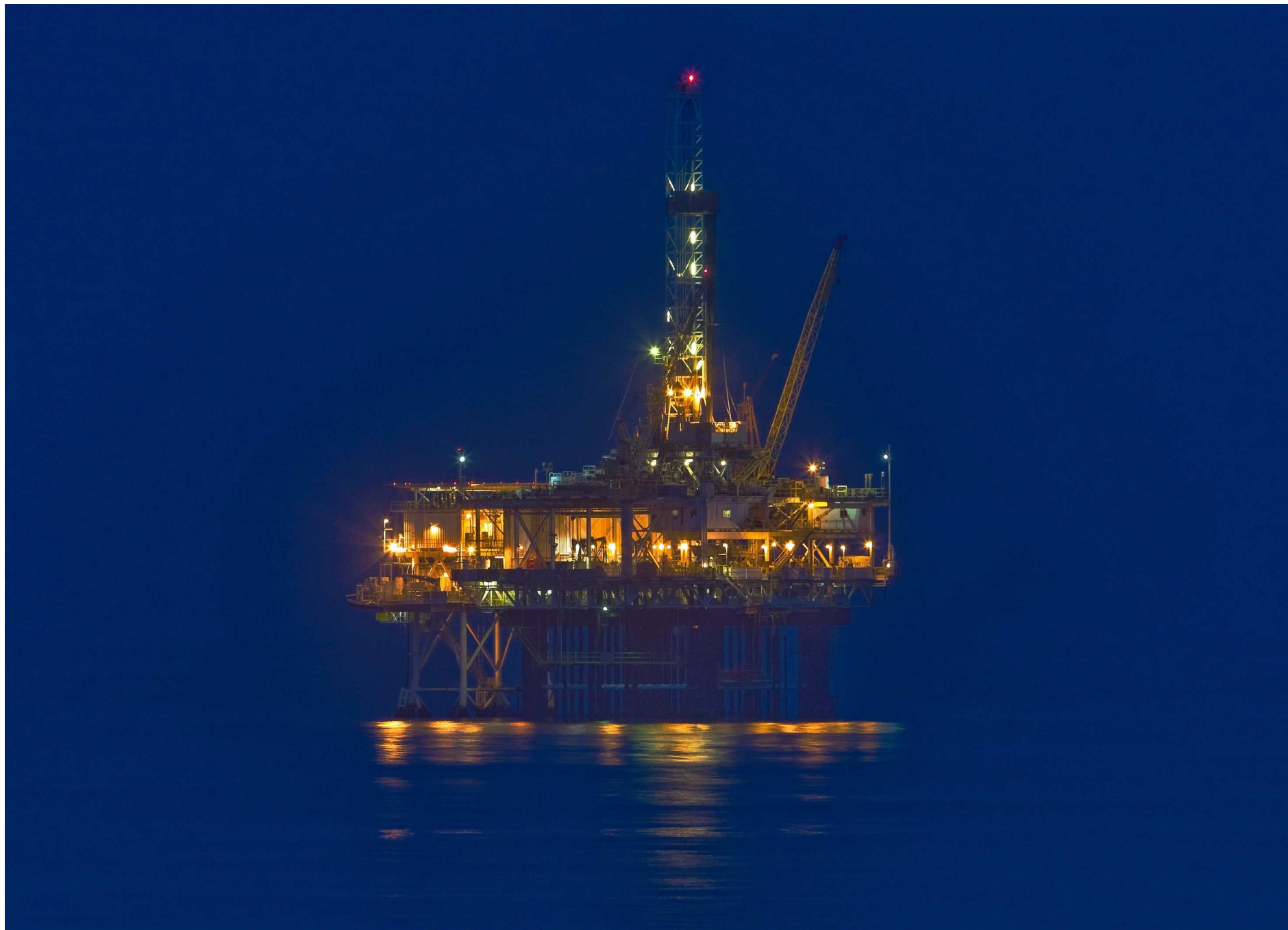
(29, 30, 31) "THREE VIEWS OF OIL PLATFORM EMMA"
Huntington Beach, California

The following sequence of three photographs features a man-made artifact close to home; one of the oil rigs off the coast at Huntington Beach. Three renditions of the same subject, taken from closely similar viewpoints but under very different lighting conditions and conveying different moods. All were captured using a 400 mm lens.

(29) The pre-dawn photo (facing page) was captured at about 5:15am on an August morning when the sky was blanketed by the marine layer. It is one of a series, taken over the course of about 30 min, which best balanced the featureless pre-dawn blue of the sea and sky with the warm colors of the lights on the rig. I stopped down the lens to *f*8 both to maximize sharpness and to give an exposure time of about 20 seconds so as to blur the reflections in the waves. Unlike the sunset photo on the following page, this was taken from high up on the bluffs; a vantage point providing a more extensive foreground which, given the slightly misty conditions, allowed the sea and sky to blend seamlessly.

(30) The sunset image on page 74 was taken with the camera down at beach level, perilously close to the surf line, to dramatize the breaking waves. Given the bright, backlit sky I could use both a fast shutter speed to 'freeze' the waves, and a small aperture to keep the distant oil rig and the close wave in focus together. This photo has been displayed in the *Evanescent Light* galleries for several years, and has been one of my best sellers, in demand from oil exploration and supply companies for use in catalogs and advertising materials. It is also one of my most frequently stolen photos!

(31) On page 75 is another capture of the same oil rig; now taken at dusk with a setting crescent moon. I had timed this visit to Huntington Beach three days after the new moon, but was disappointed to find that I was a little late, and that by the time the moon sank close to the horizon virtually all color from the setting sun had faded, and the sky was almost completely black. The photo here is thus a slight cheat, in that I combined an earlier image when there was more light, using the 'lighten' blend option in Photoshop layers to add color to the sky.







(32, 33,34) "OFFSHORE TUFAS IN MONO LAKE - THREE MOODS"
South Tufa, Mono Lake, California

A common saying about photography is that we are not capturing an image of a subject; rather, we are capturing light. I think this is exemplified by the three photographs in the following sequence, showing exactly the same subject from almost exactly the same viewpoint, yet expressing very different moods because of differences in time of day and a change in cloud conditions.

The subject is a formation of Tufa towers in Mono Lake. These unique features were created underwater, and are visible only because much of the water flowing into the lake was diverted to the thirsty mouths of Los Angeles. By themselves they are intriguing, but in harsh sunlight photographs come out looking very mundane. Around dawn and dusk it is a different matter. The topography of the lake does, however, present some problems. The tufa is found mostly along the southern shore; where views West to the setting sun are blocked by high mountains of the Sierras, and Eastern views of sunrise are cluttered by low hills and an indifferent shoreline. The formation shown here is thus one of my favorites, being nicely isolated at some distance out into the lake, and with a viewpoint giving a North-East perspective to better catch the light.

(32) The photo on the facing page was taken soon after the sun had set behind the Sierras when the clouds were nicely lighting up. The sky was still bright, and I used a 2 stop graduated filter to tame the exposure and bring out the reflections in the water. A classical 'calendar' type shot; nice enough (I think!), but merely capturing what the scene looked like at the time, and with a problem that the tufa appear as only dark, featureless silhouettes.

(33) The next image (page 78) conveys a more mysterious atmosphere, and is a case where the camera captured something that was not apparent by eye. This required previsualization (anticipating how the camera will 'see' what comes through the lens), a little technical trickery, and some luck. The key to the surreal atmosphere was a long (30 s) exposure time. This has the effect of blurring out ripples in the water to give a misty appearance; but more important here it has the same effect on rapidly moving clouds. A second trick was to provide some fill light from a hand-held flashlight. The tufa formations would otherwise (as in the preceding photo) remained as silhouettes, but a little artificial lighting highlighted them and brought up the nearby rocks at the lakeshore to provide foreground interest. The art is to balance natural and artificial light to create a natural looking effect - a somewhat hit-and-miss procedure, but one greatly aided by the ability to immediately view the results on the screen of a digital camera.

(34) Finally (page 79) another impression of the same tufa formation. This was taken a year later, at dawn on a day made hazy by wildfire smoke. The tufa appear to 'float' in a featureless void - neither water nor air.







(35) "PFEIFFER ARCH SUNBEAM"
Pfeiffer Beach, Big Sur, California

Pfeiffer Beach (not to be confused with Julia Pfeiffer Burns State Park) is located in the heart of Big Sur and is my favorite beach in all of Big Sur. To help keep it secluded there are no signs from the main highway, and getting there involves an extremely acute turn onto a mostly single-track road that meanders for a few miles to the trailhead. The big attraction for photographers is a rock formation just beyond the low-water line that is pierced by a square-cut arch. In winter the setting sun aligns to cast a shaft of light through the arch highlighting, according to the tide, the breaking surf or the sandy beach. Even at the right time of year, much depends upon the particular conditions of weather and sea. The Big Sur coast is notorious for dense fog, and that is what I had encountered on an earlier visit (see page 82). However, on a subsequent visit in November 2009 the sky was clear, a heavy surf was running, and sunset coincided with high tide.

Indeed, the waves were breaking high up on the beach, leaving only a narrow strip of sand for the several assembled photographers to set up their tripods and jostle for the perfect alignment. I selected the image on the facing page from among about 200 frames shot as the sun slowly sank toward the horizon, and the beam of sunrays gradually lengthened and became more intensely red. As each wave hit the seaward face of the rock it would completely fill the arch, transiently blocking the sun, and then leaving a fine mist that became beautifully backlit. I experimented with various angles either side and directly in front of the arch, but ended preferring an oblique view to provide a diagonal composition, and ensure that the glowing mist in the arch was not burned out by direct sunlight. Shutter speed was another important variable, and I tried settings ranging from a few hundredths of a second to a few seconds, not knowing in advance what might produce the best result.

Viewed afterwards, the slow speeds gave the most pleasing effect, capturing the motion in the waves and giving an 'angel hair' effect on the water draining down the rock. However, having smashed my strong ND filter, the slowest speed my camera would accomplish even with the lens fully stopped down and the lowest ISO setting was about 2 seconds. That had the problem that an individual exposure captured the sunlit wave crests for only a short distance as they rode up the beach, leaving large areas of uniform, dark water. I thus created the final image as a composite, by blending three successive exposures, taken a second or so apart, of a single wave.



(36) "PFEIFFER ARCH SEAWEED SWIRL"
Pfeiffer Beach, Big Sur, California

Thoughts about this photo were prompted by recent articles reporting that the Pentagon had manipulated an image of the first female four-star general by digitally replacing the background (boring office furniture) with an image of the stars and stripes. Given the ease with which this can be accomplished using Photoshop, what is an acceptable level of manipulation? For news reportage, the threshold is generally and appropriately set at zero. The image should reflect what is there, with nothing added or taken away. But what about landscape photography - particularly that which aspires to be "fine-art"? The threshold here is far less defined, and has been (and continues to be) the subject of much discussion. A reasonable viewpoint would be to say that the degree of 'allowable' image manipulation depends upon the photographer's intentions, the viewer's expectations and, in particular, what information (mis-information??) the photographer may communicate to his/her audience. Differing examples include Michael Fatali ("no computer imaging ... only natural light") and Alain Briot ("of course my work is manipulated").

A starting point is to realize that no photograph accurately depicts the scene in front of the camera. The colors in a photo are modified by the camera's jpg processing or the raw conversion algorithm; perspective is altered by use of wide or telephoto lenses; a 3-dimensional environment is rendered in two-dimensions; etc. Images as they come straight out of a camera (digital or film) typically look rather 'flat', and some processing is needed to get them looking more like the photographer's remembered perception of the scene. But, beyond that, what might be acceptable in terms of adding or subtracting elements, or processing beyond merely adjustments to curves, color balance and saturation? The photo on the facing page can serve as an example of my own philosophy.

The picture was taken at Pfeiffer State beach in Big Sur, when returning from a conference in Monterey. I had been hoping to photograph the famous sea arch with the setting sun casting a light beam through onto the breaking surf. No such luck. As is often the case the beach was beset by thick coastal fog, so I turned my attention to other possibilities. The tide was high, with waves washing among clumps of seaweed, presenting a nice opportunity for long-exposure photos to capture the 'dreamy' swirls as the foam from receding waves swept out. In itself, this is already a form of image manipulation. Our eyes and brain work at about 30 frames per second, so we perceive the motion of the waves and cannot integrate over long times as a camera can. But that alone was not enough to produce the final image. Problematically, the most visually interesting clump of seaweed on the beach did not line up with the sea arch - as I envisioned for the final picture - and attempts to move it came to nought as currents were in the wrong direction directly in front of the arch. Eventually, a particularly big wave washed the seaweed out to sea. What to do? Let Photoshop solve the problem! I had several long-exposure shots of the foam and seaweed, so it was easy enough to blend a foreground image with a separate image of the arch. Indeed, why not go a bit further? In all of the seaweed images, the currents carried swirl of the receding foam either to the right or left - giving an unbalanced appearance. Thus, the final photo is a composite of two seaweed shots taken during successive waves (luckily, the first wave did not appreciably move the seaweed). As a final step, I followed the motto of 'cut the clutter'. There are smaller rocks either side of the arch rock which rather disrupted the composition, so I cloned them out. The net result is an image that (I think) succeeds in capturing my intent at the time. It is not intended to be a realistic depiction of a particular place. Rather, a semi-abstract composition conveying a certain mood, and a different way of looking at the world. Certainly a very different impression from the photo of the same arch on the preceding page.





Rimrock Hoodoos
Grand Staircase-Escalante National Monument, Utah

LIGHT-PAINTING

There is no reason to stop taking photos when it starts to get dark. You can provide your own light, or let someone else do it for you. Using a camera flash is not a good approach; the tiny light source creates deep shadows, and it is difficult to visualize how the subject will be illuminated. Instead, the long (many second) exposures needed at night allow the subject to be 'painted' in a more controlled and flexible way by selective illumination from a hand-held flashlight. Harsh shadows can be avoided by walking around to illuminate from different angles during the exposure or by reflection from a diffuser, and the color of the light can be modified by gels placed over the flashlight. The best results are usually attained by balancing the light-painting with natural light, as images tend to look unnatural with a completely black sky.

(37) "MOAI BY MOONLIGHT"
Rano Raraku, Easter Island (Rapa Nui)

Rapa Nui (Easter Island) is the most isolated inhabited island on earth. This lonely place contains one of the world's most spectacular collections of archaeological wonders - the moai or stone statues. These were largely carved at a single quarry, Rano Raraku, where numerous examples can still be seen in various states of completion. Many mysteries remain regarding how they were transported miles across the rugged terrain of the volcanic island, and how they were finally erected on their ceremonial platforms (ahu). All the moai (except those remaining to be transported from the quarry) were toppled during tribal battles soon after the first European discovery of the island in 1722, but some, notably at Tahai, Tongariki, and Ahu Aviki have been restored in modern times.

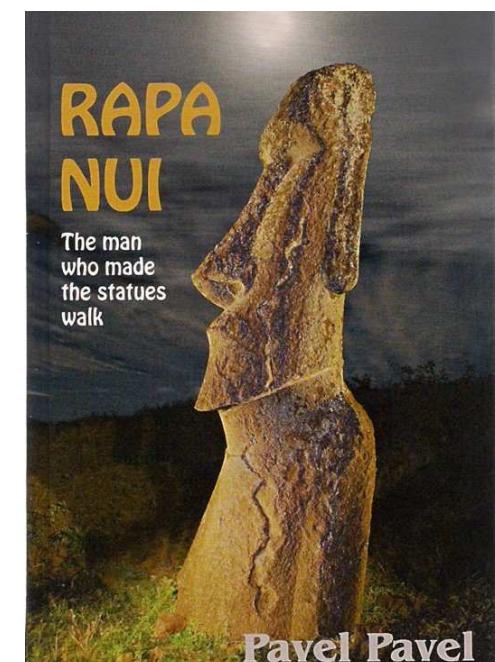
My wife and I were fortunate to spend a week on Rapa Nui. Our preferred time to visit the moai was well before dawn. There were no fences or forbidding signs, and the moai at Rano Raraku are left in much the state as when they were abandoned by their makers. We could walk among and right up to the moai, and at that time of the morning there were no other people. Just a few peaceable wild horses, who made good use of the sharp chins of the moai to scratch the backs of their necks. Sitting on the grass under the dim silhouettes of the moai in the cool stillness there was a very tangible sense that the ancient peoples who carved these figures were somehow still present: a slightly shivery feeling that I have experienced also on hiking to remote and little-known Anasazi ruins on the Colorado plateau. This sense of 'connectedness' to a place or time can only happen with quiet and solitude. Sites such as Mesa Verde and Angkor Wat, with their teeming tourists and regimented tours, strike me as only a more authentic Disneyland. The architecture, craftsmanship and sheer scale are impressive, but I find more emotional connection and reward from discovering even a small granary or one-room Anasazi dwelling. Perhaps the isolation of Rapa Nui will protect it from development and over-visitation?

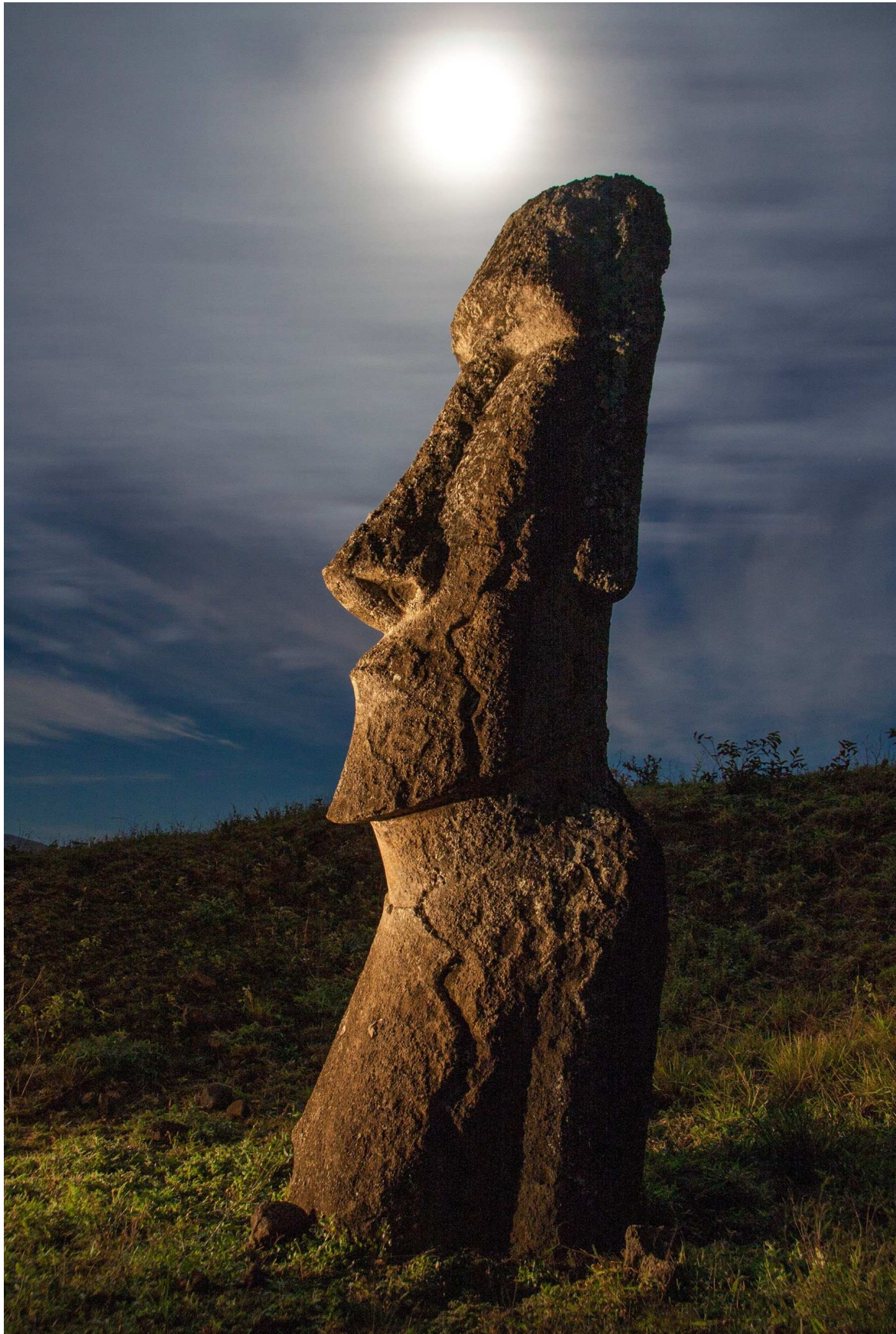
Back to the photograph. How to convey something of this feeling in a mere flat image? For most of the photographs I took of Rapa Nui - including the most successful ones - I used light-painting to highlight the moai against a moonlit or dawn-light landscape. This approach retains a sense of mystery that is lacking in full daylight, and gives more control to bring out features in the carving and provide a three-dimensionality. I used a halogen dive-light, which gives a powerful yet diffuse beam with a more pleasingly warm color balance than l.e.d. flashlights. The photo is of one of the moai on the slopes of the rano raraku quarry, fully carved and upright, but now waiting for eternity to be transported to its intended ahu.

I was honored when my photo was chosen by Pavel Pavel for the front cover of his book describing experiments revealing how the moai were transported from the quarry to their final destinations.

Local legend says that the statues arrived at their current locations by themselves - that they actually 'walked'. Several expeditions visited the island during the last century, trying to work out how the early Easter Islanders transported the moai statues. When the Norwegian explorer and archaeologist Thor Heyerdahl announced his plans to conduct more field work on Easter Island in 1986, he did not know his expedition would be joined by a young Czech engineer, Pavel Pavel, who would eventually make the moai statues walk.

Mr Pavel had followed the research and experiments on Easter Island since 1981 and came up with a theory. With the help of his friends he cast a 4.5 metre tall concrete statue weighing 12 tonnes. In the South Bohemian town of Strakonice, they conducted a trial. They fastened ropes around the top of the head as well as around the base of the bust and through a system of tilting and twisting Mr Pavel and sixteen other people were able to move the statue forward. In this manner the experimental moai wriggled forward as if it were "walking". Whereas 180 people pulling a statue on its back had been used during Thor Heyerdahl's experiment on Easter Island in 1956, only 17 people were needed for Pavel to transport a "walking moai".





(38) " THE RAPTOR STALKS AT NIGHT"
Little Finland (AKA Hobgoblins Playground), Nevada

Light-painting provides a way to highlight only those elements of a photo that you want and, to a limited extent, introduces to landscape photography the freedom of lighting available to studio photographers. I tend not to use flash guns very much: with a camera-mounted flash the light is harsh and directional, and the complications of setting up remote flash units and diffusers are off-putting. Instead, I find the simpler means of 'painting-in' a subject using a hand-held flashlight to be more satisfying and to allow greater freedom. You can open the camera shutter, then run off to the side to provide directional lighting; stay in one place to create sharp shadows and edges; or move around to blur the apparent light source to obtain a more diffuse illumination. With a tightly focused beam you can selectively highlight just those parts of the composition that you want, and with filters even paint different areas in different colors.

Of course, all this must necessarily be done at night, when the light is dim enough to allow long exposure times, and the light from a flashlight is sufficient to overwhelm any ambient light. However, a totally dark, black sky is generally not attractive. Light-painting is best done during brief windows of time a couple of hours after sunset or before sunrise when sufficient blue remains in the sky to balance the artificial light and provide an exposure time sufficiently long (about 30 s is good) to enable some control of the light-painting. Setting the exposure is a matter of taking a camera reading for the ambient light, and then trial and error to adjust the artificial flashlight illumination. This technique must have been difficult or impossible to apply before the advent of digital cameras, but now it is just a matter of looking at what you have captured on the screen and adjusting accordingly. Light-painting works best with subjects at moderate distances up to around 100 ft from the camera, as beyond that the available light from flashlights falls off too much. 'Million candlepower' lamps can extend the range, but my experience is that their battery life is severely restricting. My usual sources are a halogen 'dive lamp' intended for scuba diving which gives a powerful, broad, and fairly warm beam, or a high-powered l.e.d. Maglight that emits an amazingly collimated, intense white/blue beam. Colored gel filters taped on the flashlight allow the color temperature of the light to be adjusted or, with some loss in intensity, to provide a pure monochromatic colored illumination.

The photo opposite captures one of the fantastical rock formations at Little Finland. The image was taken about two hours after sunset, on a night with a full moon to give a background fill when color remained in the sky (visible to the camera, but not by eye at that time). A red gel on the flashlight gave a striking color contrast with the sky, and turned a natural (if unique) landscape into an almost abstract composition.



(39) "MONOLITH WITH JUNIPER TREE"
Joshua Tree National Park, California

I find Joshua Tree National Park to be a difficult place to photograph. Which is strange, because it is the location of several of my favorite images; including the banner photo on the *Evanescence Light* website (see pages 104,105). Much of the difficulty arises because Joshua Tree has few 'iconic' features - the likes of Delicate Arch, Horseshoe Bend, Half Dome, et al. - where all you need do is plant your tripod to get a striking trophy shot. Instead, there are endless rocks and Joshua trees, individually appealing but none which stand out above the others. You need to work harder to create a memorable image, or have the luck to be there during superb light.

One exception, in a small way, is the happy confluence of a twisted juniper tree and a pointed rock monolith above a campsite at Jumbo Rocks campground. This pair make an attractive composition, and by getting right down on the ground with a wide lens the tree can be made to frame the much larger rock. But the scene has been photographed countless times and that raises another problem. How to create a different vision of a clichéd icon?

On an earlier visit I had captured a photo with sunset light just catching the tree and rock, and used a long exposure to blur the cloud movement to add some drama. Not bad, but I thought I might be able to do better, and was happy when a friend proposed an overnight trip to photograph by moonlight.

Well, that idea did not work out well. After a 3:00am departure from home we arrived at Jumbo Rocks to find a completely overcast sky, with just glimmers of the moon showing in entirely the wrong place. The clouds remained for much of the day, but began to clear toward evening, raising hopes of good sunset light. There is only one small spot where the tree and rock line up, so at first Eric and I played tag, carefully setting up and removing our tripods, giving each of us a few minutes to shoot as the light changed. The best conditions came several minutes after sunset, as wispy clouds to the south behind the rock lit up. No time then for tripods, as the light was fleeting. We took turns lying flat on the ground, shooting hand-held and hopefully keeping the horizon level while holding steady enough to get sharp shots. By this time the rock and tree were shaded, forming silhouettes against the sky. We were both therefore using fill-flash to add light; in my case using a warming filter in front of the flash. We had the thought of using two flashes to separately illuminate the tree and rock, but Eric is a Nikon guy and I use Canon, and the two won't talk to one another to synchronize. So, I cheated a little after the fact, and in the final image above blended in an earlier shot when the rock was still gently lit by the setting sun.

In terms of composition, I had zoomed out to the widest setting (10 mm) on my lens to encompass as much of the sky as possible, and that had the result of also including the rounded boulder next to the tree, adding an extra element and nicely contrasting shape. Fortuitously (meaning I did not plan or even notice when shooting, but only after viewing later on the screen), the clouds gave the appearance of emerging, mist-like, from the foliage and trunk of the tree. In post-processing it was obvious that the filtered flash light had imparted too much red onto the tree in the original RAW conversion, so I toned that down, while correspondingly boosting saturation on the sky and applying some selective sharpening to accentuate the clouds. Overall, I was striving to create a slightly surreal impression, not simply what I observed at the time - even with my head on the ground!



(40) "PONTE DEL DIAVALO BY FLOODLIGHT"

Tuscany, Italy

Ponte della Maddalena (Italian: "Bridge of Mary Magdalene") is a bridge crossing the Serchio river near the town of Borgo a Mozzano in the Italian province of Lucca. One of numerous medieval bridges known as Ponte del Diavolo, the "Bridge of the Devil", it was a vital river crossing on the Via Francigena, an early medieval road and important medieval pilgrimage route to Rome for those coming from France. The bridge is a remarkable example of medieval engineering, probably commissioned by the Countess Matilda of Tuscany circa 1080-1100. It was renovated circa 1300 under the direction of Castruccio Castracani. The largest span is 37.8 m.

This spectacular bridge ranked high among the list of attractive subjects I hoped to photograph during a recent visit to Tuscany, but it presented some problems in creating a good image. However, photographic difficulties are basis for many of my selections as 'Photo of the Month'. Just occasionally I might find a great subject under great lighting, so that all that is required is to press the shutter and upload the photo with very little post-processing needed. But then there is nothing much to write about... In this instance the difficulties lay in both composition and lighting. Access is severely hindered by a railway running along the west (left) bank of the river, and by a narrow, busy road along the east. The only safe place to set up a tripod was from a small parking area, from where I tried to get the best possible view from the top of the parapet. Not actually difficult, but I felt constrained in having little freedom to compose the shot.

The second aspect concerned the lighting. During a first mid-day visit under full sunlight the bridge looked rather mundane and lost in its surroundings. Noticing floodlights mounted along the river banks I had better expectations for a night shot and we returned during the late evening, anticipating a time when the remaining natural light might balance the floodlit bridge. The question then was whether the floodlights would actually be turned on. For several frustrating minutes they remained off, while the remaining light in the sky faded. Eventually one, two and finally all four lights came on but, even more frustratingly, they would erratically extinguish and re-ignite. I wanted a long (30s) exposure to blur the ripples in the river and get a nice reflection, and took several shots before getting one where all the lights remained on. But then a further problem was that the lights on the far side of the bridge were deep orange mercury lamps, whereas the near-side lights were of a much higher color temperature. Even on the camera screen it was horribly apparent that the lighting on the bridge came out as a lurid and most unattractive green with a white balance setting that gave a realistic blue sky and pleasing orange backlight. Producing the final image thus took some time in Photoshop, principally using a masked layer to selectively adjust the color temperature of the bridge where it was illuminated by the white-green floodlights.



(41) "BIXBY BRIDGE"
Big Sur, California

One of my usual places to camp (for free!) while visiting the Big Sur area lies a few miles along the old coast road, high up in the Los Padres National Forest. The road starts next to Bixby Bridge, so I often stop to photograph this iconic feature of the Pacific Coast Highway when returning in the evening. This year I had a particular excuse, having received a new Canon 17 mm tilt/shift lens as a Christmas present. (Thank you, Anne!). One of the functions of the lens allows 'perspective control'. By shifting the lens it is possible to keep features such as the bridge pillars truly vertical in the photo, without the convergence that would otherwise result from tilting the camera to include the full depth of the canyon.

Dusk is a good time to photograph the bridge, as passing cars can be used to light-paint the roadway. This is a matter of timing, and some luck, to balance the fading daylight with the tracings of the car tail lights. It typically takes about 45 seconds for cars to cross the bridge and disappear out of sight around the following corner, so that sets a minimum exposure time. Then, it is a matter of opening the shutter as a southbound car enters the bridge, and hoping that headlights from a northbound vehicle do not wash out the shot. Not so easy, as most traffic is heading north at night toward the campgrounds and hotels of Big Sur and Carmel. However, my recent visit coincided with a full moon, giving unlimited time to wait without worrying about rapidly changing light. The final image above is a blended composite of three exposures: one with the lens shifted up and exposed for the sky; a second shifted down and exposed for the bridge, without traffic; and a final shot timed when two southbound cars crossed the bridge in convoy.





PANORAMAS

Some scenes are just too wide (or tall and narrow) to fit within the 3x2 aspect ratio of a digital camera sensor. The solution then is to take several shots, panning the camera horizontally (or vertically) between each and allowing a good amount of overlap so the individual frames can subsequently be stitched together. It is best to do this using dedicated hardware to ensure the camera remains completely level and centered on the horizon, but improved software now places much less demand on the original captures. Indeed, having neglected to bring a tripod with me, the panorama below of UC Berkeley and the Golden Gate was taken by balancing the camera on top of a backpack resting on the ground.





(42) "PANORAMA OF Mt. WHITNEY FROM ALABAMA HILLS AFTER RECENT SNOWFALL"
Alabama Hills, Lone Pine, California

A blog article by George Barr raised a problem inherent in photographing beautiful places; "How do you ever compete with the real thing? And if you can't, why bother?" One option is indeed not to bother - and George's photography is aimed very much at finding beauty in subjects that to the casual eye may indeed not seem to possess much inherent interest or beauty. But that is rather limiting, and to photographers of lesser skill it would seem that there might be a higher chance of coming out with a great image if you start with a great subject. The difficulty, of course, is that the great subjects (Delicate Arch, El Cap and so on) have already been photographed so many times, and by so many great photographers, that it is almost impossible to come up with some new interpretation. In his article, George discusses several several strategies that have been historically used to produce an image with novelty, and which convey something in addition to, and different from, what a visitor might directly experience at that location. Such strategies include isolating only a small part of a grand scene; selection of unusual viewpoints; and post-processing (e.g. conversion to black and white) of the original photograph. The simplest approach, however, is merely to photograph the subject in exceptional conditions.



It may (and has!) been argued that this reflects more on the photographer's perseverance and willingness to get up very early in the morning rather than his photographic skills; but surely that in itself deserves some reward, and can result in a nice image.

Which brings me to the photograph above - a panoramic shot of Mt. Whitney and the Sierra Nevada mountain behind the Alabama Hills. Being the highest peak in the lower 48 states this is cliched subject, but I hope the photo above has some freshness to it.

I had noted the possibilities of this composition on earlier visits while driving along the Movie Road through the Alabama Hills, and pictured an early morning shot with the sun on the mountains while with the foreground rocks remained silhouetted in black shadow. During a recent visit the conditions were promising; an earlier storm having dumped snow on the mountains and leaving the sky crystal clear. However, I spent too long photographing at Mobius and Lathe Arches, and by the time I drove along the road, sunlight was just touching the rocks. A little disappointing, but it's best not to get locked into preconceived notions, and just to take what is offered. Indeed, I think the result came out better than if the rocks were mere black outlines .

(43) "YOSEMITE FIREFALL"
Yosemite National Park, California

Horsetail Fall is an ephemeral waterfall high on the cliff face of El Cap. In Yosemite Valley. Sometimes, and only sometimes, it puts on a fantastic light display, catching the dying red rays of the setting sun as the rocks either side plunge into shade. If anything captures the meaning of 'Evanescent Light', this is it!

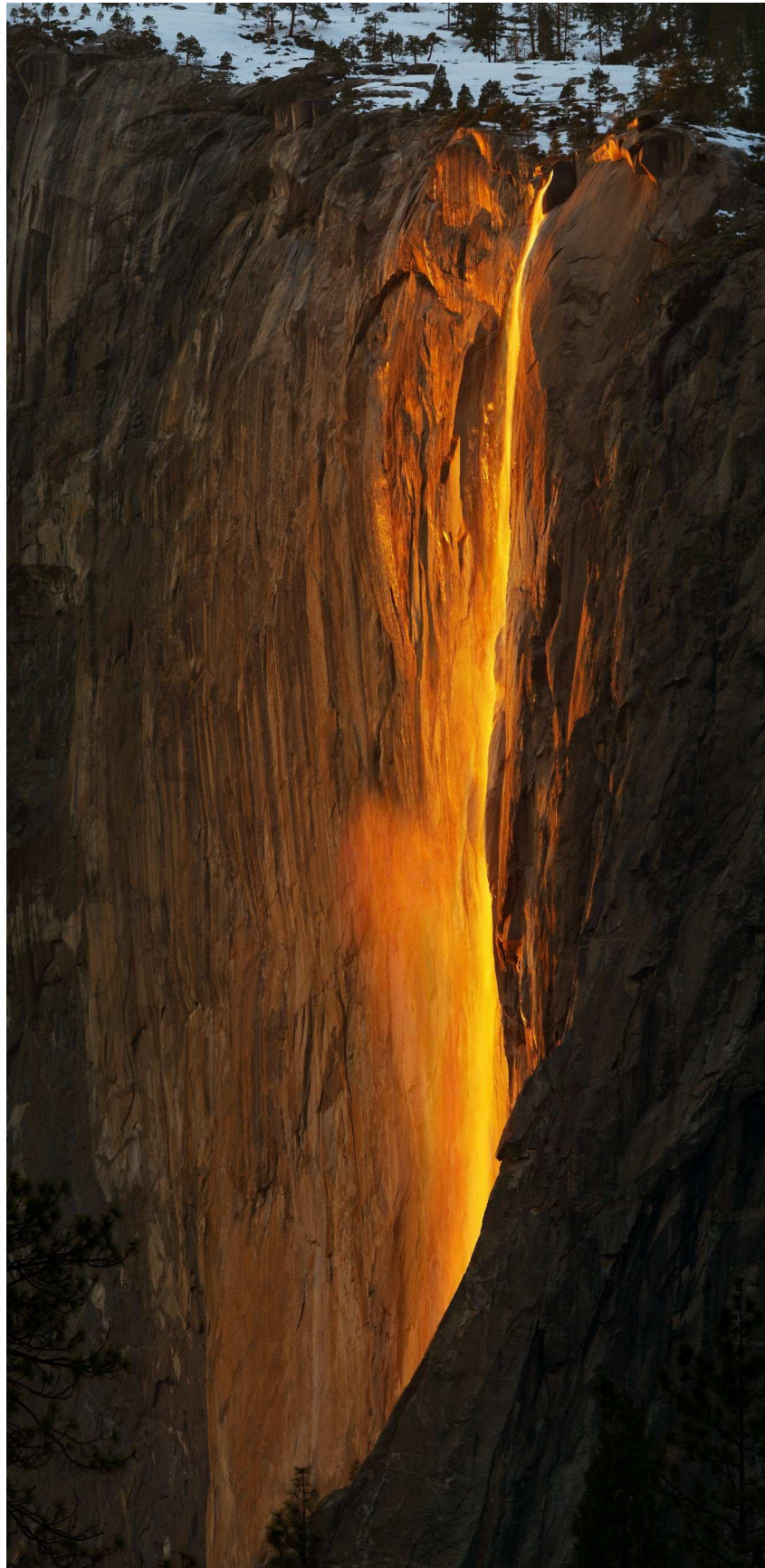
The first photographer to capture and popularize the 'firefall' of Horsetail fall was Galen Rowell, and it is often said that no one since has done it better. Maybe so. But there is plenty of incentive to get your own photo, and maybe do it differently.

Capturing the firefall demands some planning, and a lot of luck. A first requirement is that the setting sun is aligned well. This happens only in Winter, with the optimal time being around the middle of February. By early March the lower part of the falls go into shadow before the sun is low enough to produce a red glow. Second, there must obviously be a clear sky to the West. Finally, there needs to be a good flow of water over the falls. The catchment area is fairly small, so this needs either a period of recent heavy rain, or a good snowpack with a few days of preceding warm weather. Some years the firefall never happens, and when it does prime light last for only ten or fifteen minutes. On average, the firefall is present for perhaps only one or two hours per year!

The photo on the facing page was taken on Feb. 16, 2008. I had been following the Yosemite weather forecast, together with online updates on the *Yosemite Blog* and *View from the Little Red Tent*, that all pointed to good, clear conditions that weekend following several warm days. The omens looked promising enough to justify the 800 mile round-trip journey from Irvine. Arriving in Yosemite, the next choice was where to shoot from. The classical view of Horsetail is from near the El. Cap picnic area, replicating Galen Rowell's image. This time around I decided on a change, and selected a location on the far side of the Merced River with a clear view through the trees of the falls. The extra distance provides a surprisingly different perspective. The view from the picnic area shows the top of the cliffs silhouetted against the sky – nice if there are some high clouds to add interest and color, but otherwise leaving a big blank area at the top of the photo. In contrast, the view across the river reveals the snow slopes that rise steeply above the cliff top, giving the illusion through a telephoto lens of a viewpoint almost level with the falls, instead of looking steeply up from thousands of feet below.

Arriving at around 4:00 p.m. there were already around a dozen photographers staking out their few square feet of meadow to set up tripods. Then, it was just a matter of waiting and hoping, stamping around in the snow to keep warm and watching the progression of the light as the sun swung around to the north casting a growing shadow from the nose of El Cap across the rocks to the left of the falls. On this day the falls became a silvery cascade at about 5:20 p.m., turned deep red by 5:30 (the photo on the facing page), and were extinguished by the setting sun at 5:41. So, not much time to get good shots.

Horsetail Fall appears rather small when viewed from the valley floor, but in fact it boasts the longest vertical free drop of any waterfall in Yosemite. Aiming to capture this enormity I returned the following year with the intent of producing a high-resolution vertical panoramic image by stitching together several individual shots. I set up using a RRS panning clamp and rail to focus the camera on the falls, and then lock everything down while allowing free movement along the vertical axis. With these settings, three shots taken with a 10 Mpixel Canon 40D and 100-400 lens zoomed in to about 200 mm nicely covered the height of the falls, with generous overlap for subsequent stitching. A final ingredient for a good photo involves enough wind to kick up a good amount of spray, otherwise the falls themselves appear as only a narrow ribbon of light. That was present, but I worried that changes in the spray pattern between successive shots would cause problems, and took photos as quickly as the two second delay on the mirror lockup would permit. In the end, the photomerge and blend functions in CS3 did a fine job to create the vertical panoramic photo extending over pages 102-103.







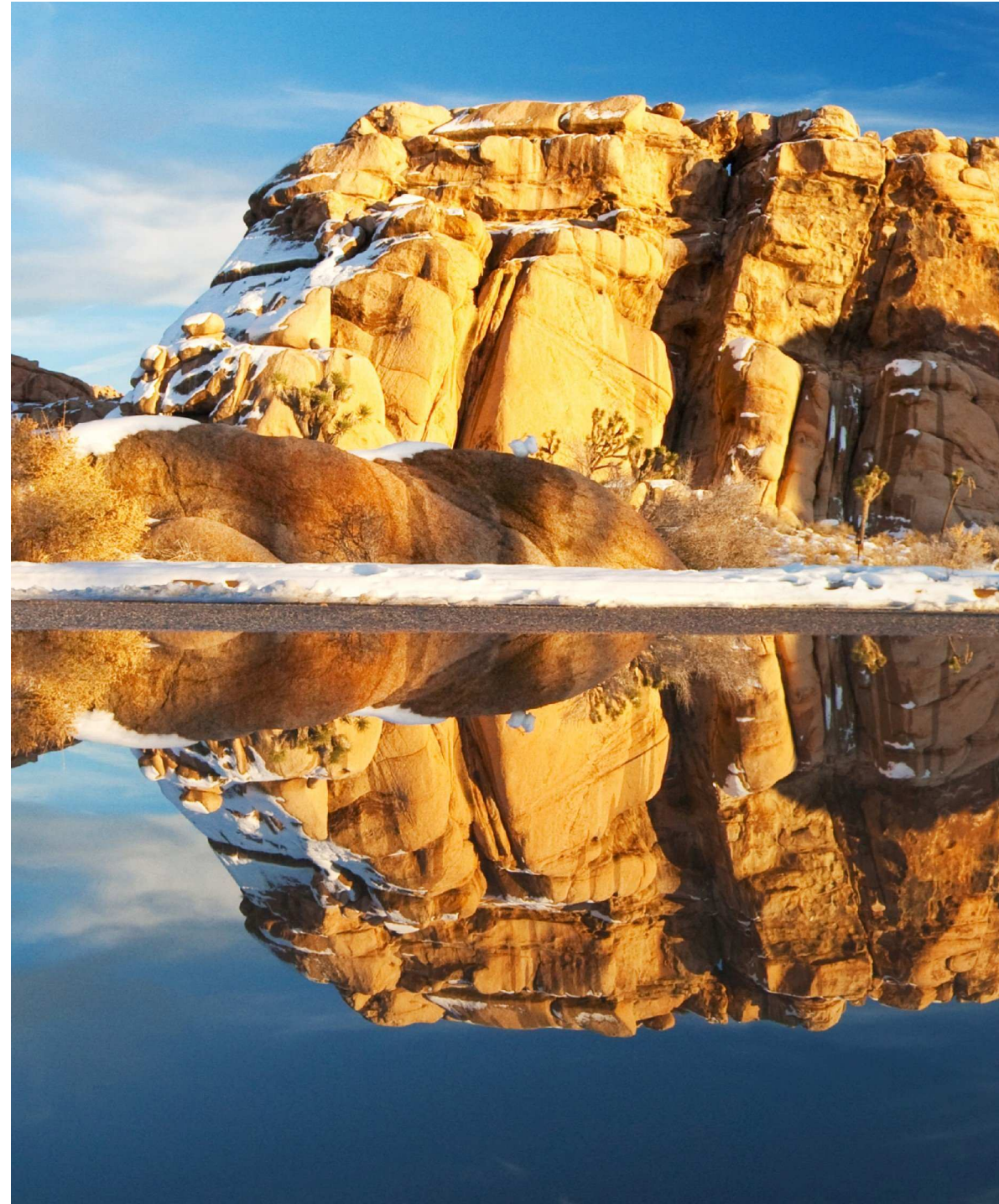
(44) "JOSHUA TREE PANORAMA AFTER RARE SNOWFALL"
Joshua Tree National Park, California

What makes a good photograph? Subject, lighting, composition, and technical excellence all factor in. The first two ingredients are very much a matter of being at the right place at the right time, and this photo is one such instance. Joshua Tree National Park is a great location for photography, combining the unique forms of the Joshua trees themselves with warm granite rock formations. Usually it is a hot, arid place, but heavy snowfall in the desert a few days before Christmas gave a very different appearance, further enhanced by crystal-clear blue skies with fantastical lace clouds. A good subject then, and under most unusual conditions. How to do it justice?

Where do you put the camera? How do you frame and select the elements within the image? A common mistake is simply to walk around, always shooting photos at eye level. A more interesting approach is to select unusual viewpoints - to take photos that communicate a view that most people would not 'see' even if they were there at that same place and time. Reflections make a nice example, as even small rainwater pools can make for expansive images if you get right down to the ground.

Indeed, the photo here was captured using only a small 'puddle' of melted snow at the side of the road. At normal eye level it looked just like a small, muddy puddle, with a large expanse of tarmac behind - but with the camera almost touching the water the puddle became a giant reflecting mirror. This is an instance where I find the 'live-view' feature of recent DSLR cameras to be very helpful. Before, I would have been lying flat in the mud, trying to squint through the viewfinder to compose the picture. Now, I can simply crouch down, keeping dry and mud-free, composing with the lcd screen.

A further aspect of composition has to do with symmetry. The 'rule of thirds' holds that key features, such as the horizon line, should be placed either about one third up or down from the edges of the frame; but certainly not in the middle. For reflections, though, I often find it works better to break the rule, and put the horizon dead in the middle. The perfect vertical symmetry is certainly more eye-catching. Here there is also an interesting horizontal semi-symmetry, with the two rock formations straddling the center Joshua tree. But it is not quite symmetrical - the left-to-right lines of diminishing outcrops and trees contrast with the expanding lines of cloud formations to lead the eye across the picture.







Trona Pinnacles at sunset
Searles Lake, California

TELEPHOTO

A telephoto lens, a lens with long focal length, basically just produces a magnified image. It lets you take pictures of something a long way away without having to get closer. That's good if you are feeling lazy. More importantly, it lets you photograph wildlife that is either too skittish (birds) or too dangerous (lions) to approach closely.

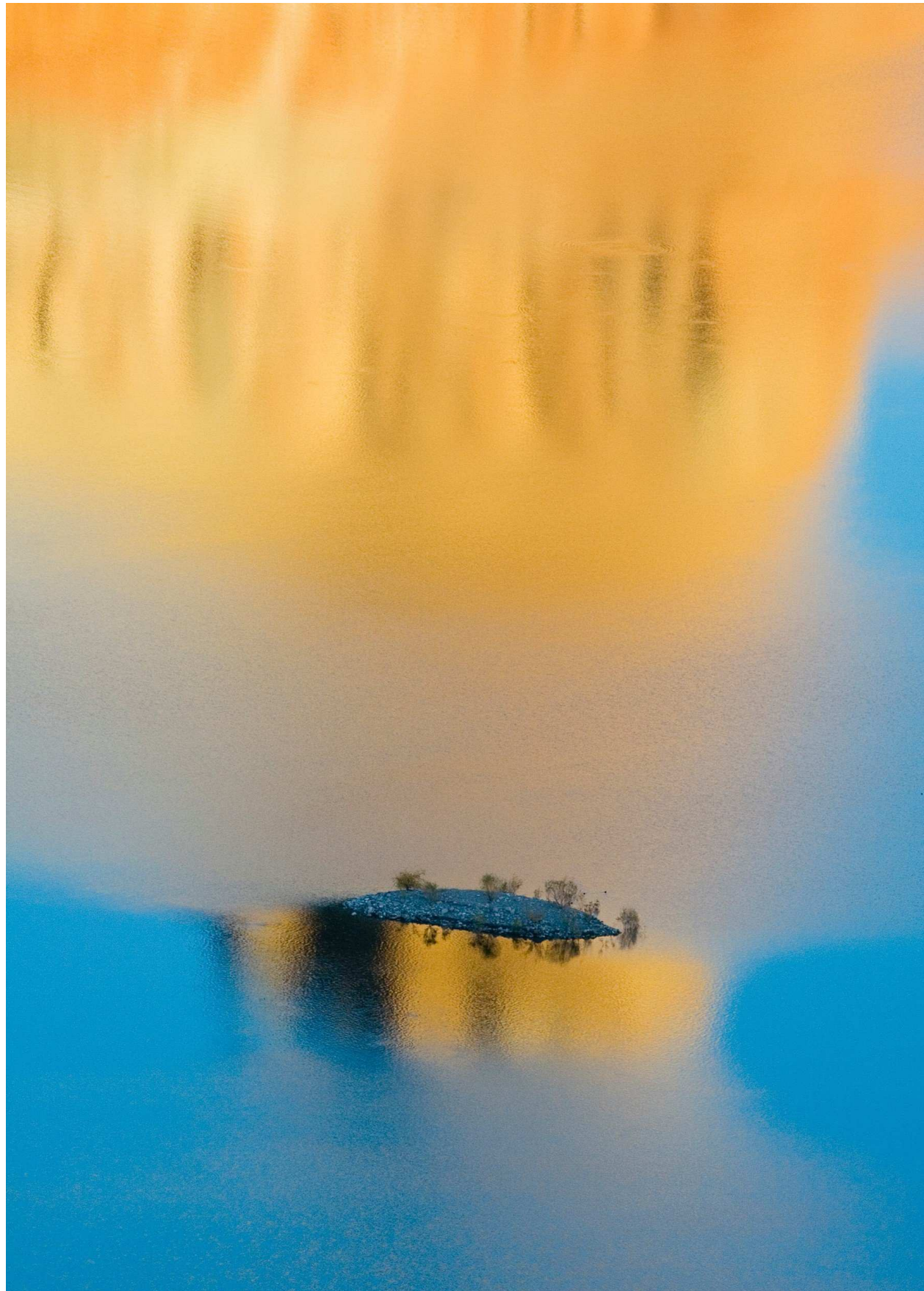
A telephoto lens also has more subtle uses. One is to compress perspective. In this case, the lens is not actually compressing the perspective; rather, it is allowing a magnified view of the subject from a long distance away and it is the distance that provides the change in perspective. The photo of the Trona pinnacles on the facing page makes a nice example. By using a telephoto lens at long distance I was able to represent the pinnacles and mountains at closer to their respective true scales, and to make the pinnacles stand out against a darker background. A second application is to abstract small parts of a scene. Photographs are better at communicating subjects at a small scale than vast scenic views. The compression of perspective, together with representation as a two-dimensional print, remove the normal cues as to distance, rendering an image more akin to Japanese paintings of overlapping layers. This abstraction can then be extended by narrowing the frame to exclude almost all references to the surrounding landscape, creating a picture apparently dissociated from the real world; one which might have been painted from imagination.

(45) "EMERGENT ISLAND"
Lake Powell, Utah

The photo was taken from Alstom point - a long, bumpy ride along a dirt road to a high promontory with superb views across Lake Powell. The lake is not really a 'lake', but rather a giant reservoir impounding the waters of the Colorado river and swamping what used to be Glen Canyon. The reservoir began to fill in 1963 following completion of Glen Canyon dam, reaching its high water mark in 1980 when it overtopped the spillway and caused consternation by eroding the diversion tunnel directing the overflow around the side of the dam. Since then drought conditions have caused the water level to fall precipitously, reaching a low point in the winter of 2005. Photographs taken during high water years show red and yellow sandstone cliffs forming a color contrast with the deep blue of the lake. More recently the scene is marred by the bathtub ring left on the rocks by the receding water. This photo was taken in 2006, when the water had dropped about 150 ft below its high point.

Nevertheless, a good sunset with the wind in the right direction to blow away pollution from the Navajo power plant produced a spectacular vista of glowing sandstone. After taking the requisite picture postcard scenic shots, I started looking for different and less literal ways to capture and communicate the scene by using a long telephoto lens to isolate tiny sections. Golden reflections from the sunlit Gunsight Butte directly across Padre Bay caught my eye, and zooming in revealed a tiny island that had recently emerged from the depths as the water level receded. I framed the shot to exclude the cliffs (and the bathtub ring), creating an almost abstract composition consisting almost entirely of diffuse reflections, with the island as the only solid, sharp subject. Gentle winds were constantly changing the patterns of the reflections, so I took several shots over a few minutes, ultimately selecting one where a band of still water below the island framed a reflection of the very top of the butte.

My hope is that this photo works on multiple levels: as an almost abstract composition of colors and form with the island providing just enough clue as to the physical setting; and as a metaphor for our reliance on the erratic and unpredictable flow of the Colorado river. The water level rose almost 60 ft over five years from the date of my photo, but has now (2013) dropped back to about the same level. The little island will be once more emergent!



(46) "FAIRYLAND CASTLES"
Bryce Canyon National Park, Utah

Bryce Canyon must be high on the list of the most visited national parks in the US. The eroded hoodoo formations are striking and iconic, but it is the lighting that makes Bryce truly unique.

This comes about because Bryce is not really a canyon, but rather a series of east-facing amphitheatres. The viewpoints are up on the rim, so you are looking down onto the formations, and directly into the rising sun. Such backlighting would normally cause big problems for photography, because the intense direct light from the sun would overwhelm and render foreground subjects as mere silhouettes. But here the downward angle of view allows the sun to be excluded from the frame, so that the hoodoos fall within a sensible exposure range. The real magic though is created by reflected light. Bryce is at an altitude of over 8000 ft, and catches the very first rays of the rising sun. That soft red light then diffusely reflects off the white and orange sands of the concave amphitheater, illuminating the hoodoos so that they almost seem to glow with an inner light.

It is easy - too easy - to come away from Bryce with a collection of excellent photos. It is much harder to come away with anything original. The walls of the visitor center and Ruby's Inn are lined with spectacular and inspiring photographs; the challenge is to find something a little different. I usually pass by Bryce two or three times a year. It lies a one-days drive from my home, and I often stop there overnight on my way to or from destinations further in Utah. I camp in the forest immediately outside the National Park boundary, emerge reluctantly from my warm sleeping bag just a few minutes before sunrise, and still get to one of the overlooks in time for first light. On recent visits I have concentrated on using a long telephoto lens to abstract distant features, rather than taking wider views of the much-photographed formations directly below the rim. This photo on the facing page was taken with a 400 mm lens, looking across from Sunset Point toward features in Fairy Canyon. By eye these appeared insignificant and lost in the bright sunlight, but through the viewfinder they shone with a mysterious luminescence. To get a sharp image I used a tripod, switched on live view to act as a mirror lockup, and selected a 10s timer delay to let any vibrations die down after pressing the shutter button. That delay also allowed me to move round and use a hand to shield the lens from direct sun, as the lens hood alone did not completely block the light. Even so, the image out of the camera appeared rather washed out, mostly due to haze in the air over the long distance at which the shot was taken. However, global and local adjustments in Photoshop brought up the contrast nicely, allowing the glowing hoodoos to really 'pop' against the shadowed background.



(47) "ROCKY CREEK BRIDGE AND BIG SUR COASTLINE"
Big Sur, California

I usually strive for simplicity when composing a photograph. Images that emphasize just a few subjects and cut out the clutter of the real world tend to have more impact. Indeed, there is a natural progression in the evolution of a photographers skills toward ever simpler and condensed compositions. Sometimes, however, it is good to make a U turn, and try to make a complex composition that still manages to hang together. This month's photo is an example; though one created more by chance than initial intent.

I was driving along then Pacific Coast highway north of Big Sur. The road is narrow and wriggly, demanding full attention, but I noticed a spectacular view of black cliffs layered with mist and pulled off onto a convenient dirt shoulder to have a better look. It was only then that I realized that, in addition to the natural coastline, Rocky Creek Bridge was hiding coyly in the background. Even better, there was a sea arch in the foreground. I walked around to find a viewpoint that nicely lined up the natural and man-made arches, and selected a focal length of 400 mm to achieve a tight composition. Then it was just a matter of waiting for a big wave to break before pressing the shutter. The two birds silhouetted against the wave were a pleasant discovery after I got home and looked at the image on the computer screen - I had not noticed them when taking the shot.

The final result is a quite complex picture, There is no single subject, and the eye wanders between the bridge, sea arch, wave and birds. But I think it works, in part at least because the bands of mist and reflections from the sea break the image into several receding layers. Long telephoto lenses compress perspective, and there are certainly no leading lines in this image to provide a sense of depth. But the distinct layers of diminishing contrast provide a three-dimensionality - akin to Japanese paintings - and allow the viewer to consider each in turn. The sea mist, brightly back-lit by the early morning sun, is a crucial element in the image, serving to define the layers. I returned the following morning to the same viewpoint, but there was no mist, and the magic was gone.





Comet PANSTARRS aligned with crescent moon
Newport Beach, California

ALIGNMENTS

A single subject is not usually enough by itself to make a great, or even a good photograph. Something else is needed to make it special. In this section, that something is provided by unusual alignments - a lining up of terrestrial features, or timing of a conjunction of astronomical events. Whatever the case, my object is to make a photograph that is unusual - to add something unexpected to a scene that might appear mundane under normal circumstances. But it never hurts to begin with a subject that is interesting in its own right...

(48) "MITTENS SHADOW"

Monument Valley Navajo Tribal Park, Arizona

The Mittens are a pair of rock formations in Monument Valley. They are almost exact mirror images of one another, and are the first thing that visitors see after pulling into the parking lot of the Tribal Park. Given that they have been photographed by landscape artists of the calibre of Ansel Adams, it is hard to come up with new interpretations of this classic scene. But an opportunity presents itself for just a few days in the fall and spring of each year. The Mittens lie close to a west-east axis, with the West Mitten slightly to the south. Thus, when the timing is right, the setting sun casts a shadow of the West Mitten directly on the East. Moreover, the shadow of the West Mitten fortuitously falls within the profile of the East mitten, rather than casting the whole formation into shade.

When then, are the right dates to observe this spectacle? Google Earth provided the answer, with a high-resolution map allowing me to measure the angle between the Mittens. Next, the US Navy conveniently provide a website that can calculate tables of altitude and azimuth angles of the sun for any day of the year at any place on Earth. This indicated that September 12th or 13th should be optimal. Corresponding dates in Spring would also work, and indeed might stand a chance of better weather, but I usually have teaching commitments at that time. So, a good excuse for a quick trip to Northern Arizona. The trouble is that Monument Valley is a fifteen hundred mile round trip from my home. A long way for a shadow...

Indeed, it looked like it might be a long way for nothing. Storm clouds covered the sky, and I held little hope of seeing the shadow. But, just a few minutes before sunset a window opened in the sky to the west, creating a wonderful chiaroscuro contrast between the highlighted formations and the dark clouds and shadowed foreground.





(49) "ICELANDIC CHURCH AT THE END OF
A RAINBOW"
Husafell, Iceland

Living in Southern California we don't get much rain, and hence rainbows are a rarity. Going on vacation to Iceland thus made quite a change. Lots of rain, and quite some time sitting in the car watching it come down, but more than compensated for by excellent light and cloud formations on the edges of the storms.

The photo here was taken near the end of our stay, while driving up into the interior after hiking in the rain to Glymur, the highest waterfall in Iceland. A few gaps were starting to appear in the clouds, and an intense rainbow formed against the grey sky. Initially the road passed along a featureless valley and rather than stopping and photographing the rainbow in isolation, I thought it better to keep on going in the hope that some interesting foreground would appear before the it faded. Indeed, around the next ridge a classical Icelandic rural church appeared in just the right place! The composition brought back memories of Galen Rowell's most famous image of a rainbow over the Potala Palace in Lhasa. But this was merely a chance alignment and not any conscious decision to replicate his composition. Certainly he had the better shot and a more majestic subject; and whereas he had to run two miles gasping for oxygen at 15,000 ft altitude, I merely had to wander a hundred yards down the road in light drizzle.



(50) "RAINBOW ON UPPER YOSEMITE FALLS"
Yosemite National Park, California

The easy way to spot a lion in a Kenyan game reserves is to look for a cluster of Land Rovers. The easy way to look for good photographic subjects in Yosemite Valley is to look for a cluster of tripods.

Thus it was that I spotted a huddle of tripods, and accompanying photographers under the trees to the side of the road near Sentinel bridge early in the morning of Presidents' day. While driving it was not easy to tell what all the expensive white lenses were trained on, but it seemed worth stopping to find out. The answer revealed itself through a clearing in the trees: the angle of the rising sun was just right to create a rainbow in the spray at the base of Upper Yosemite Falls. A phenomenon well known, I am sure, to locals, but something of which I had not previously been aware. A thin cloud attenuated the intensity of the color that day, but forearmed, I went back the next morning to find a clear sky, more saturated colors, and a blessed lack of other photographers.

The time window for capturing this phenomenon is only brief, since the rainbow rapidly moves downward with the rising sun and is lost as it sinks below the spray. Also, the waterfall needs to be in direct line with the photographer and the sun, and it seems that February is the optimal time of year to achieve the best alignment of altitude and azimuth of the sun, together with a good flow of water down the fall.

The refracted light from a rainbow is fully polarized, so I used a polarizing filter to enhance contrast and saturation by selectively darkening the rocks and trees (conversely, the rainbow can be completely obliterated by misalignment of the polarizer!). A tree with interesting profile provided a sense of scale and foreground interest, and I moved around a little to line up the relative positions of tree and rainbow. Other major variables were the changing ways in which the water cascaded down the fall and the patterns of spray kicked up by the wind. It is hard to predict the results, so I prefocused a composition, locked up the mirror, and captured numerous shots triggered by cable release while looking directly at the fall, not through the camera. I also played with varying the shutter speed, to either capture the texture of the falling sheets of water, or to blur the motion. The photo above is my favorite from among more than 100 shots captured that morning: for those interested in the technical details; Canon 7D, ISO 100, 100-400 at about 300mm, 1/125 s, at *f*8.



(51) "TRANSIT OF VENUS"
The solar system

A montage of several shots of the transit of Venus that was visible over California on June 5th, 2012.

The transit was a once-in-a-lifetime opportunity to capture some unique images (I had missed the 2004 transit); but also presented some problems, both aesthetic and technical.

Aesthetic concerns arose because the transit is basically a small black dot moving across a bigger white circle - as in the top set of images. Deeply humbling because the little black dot is a planet nearly the size of the Earth, but as a photograph not much to look at. With just regular photographic gear there is no way I could compete with the spectacular multi-spectral images captured by the NASA orbiting solar observatory, so I was looking for a way to introduce a terrestrial element into my photos to make them more interesting.

During most of the visible transit the sun was high in the sky, well above any distant features on the horizon. But airborne objects were fair game. The hill behind my home provides a clear view to the northwest out over the ocean, and the track of the sun conveniently crossed the flight path of airplanes departing from John Wayne (SNA) airport. So I mounted my tripod, set the camera to high-speed motor drive and patiently waited, repositioning every few minutes as the sun dropped down, hoping for a coincident intersection. I had anticipated some difficulty as I was only a couple of miles from the flight path, and at that distance the commercial jetliners spanned almost the full width of the sun. But luck was with me, and a small two-prop plane transited the sun at exactly the right incidence to complement Venus. The lower-left image is a 'straight' shot; absolutely no Photoshop trickery! A little later, a commercial jet intersected the sun. This time the alignment was not so good. The plane crossed near the bottom of the sun, and I did not get a single capture with the entire body of the plane silhouetted. The final image is thus a composite of two shots, respectively capturing the front and back sections of the jet. A bit of a cheat, but I like the result for the way the sunlight catches the jet exhaust.

Technically, difficulties arose because the sun is very bright, and Venus is a very small dot. To counteract the first problem, I stacked 6 and 8 stop ND filters for a total attenuation of nearly 10,000x (OD 14). With the sun high in the sky, that gave an exposure of 1/2000s at f16, ISO 200; a fast shutter speed to minimize an blurring from camera shake, with an aperture large enough that diffraction would not be a problem. Toward sunset the sun dimmed appreciably, and I progressively removed the filters, ending with no filters and an exposure of 1/800s at f8. That means that the sun at the horizon was only about 1/80,000 times as bright as when high in the sky in mid-afternoon. A testament, perhaps, to the air quality in the L.A. basin! Although numerous websites warn that photographic ND filters may not adequately block UV and IR light, I had no problems with either the camera or direct viewing through the eyepiece. To resolve the small dot of Venus I combined my longest lens (100-400 zoom) with a 1.4x teleconverter on a camera (Canon 7D) with a 1.6x crop factor, for an equivalent (35 mm) focal length of 900mm. With that magnification the sun moved remarkably quickly through the frame, and needed frequent realignment to keep it centered.

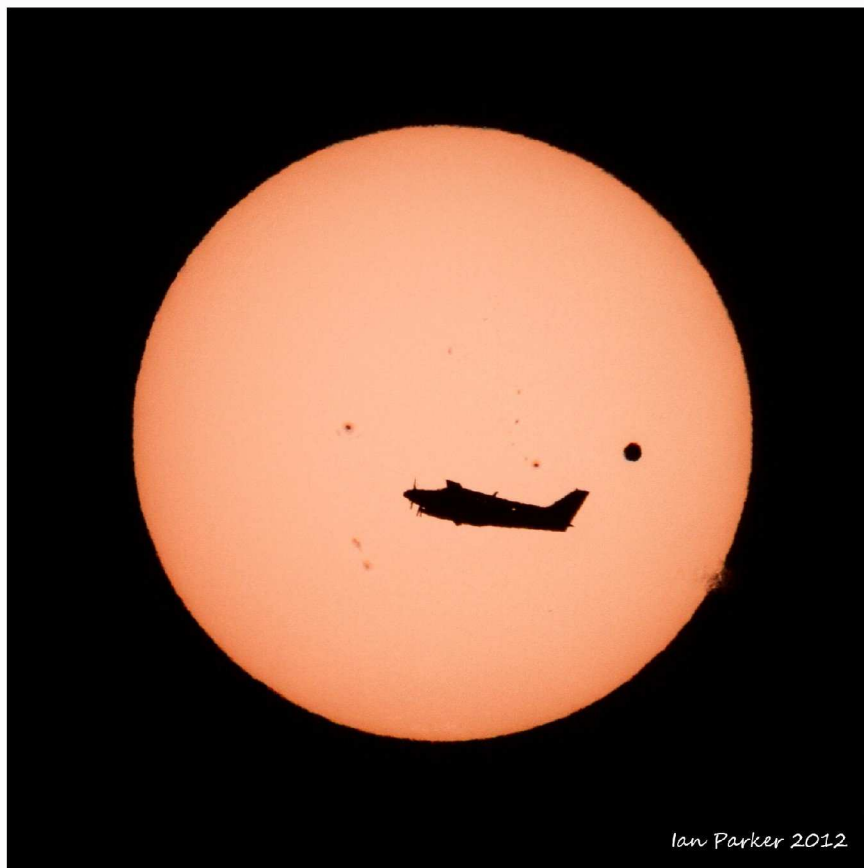
The coincidence of experiencing an annular solar eclipse (i.e. a transit of the moon) and a transit of Venus within just a couple of weeks of one another got me thinking about how long one might have to wait to experience a dual transit: perhaps to capture a 'Disney-like' photo like that at the right (which, of course, is a Photoshop composite). I am sure NASA can calculate the exact date of the next such occurrence, but as a rough estimate I started by assuming that transits of Venus occur on average about every 60 years. Solar eclipses (of any type) are much more frequent; about two per year if you are willing to travel anywhere on earth to view them. Given that an eclipse lasts around 2 hours, that means the probability of an eclipse at any given instant of time = 2hr/180 days, about 1/2000. Thus, a dual transit might be expected about every $60 \times 2000 = 120,000$ years. This calculation assumes that transits occur randomly and independently, whereas the orbits of the moon and Venus are highly periodic, but the number should be in the right ballpark.

120,000 years is a long time in human terms, but surprisingly brief in deep astronomical/geological time. There must have been many simultaneous transits throughout the history of the earth. Perhaps the dinosaurs saw one - but they probably did not take much notice.





Ingress sequence



Simultaneous transits by Venus and airplanes taking off from John Wayne airport



Milky Way and bristlecone pine
White Mountains, California

ASTROPHOTOGRAPHY

Night time is no excuse to stop taking photographs. Indeed, the range of possible subjects expands from the merely terrestrial to the entire universe! The advent of digital sensors with high sensitivity and low noise now makes it relatively easy to capture good images of stars and galaxies, with the primary requisite being a 'dark sky' location. Although the planets, stars, galaxies and nebulae can make spectacular subjects in their own right, that needs specialized equipment and is the province of true astronomers. My approach is to create "astro-scapes" combining the celestial with the terrestrial - usually employing light-painting to highlight the latter.

(52) "PERSEID METEOR SHOWER OVER THE ALABAMA HILLS"
Alabama Hills, Lone Pine, California

Gadgets are fun! Although the essence of photography is aesthetic, it is always nice to have a new lens or camera body to play with and provide motivation to get out and experiment. In this instance my new toy was not an item of camera gear *per se*, but rather a motorized equatorial telescope mount intended for astronomy.

My inspiration came from viewing a spectacular photograph of the Milky Way as a backdrop behind a bristlecone pine tree, taken by Tony Rowell and exhibited in the Mountain Light gallery in Bishop. What made this photo especially remarkable were the sharply-focused bright stars, the intensity of the stellar clouds in the galaxy, and a 3-D effect that made the tree appear to 'pop-out' of the frame. After some pondering, I figured out that all of these effects came about because the photo had been exposed while the camera tracked the movement of the stars (or, more correctly, tracked against the Earth's rotation against the stationary stellar background). Capturing photos of the stars with a fixed camera otherwise presents a dilemma. Short exposures don't capture much light, but exposures longer than a few seconds or tens of seconds smear out the stars, giving an unattractive appearance as elongated streaks (with the exception that very long exposures can be used to generate nice star trails, as in the photo on page 129). Although you can increase the ISO setting to shorten the exposure, this gives more noise; and using a wide aperture (small f#) lens introduces the problem that the depth of field may not be enough to have both stars and foreground in focus. Tracking the stars solves these difficulties, allowing exposures of many minutes at reasonable ISO and aperture settings. As a by-product, it also gives that 3-D effect. Foreground objects appear as a black silhouette while exposing for the stars which moves across the image as the camera tracks, so that the trailing edge appears to cast a graded shadow onto the sky. After stopping the tracking motor, the foreground can then be 'painted-in' using a hand-held flashlight, and the shadow provides the 3-D illusion.

I had to get my own tracking mount and try this for myself. After some research on the web, I ordered an Orion Astro View equatorial mount and a single axis motor drive; a mid-size amateur system chosen because it looked strong and stable. However, I had not realized how heavy it is! At least I could remove the weights intended to counterbalance a large telescope. The only other modification was to machine an adapter to remount the ballhead from my regular tripod so it would be level at the latitude of California.

Fortuitously, the mount was ready just in time for the Perseid meteor shower, which was due to peak close to a new moon, ensuring dark skies. My chosen location was the Alabama Hills, a site with low light pollution and where zero cloud cover was almost guaranteed. Moreover, I anticipated that the Mobius rock arch would provide a striking and unique foreground. But I was not alone in that thought. Shortly after arriving together with my son Robin, who was helpfully acting as assistant and sherpa to carry all the gear, another set of flashlights approached out of the dark, revealing Tony Rowell himself together with his sherpa. A nice coincidence indeed, and a good opportunity to get some tips from the expert. However there was not really enough space for two tripods at the perfect vantage point, and since Tony was there to make a time-lapse movie for the noble purpose of promoting designation of the Alabama Hills as a National Monument I left the arch to him after a couple of shots, and wandered off into the rocks to try to catch meteors.

Setting up for astrophotography is quite a job, given the pitch darkness and hand-numbing cold at 2:00 am. Align the mount exactly with the North star, and then don't trip over the tripod; set the interval timer to the correct exposure; check ISO and bulb settings on the camera; make sure the lens is still focused at infinity when there is nothing bright enough to focus on; frame the shot when it is too dark to see anything through the viewfinder; check the drive motor is set for the northern hemisphere, turn it on, remember to turn off at the end of the exposure; then take a few more shots light-painting the foreground for subsequent blending with the star shot in PhotoShop. I ended up with a lot of duds, but imagine I will get the hang of it with practice.



(53) "NORTHBOUND TRACKS"
Racetrack Valley, Death Valley National Park, California

Nighttime provides some interesting opportunities for photography, even when there appears to be no light! Digital cameras have improved greatly in terms of sensitivity and low noise over the past few years, so it is now possible to take photos even by starlight. However, this does require long exposures, and a problem is that the stars move (or, rather, the Earth rotates) surprisingly quickly, so that images of stars start to become smeared out with exposures exceeding a few tens of seconds. On the other hand, that can be turned to interesting effect by capturing images over very long (hours) times, so that the stars trace out their own trails.

The end result depends upon which direction you are looking. To the east or west, near vertical streaks result. Due north is more interesting as (in the northern Hemisphere), stars then appear to circle around the North Star, Polaris. This is a neat effect, but of course one 'star circle' photo is going to look exactly like another. The trick then is to contrast the stars with some terrestrial foreground feature. My aim in the image here was to combine the mystery of the heavens with the mystery of the moving rocks of Racetrack Valley. The rocks are mysterious in that they leave trails behind on the flat lakebed, but nobody has ever seen them move! Thus, star trails and rock trails in the same photograph.

Before sunset I used my GPS to locate the direction of true north, and then went looking around the lake bed to find some rocks with trails heading in that direction. There are numerous moving rocks near the southern end of the playa, and I was pleased to find a pair heading at just the right bearing. While it was still light I set up the camera with a super-wide lens pre-focused to infinity, and took a shot that I could later use to blend the foreground into the final image. Then came the waiting. The moon was almost new and would not rise until near dawn, but even so several hours passed before the sky was fully dark and the stars shone bright and crisp. No need to be uncomfortable though, as I had taken a sleeping bag and mat, drink and dinner. Indeed, it was quite an experience to lie out with the moving rocks as silent companions and watch the stars emerge. Around 10 pm I started the remote interval timer that controlled the camera and, my job done, settled down to sleep.

Some technical notes. Getting the star trails to trace out long arcs needs an exposure of several hours. This is one instance where film cameras still have an advantage over digital. The shutter on older, 'mechanical' cameras can be left open indefinitely without running down the battery! Also, the reciprocity characteristic of film actually becomes an advantage as compared to the perfect linearity of digital sensors. Background light in the sky registers only faintly on film during a long exposure, whereas the continual movement of the stars means that their trails are not subject to reciprocity failure. This is good, as the night sky is not as dark as it appears, and even in the remote backcountry of Death Valley light pollution from distant cities still intrudes. A solution for both problems with digital cameras is to take numerous consecutive exposures of medium duration, rather than a single much longer exposure. Then, if the battery fails, all is not lost; camera noise, which accumulates with length of exposure, is minimized; and there is less build-up of background light. The photo above is a composite of nine 20 minute exposures using an interval timer, which I later combined as layers in PhotoShop using the 'lighten' blending function, and finally merged with a separate shot of the foreground rocks.





Kissing swans
Jokulsarlon, Iceland

WATER AND ICE

(54) "ULURU CASCADES"

Uluru-Kata Tjuta National Park, Northern Territory, Australia

Uluru (Ayer's Rock) is the iconic symbol of Australia's 'Red Centre'. In December 2007 I was invited to speak at a meeting of the Australian Physiological Society, and afterwards took the opportunity to travel to Alice Springs in the company of my colleague and good friend Dirk vanHelden. We rented a 4WD camper van with which to explore the outback, and drove through the McDonnell ranges south toward Uluru.

The famous rock is a magnet for photographers, and is usually captured at sunset and sunrise, when it takes on a spectacular sequence of color changes. However, to be honest, this has become very cliched, with hundreds of nearly identical photos published on the Web. More so, visitors are tightly corralled, and confined to just one defined 'sunrise' viewing area, and another for sunset, so it is difficult to find any original viewpoint.

Thus, after taking the obligatory sunset shots, I felt a little let down. But all was rescued the next day, which served to reinforce David Muench's maxim that "bad weather makes for good photography". The sky was grey and overcast, and we made use of the unusually cool conditions to set out on the 6 mile hike circumnavigating the base of the rock. Shortly the clouds grew darker, it started to drizzle, and then to pour down in earnest. After some delay small trickles of water began to course down the rock face, and gradually these grew into roaring cascades that overflowed the pools at their base, and flooded across the path. This is a rare occurrence in the outback in the middle of summer! A ranger passed us exclaiming that she had never seen anything like it before.

So, a great subject for unusual photographs; but there no shelter under which to take my camera from its secure haven in my (waterproof) Lowe backpack. Any attempts were first thwarted by raindrops on the lens, and then when the interior elements of my mid-range zoom completely fogged up.

The solution came when we finally returned, completely soaked, back to the van. This provided necessary shelter from the now torrential rain, and the distance from the perimeter road to the rock allowed me to use my (non-fogged) telephoto lens. Shooting from a vehicle was restricted to places along the roadside where where it was possible to safely park, and only a few pullouts provided a clear view unobstructed by trees. The photo here with two cascades framing a dead tree ended up as my favorite. Basically a 'straight' shot, using a polarizer to reduce reflections from the rain-slicked surface, a mild saturation boost to enhance the deep red of the rock, and a curves adjustment to compensate for the loss of contrast through the heavy rain.



(55) "JOKELBERGS UNDER A WINTER SKY"
Jokulsa Beach, Iceland

Winter has become our preferred time of year to visit Iceland. The tourists are gone, and the light is fantastic. The sun does not rise until about 10:00am, and it is gone by 4:00pm. In between the sun never rises far above the southern horizon, so the 'golden hour' effectively lasts through the entire daylight time.

My selection here is from perhaps THE top photographic location in Iceland; Jokulsarlon. The main feature is a lagoon, into which icebergs calve from a glacier descending from the Vatnajokull ice cap. The bergs drift around in the lagoon, slowly melting until they pass out to sea down a narrow channel. But they are not done yet, as the tides and waves may wash them back up onto the black sand beach. There, the jewel-like bergs contrast with the jet black volcanic sand, making a subject at least as intriguing as the lagoon itself.

Many photographs of the Jokulsarlon beach feature long-exposure images of bergs at the edge of the sea, with receding surf blurred into dream-like patterns. That was not to be on our December visit. Firstly, an account by Varina Patel described her disastrous experience just a month earlier, when a rogue wave brought her down, resulting in a damaged knee and destroyed camera and lens. Secondly, all the bergs had in any case been washed up to the high water mark, and the surf (which appeared innocuous) was breaking far down the beach.

Thus, on this visit I had to be content with creating less dynamic images. In consolation, the winter sun rose and set well to the south and out to sea, rather than behind the mountains as in summer. If the clouds cooperate, this can make for spectacular skies. I was lucky on this occasion, when a clearing in the south west allowed the late afternoon (3:00 pm!) sun to shine through and catch drifting clouds overhead. To capture the photograph I selected my widest (10 mm) lens and positioned the tripod low down, close to a grouping of attractive bergs. Even with that lens, I could not encompass enough of the sky, and the final image is a blend of two shots, with exposures set independently for sky and foreground. In both cases I used a 6 stop solid ND filter to give a 30s shutter speed to blur the surf and the drifting clouds.



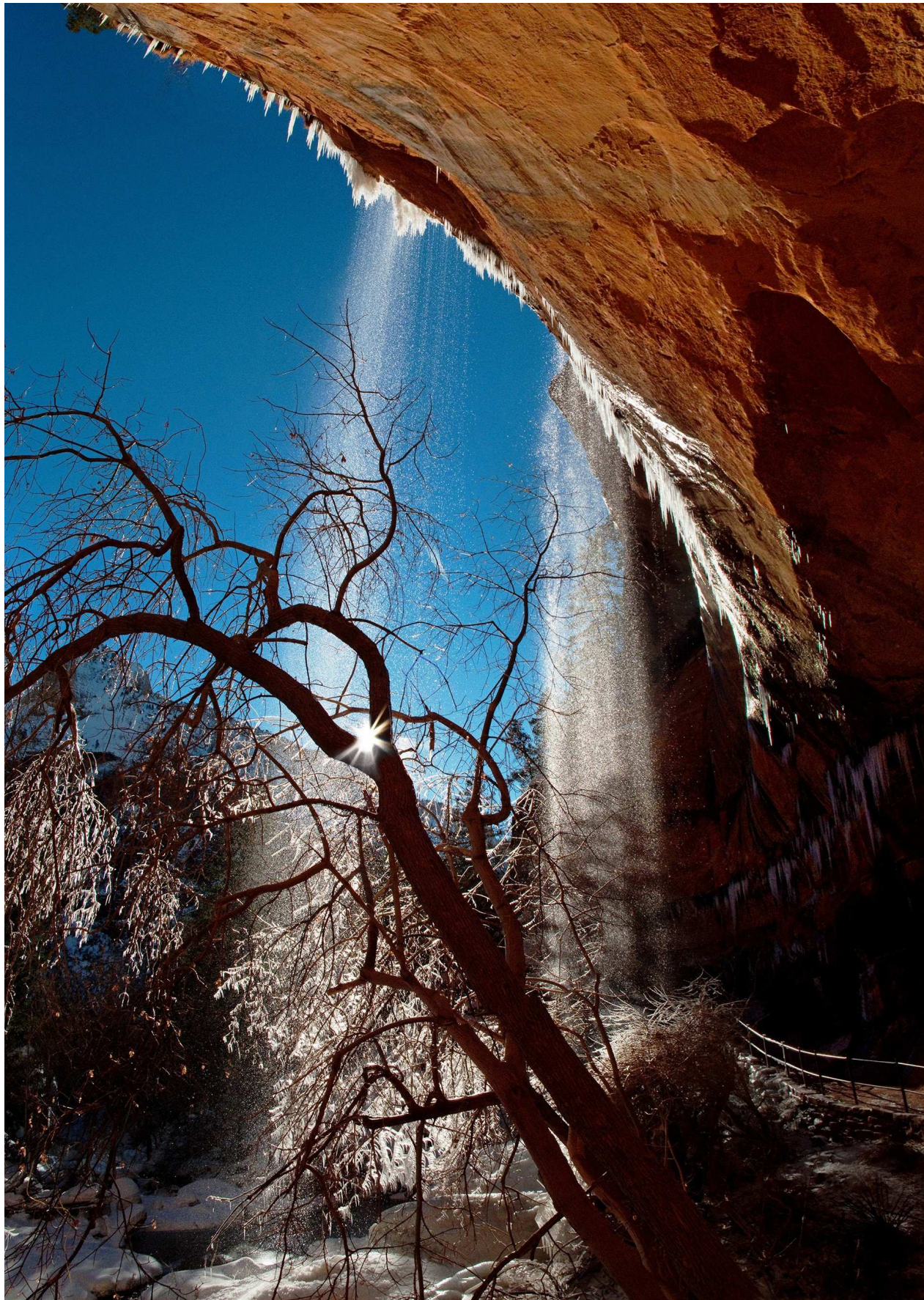
(56) "DOUBLE WATERFALLS AND ICICLES AT THE EMERALD POOLS"
Zion National Park, Utah

Steve Cossack runs a series of photography workshops entitled 'f8 and be there'. That title encapsulates the view that the main thing in landscape photography is to be at the right place at the right time. The 'f8' simply refers to what is likely to be the optimal lens aperture. In other words, don't worry too much about the technicalities; it is the subject and the lighting that matter. However, this presupposes that you have a camera with you at the time! Having found myself on several occasions gazing at a great sunset but without a camera, my requested Christmas present one year was a new Canon G10. This 'point-and-shoot' camera is small enough to carry in a (large) pocket, yet can create 15 megapixel RAW files, and has received excellent reviews.

When faced with a steep and icy dawn hike to the Emerald Pools in Zion Canyon, I thus decided to leave my heavy camera backpack with SLR gear and tripod behind in the car, and to take only the G10. My objective was the lower pool, where a stream cascades over an overhang creating multiple falls - and best of all, the trail passes below the overhang and behind the falls. I had previously photographed here in autumn, catching the falls as they were lit by the rising sun against a background of fall colors in the cottonwood trees.

Now, in the middle of Winter, the trees were bare, but the lack of color was compensated by fantastic fringes of icicles hanging from the lip of the overhang. Alone at this early hour, I scouted a good position to capture the free-falling water, and waited for the sun to rise over the opposite side of the canyon. Although the G10 zooms to an unusually wide angle (28 mm equivalent) for a 'pocket' camera, that was not enough to frame the entire height of the falls, and moving further away destroyed the composition. My improvised solution was to treat this as a vertical panorama, taking three sequential (handheld) shots trying to move the camera along a near perfectly vertical axis. The images were captured just as the sunlight back-lit the falls, while the back of the overhang remained deep in contrasting shadow. To avoid complications I took this initial series of shots using the tree to block direct sunlight from the lens, and then took an additional shot with the sun just peeping between the branches to create a 'sunstar' effect.

Handholding the camera I was unable to use a long exposure to blur the falls to get an 'angel-hair' effect I returned the next morning equipped with tripod and DSLR camera. By then, however, the rangers had closed off the path because of the danger of falling icicles. I thus had to be content with the 25 megapixel stitched image from the G10, which nevertheless made an excellent print. Amazing for such a tiny camera!



(57) "GOLD AND BLUE ICE CAVE"
Vatnajökul Glacier, Iceland

This photo was taken on an Ice Cave tour guided by Einar at Local Guides. We visited Iceland in December, and encountered heavily overcast and rainy weather on the first day we met up with him. Although the ice cave we entered was architecturally impressive, it lacked any real color. However, by the next morning the sky was clear, and Einar took us to a much more spectacular cave, with a double entrance that aligned with the rising sun to create a wonderful golden glow contrasting with the blues and greens of light filtering through the ice.

Ice caves present some unique photographic challenges, and as this was my first time I was not sure how best to solve them. The space is confined, so I took my widest lens, a 14mm on a full-frame camera (Canon 5DIII). Then, to handle the extreme contrast range I bracketed 3 exposures for each shot at 2-stop intervals, and manually blended these to create the final image. Perhaps the biggest problem though was finding and setting up good compositions. To get a wide field of view I found that I mostly had the camera hard up against the back wall of the cave, making it difficult to see what was in the frame through either the viewfinder of the live-view screen. Compounding that, the floor of the cave alternated between irregular blocks of slippery ice, glutinous black moraine dirt and silty, ice-cold water, making avoidance of injury and immersion a higher priority than optimizing the camera angle.

Enough excuses! The photo on the facing page was my favorite, and perhaps the only one where I can claim a deliberate composition, rather than a random shot hoping that a super-wide lens would capture something interesting. My aim was to combine the diagonal slant of the ice formations together with contrasting colors progressing from white through green and blue to gold. As a neuroscientist, the bizarre, brainlike formation at the top right appealed to me, and I framed the shot to juxtapose it against the golden light entering through the lower tunnel and highlighting the group of figures. I usually don't include people in my landscape work, but here I felt that they helped (indeed, were vital) to provide scale to what would otherwise be an utterly abstract scene.





The Second Wave
Coyote Buttes North, Utah

ROCKS

I live in the South west of the United States, where the bare bones of the Earth's geology lie fully exposed rather than hidden under veils of vegetation and trees. In particular, the eroded sandstones of the Colorado Plateau display the most colorful and fantastical formations to be found anywhere on the planet.

(58) "HOBGOBLIN'S ARCH"
Little Finland, Nevada

The best light for photographing the sandstone formations of the Southwest is indirect; when the sun's rays are reflected into the image from an adjacent rock wall to accentuate the golden red color of the rock and provide a pleasantly diffuse illumination. A classical example of this technique is photography in slot canyons, as illustrated by the images of Antelope Canyon on pages 59 and 145. Another famous example is the sunrise view of Mesa Arch in Canyonlands National Park, where the rising sun hits a vast rock face below the arch, casting a golden glow on its underside. However, that location is too famous, and even in the middle of winter a group of photographers can be found each clear morning, blocking all the good viewpoints with their tripods!

Thus, I was pleased to find a 'miniature' Mesa Arch while visiting Little Finland (AKA Hobgoblin's Playground) - an extremely remote and little-known region of amazingly eroded and fanciful sandstone formations in Southern Nevada. The arch is much smaller than the Canyonlands version - only about 5 ft across - but lights up beautifully as the sun rises over the opposite hillside and hits the rock face below the formation. Moreover, the arch itself is patterned with more attractive erosion flutings than is Mesa Arch itself. To add more interest, I also tried to catch a 'starburst' as the sun cleared the top of the arch. There are two tricks to make this work. First, the lens needs to be stopped down to its minimum aperture to project a pattern of the iris blades. Second, it is important not to capture the full disc of the sun, as that washes out the image and projects ugly reflections from the lens elements. Instead, the photo needs to be framed so that only a tiny part of the sun hits the lens. This is rather trial and error; so I took several handheld shots varying the camera position slightly, and later selected the best one.



(59) "ANTELOPE ARCH"
Lower Antelope Canyon, Page, Arizona

Antelope canyon is a small slot canyon on the Navajo reservation just outside Page, Arizona. It is bisected by a major highway, and lies close to one of the largest, and most polluting coal-fired generating plant in the country, so the immediate surroundings are not auspicious. Nevertheless, it has been a favorite subject among photographers since its 'discovery' some 20 years ago. The reason is that the depth and geometry of the canyon are just right to bounce sunlight off the sinuous sandstone walls to create a wonderful inner glow. Very deep, narrow canyons, such as Buckskin Gulch, allow little light to penetrate to the bottom, and have a dark and gloomy feel. On the other hand, shallower canyons like Spooky and Zebra are too brightly illuminated by direct light, so that the walls largely reflect only the true color of the sandstone. Although the rock of Antelope Canyon is itself only a nondescript orange/brown, it comes alive when sunlight falling directly on one wall reflects multiple times to cast a faint, but brilliant orange glow. Moreover, wonderful color contrasts are created by juxtaposed areas that receive either reflected sunlight, or take on a blue/cyan cast from the cloudless sky.

The trick in photographing slot canyons is to master the extreme contrast range. Indirect light filtering into the canyon is quite dim, necessitating exposures of a second or more, but any direct sunlight hitting the rock, or view of the sky, completely blows out the highlights. The art is to frame pictures to just exclude such highlights. Inconveniently, this usually seems to involve camera angles requiring the photographer to lie flat on his back on the canyon bottom, squeezed into a nook so that an overhang of the near wall blocks out any direct view of the sky. Such was the case with the photo here, taken in Lower Antelope Canyon. I had wandered up and down the length of the canyon a few times scouting for interesting combinations of light and rock form, and was taken by this composition where a sinuous hollow in the back wall framed glowing rock high on the opposite face of the canyon. A wide-angle (16 mm equivalent) lens nicely took in the arch, and stopping down the lens to get good depth of field necessitated an exposure of about 1 second. However, there was no space to set up a tripod. Instead, I took the shot hand-held, pressing the camera against the rock for stability.



(60) "SAND TUFA - MOONSET BEFORE SUNRISE"

Mono Lake, California

Sometimes it is possible to create a landscape photograph which, although entirely 'straight' and unmanipulated, looks as if it was shot nowhere on Earth. The first requirement is, of course, to find somewhere that is truly unusual. Among the most surreal locations I know of are the sand tufa of Mono Lake. Unlike the better known carbonate tufa formations in and around the water-line of the lake the sand tufa are small structures, only two or three feet high, but sculpted into fantastically delicate filigree patterns. Owing to their delicacy, the sand tufa are not widely advertised, and are infrequently visited. I happened upon the scene here only by chance exploration.

A second feature that helps evoke an 'other-worldly' atmosphere is under unusual lighting. Under full sunlight natural grey color of the sand tufa appears rather mundane. But catch them at the edge of the light, an hour or so before sunrise and it is a different matter. The saturated blue of the (almost dark) sky casts a diffuse overhead illumination, while the faint orange glow in the east preceding the rising sun throws a subtle, contrasting front light. My visit was also timed around a full moon, providing a highlight in an otherwise uniformly blue sky.

I often like breaking the 'rules' of composition, and here placed the moon directly in the center of the frame - also framing the tufa so as to align as a V pattern centered on the moon. My aim was to create a symmetry that would draw the eye into the picture, but with enough variation and asymmetry in the formations themselves to maintain interest. To emphasize the tufa I used a wide-angle lens, getting close, and setting the tripod as low as possible in a small depression. The composition is quite critical, as movements of the camera by a only a few inches make a big difference. Working on soft sand also introduced the complication that I needed to anticipate in advance where I might want to photograph, so as to avoid leaving obvious footprints that would quite destroy the otherworldly affect.









Annie, my photographic elph in an Icelandic ice cave.



