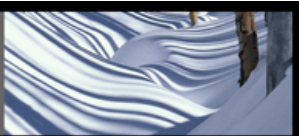


MICHAEL CLARK
PHOTOGRAPHY



NEWSLETTER



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fall 2007



FALL 2007 NEWSLETTER

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Hanging tough and waiting for possibilities...

ON A RECENT SHOOT I WAS REMINDED YET AGAIN THAT CONTROL IS A MYTH.



While suspended 500 feet above terra firma on Devils Tower last month I was reminded once again that as an outdoor photographer we are in control of very little. Sure, I had the climbers start up the climb with plenty of time to get set up for the shot that you see on the cover of this issue of the newsletter. But mother nature isn't always as cooperative as I'd like. As soon as I started to shoot my good friend Jacopo Alaimo, an Italian huber-guide, on the 2nd pitch of the classic 'El Matador' the clouds moved in and we dropped into murky shadows - not what I was planning on or hoping for. We held tight on the wall and managed to get a few beams of light hitting the climb but only for 20 seconds here and there.

Just when it seemed that we had done hours worth of hard work for nothing I noticed a gap in the clouds just above the horizon. I ascended to the top of the route and set myself up for *the* shot that I really wanted and we waited. We waited for 30 minutes or more. And finally for about four minutes just as the sun kissed the horizon we had the most incredible light I have ever seen. There was a haze that the sun was shining through and on the wall the light was dancing with hues of pink, orange, red, and gold. I shot sixty or more frames in that four minutes and I knew we had gotten something special. The light was so soft and ethereal that I had to crank the camera up to ISO 800. The images have a very nice texture to them because of that, not grain or noise but a film like quality with the sharpness of digital.

As an adventure and outdoor photographer, it is those rare moments when you are prepared and everything falls into place better than you could have ever planned that really make a career. I seem to have been prepared for quite a few of them and it is always magical when it happens, not only for me but also for the athletes I work with.

A few days earlier I had shot some portraits of Frank Sanders, owner of the Devils Tower Lodge and "the" guide for climbing Devils Tower. Those images aren't included in this newsletter as they are part of an article proposal I am putting together for several possible magazines. But the point here is, during the photo shoot Frank began to feel like a superhero with both myself and the assistant egging him on. By the time we were done Frank was in tears and it ended up being a very emotional and memorable moment. It isn't often that I feel I can give back to the people I photograph. As a pro, it always feels like I am taking, taking and taking more from those in front of the camera. It feels good to use photography to give back and I plan on doing a lot more of that.

Earlier that week I had also photographed an incredible woman, Jessica Kilroy, whom you can see in the *Parting Shot* image on the last page of this newsletter. Besides shooting rock climbing images of her, we also created some new portraits for her next album. She is an incredibly talented singer/songwriter and musician. Look for her music on iTunes, she'll be famous someday!

All in all, my recent Devils Tower trip reminded me of the incredible privilege we have as photographers to travel and meet amazing people - and that we can engage them in a way that affects us all.

publisher, editor, and photographer
Michael Clark

Michael Clark Photography
4000 La Carrera, #924
Santa Fe, New Mexico 87507 USA
office 505.438.0828
mobile 505.310.4571
mjcphoto@comcast.net
www.michaelclarkphoto.com

Michael gets 2nd Place in Sportsshooter.com Photo Contest

RECENT IMAGE OF TIMY FAIRFIELD WINS 2ND PLACE IN THE SPORTS ACTION CATEGORY



Michael's 2nd place image in the July sportsshooter.com photo contest of Timy Fairfield on Superdope (5.13b) in the Crystal Cave near Jemez Springs, New Mexico. This image was also the *Parting Shot* in the last issue of the newsletter.

Last month I found out that a recent image of mine was chosen by the Sportsshooter.com community as one of the best images submitted for the month of July in their clip contest. Sportsshooter.com is a 5,000-plus member strong sports photography website and community. It is the largest photo community of its kind on the internet and it's also a website chocked full with insider info on shooting sports, great images and the gear involved.

From time to time I submit images for the monthly clip contest - the competition is fierce and there are a lot of world renown photographers submitting their work. And since my adventure sports photography is outside the norm in a world of football, baseball and basketball images it is even more satisfying to see a rock climbing photo make the cut. This image was the *Parting Shot* image in the last issue of the newsletter and has also been added to my portfolio - both on my website and

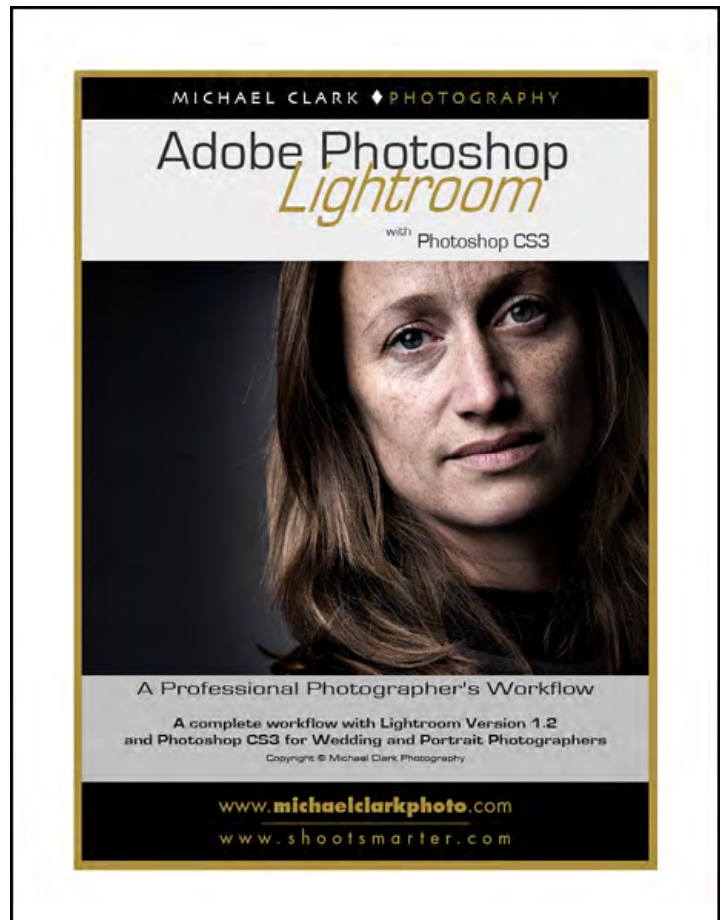
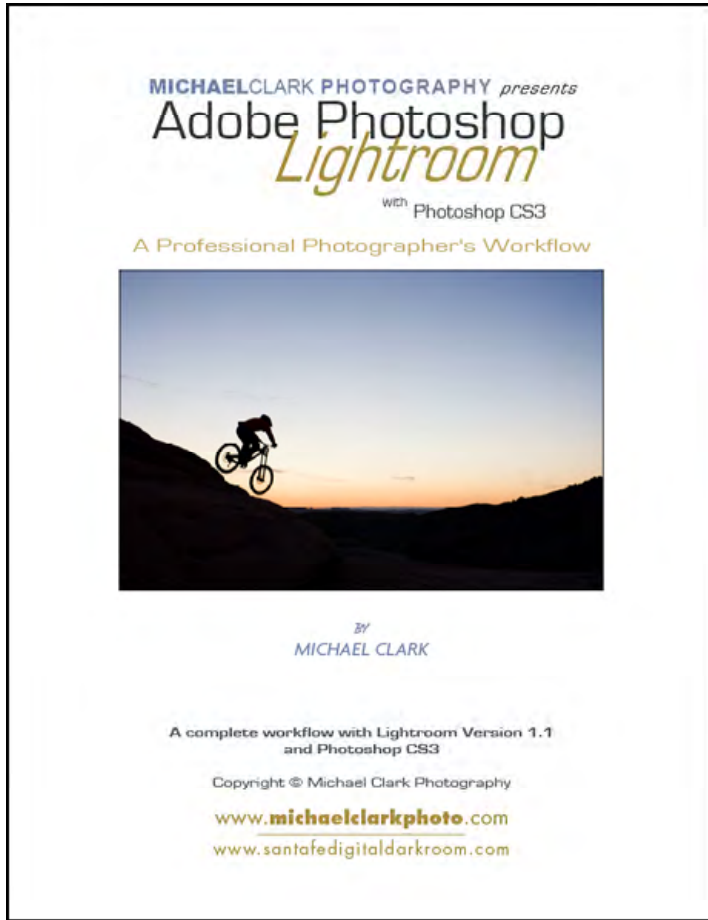
in my actual portfolio. The image took a lot of work to produce. The cave is close to the road but we had to lug over 200 pounds of lighting gear, a generator and climbing gear up into the cave on one of the hottest days of the year. In other words the sweat factor was high! But it paid off quite nicely and I am sure this image will grace a few magazines.

My thanks to Timy Fairfield for climbing the route twice on such a hot day and for putting in the work to create this image. The image was shot with A Nikon D2x, 10.5 mm fisheye lens and with two Dyna-Lite Uni400jr strobes and 30 degree grid spots.

RECENT CLIENTS: Outside Magazine, Nikon, American Photo, Climbing Magazine, Prana, ProSales Magazine, Sharp End Publishing and O'Reilly Digital Media.

Adobe Photoshop Lightroom eBook in its 3rd Edition

THE UPDATED LIGHTROOM WORKFLOW NOW COVERS VERSION 1.2 AND PHOTOSHOP CS3



The *Adobe Photoshop Lightroom: A Professional Photographer's Workflow* eBook covers version 1.1 of Lightroom and Photoshop CS3. Even though Lightroom is in version 1.2 at the moment, there are no changes to the physical user interface so the latest version of the eBook is still current. New topics covered in this workflow (from the 1.0 version) include: Lightroom catalogs, five ways to speed up Lightroom, synchronizing folders, an in-depth explanation of the Clarity slider, an in-depth examination of the new sharpening sliders, an explanation of the new lens correction controls, Lightroom 1.2 and Photoshop CS3 compatibility and much more. I am still offering it at the low price of \$24.95.

To purchase the e-book contact Michael directly at mjcphoto@comcast.net or buy it on the [Santa Fe Digital Darkroom](http://SantaFeDigitalDarkroom.com) website. Payments accepted via PayPal or with a credit card on the Santa Fe Digital Darkroom website. Drop me an email and I can send a payment request to you directly via PayPal.

Also, for those of you that have bought a previous version of the workflow eBook - drop me an email and I can send you the upgraded version for only \$12.95!

And a new version of the Lightroom Workflow ebook tailored to wedding and portrait photographers will be available soon via Will Crockett's Shootsmarter.com website. This is a different workflow than I normally use but one that is dead on for those working in the wedding and portraiture world. It incorporates an sRGB color managed workflow that works better with printers like those used in the wedding and portrait industry. Hence, without too much work you can deliver prints to your wedding and portrait clients that match your vision exactly.

This new edition of the *Adobe Photoshop Lightroom: A Professional Photographer's Workflow* eBook will be available soon. Check my blog or shootsmarter.com for availability. It will be priced the same as my main Lightroom eBook - at \$24.95.

Digital Photography: Where do we go from here?

MY LIST OF WHAT WE REALLY NEED IN NEW DSLR'S AND MEDIUM FORMAT DIGITAL CAMERAS...

I originally thought up this article about a month ago just before Nikon and Canon announced some of the most ground breaking cameras to ever hit the market. In light of these new digital SLR camera models I thought I'd still go ahead and give my opinions on "Where do we go from here?" and add my comments relating to the latest cameras.

I have written before about maximum resolution in 35mm type digital SLR cameras so I won't go into that here. Suffice it to say that I think we have hit the wall or are pretty much right there in terms of how many megapixels are practical and possible in DSLRs. Canon's recent announcement of the 1Ds Mark III with its maximum resolution of 21 MP is going to push Canon's lenses very hard. And if the rumors hold and Nikon releases a 20+ MP camera next spring then we'll have come very close to the limits of 35mm optics since the lenses are the limiting factor - or rather the diameter of the lenses.

So without further ado here is the list of what I feel we really need in new digital cameras, for both 35mm and medium format:

HIGHER BIT DEPTH: The first thing that I have had on my wish list for a long time is higher bit depth. Currently most digital cameras (35mm) operate at 12 bits (4,096 colors per channel). While it works quite well, highlight blooming is a common issue and transitions between highlights and shadows could be better. Hence, I am not surprised to see both Nikon and Canon introduce 14 bit cameras and this is a huge improvement in image quality that is reason enough to upgrade even if there were no other improvements in the camera.

One of the major reasons for a higher bit depth besides the issues above is that it also gives you a lot more headroom when tweaking images in photoshop. Now, I don't go to extremes in general. I am one of those photographers that likes to get it right in the camera - but every once in a while when I pick up the artistic license it is nice to go a little crazy with an image and not have severe noise or pixelation occur.

On a side note, medium format backs have been 14 bit for a long time (even though most advertise their backs as 16 bit). The only medium format back that is truly 16

bit are the Leaf backs according to my sources. True 16 bit is fantastic and in the future, we can only hope that the camera manufacturers will aim for true 16 or even 24 bit capture.

BETTER LENSES: The optics are currently the limiting factor in terms of resolution for 35mm based digital cameras. This has more to do with physics than it does our ability to build incredible lenses. Nonetheless, better made optics and optics made specifically for digital capture would help eliminate some of the issues that commonly appear in digital images such as chromatic aberration, vignetting, loss of sharpness and overall image quality. This is especially true with wide angle lenses and both Nikon and Canon can improve their optics in this genre.

Nikon has already started building digital specific lenses and is shipping these along with the new D3. On the Canon front, especially with their new 21 MP camera, their optics need a big improvement if they hope to keep up with that sensor. At the moment, I would venture a guess that most of their lenses don't resolve as much detail as that 21 MP sensor. Even with the 16 MP 1Ds Mark II, Canon only had a few lenses that could match the resolution of the sensor - I haven't done any testing on this but from what I have heard from Canon shooters it seems to be true. And with my Nikon D2x, it pushes my lenses very hard - only the best lenses can really resolve what that sensor can produce.

As a side note with medium format digital capture the optics have not yet become a limiting factor because of the larger diameter lens mount and we haven't yet reached a resolution that really taxes those lenses. Even so Hasselblad has designed specific digital lenses, mostly wide angle options, for the latest H3D.

WIDER DYNAMIC RANGE: As a pro photographer who often shoots in challenging lighting I am always wanting greater exposure latitude, especially in the highlight areas. Digital has significantly more detail in the shadows than slide film ever did and we can't complain there at all. It is only in the highlights that I wish we could improve the dynamic range of these cameras. Part of this will be helped by higher bit depth

(as discussed already) and part of this will have to be addressed via firmware as it has been with the latest Canon 1D Mark II. I applaud Canon for including what they call "Highlight Protection" in their latest cameras as this helps retain highlight detail. I have heard that Nikon has incorporated something similar into its new Nikon D3, but it remains to be seen how effective it is in everyday usage. This is an area where overall image quality can be drastically improved. We many not always need extreme exposure latitude but it gives us many more options in the final processing and obviously in contrasty and difficult lighting conditions.

LIVE AND ACCURATE HISTOGRAM IN THE VIEW-FINDER:

It might be considered a bold move by some, but if I had my way I would take the standard metering nomenclature out of the cameras viewfinder and replace it with an accurate live histogram. Why? Because for metering these days the cameras meter is only the starting point for a good digital exposure. Using the histogram to judge exposure is a much more accurate and better system then setting your camera in manual mode and just clocking the exposure where it tells you. This would allow us to work faster and really lock in the exposure without having to look down at the back of the camera and check out the histograms. Even better if they could have a "heads up display" on the screen in the viewfinder that splits out the red, green and blue histograms after each shot that would be incredible. And last but not least - if we could have accurate histograms from the actual raw images instead of histograms built from a jpeg rendering that would be HUGE!

LOSE THE 35MM FORMAT FRAME: This might just be a personal preference, but I am not a huge fan of the overly rectangular 35mm frame ratio (2:3). I would much prefer to see a 6x7 or 6x45 type framing ratio since the 35mm frame has to be cropped quite a bit for the normal magazine page. Nikon has caught onto this idea by offering different crop factors with the new D3. I think another reason I'd push for a less rectangular sensor is that there is a lot of wasted space in the image circle with the standard 35mm frame. A 6:7 framing ratio makes better use of the lenses image circle and would likely have less vignetting as well.

MORE ACCURATE AND RELIABLE AUTOFOCUS:

With the advent of high resolution digital SLRs we have seen that the autofocus of the film days wasn't all that accurate. And it still proves to be a hot topic. Witness the big autofocus issues with the brand new Canon 1D Mark III. I know of several sports and wildlife photographers that feel burned by Canon because the autofocus is less accurate than their previous camera. In my own experience, I have to send in my Nikon D2x about once a year to have the autofocus re-aligned because a few outer focus point start to go off kilter. This is a quality control issue I think and for companies like Canon to release a pro camera with major autofocus issues is pretty rough, especially when buyers plunk down \$5,000 and expect it to work!

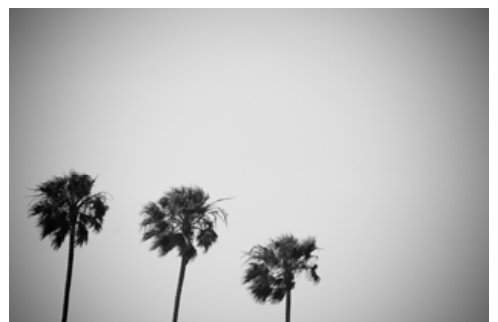
LOWER NOISE AT HIGH ISO'S: This has been an ongoing issue for Nikon shooters, not so much for Canon shooters. But now with the release of the Nikon D3 and the incredible sample photos that mark a new era in low light shooting possibilities it appears that some major strides have been made in this area. Kudos to both Nikon and Canon for working on this - I can't wait to try out a D3 at 6400 ISO. That will open up entire new worlds of photography.

FASTER FRAMING RATES FOR 12+ MP CAMERAS: Canon just announced a 10 MP camera that shoots at 10 fps and Nikon's D3 has specs of shooting at 9 fps at 12 MP so it seems like great strides have been made in this area as well. As the technology continues to grow I'm sure we'll see even faster framing rates on even higher megapixel cameras.

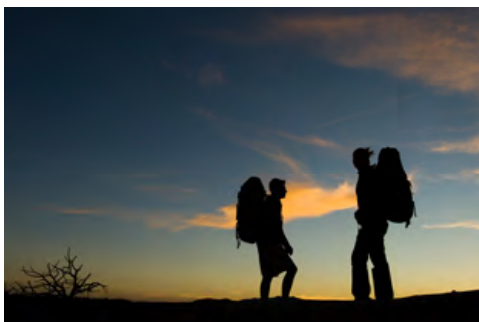
BETTER VR & IS LENSES: It would be very nice to see the Vibration Reduction (aka Image Stabilization) improved as well to help counteract the high resolution these cameras can capture. When you increase the number of pixels on a sensor you also increase the sensitivity to camera shake and at 21 MP with the latest Canon that will become a huge factor. Don't get me wrong - the VR and IS is already very good but I hope they keep working on it so it can keep up with the new high resolution cameras.

SMALLER AND LIGHTER CAMERAS: Last but not least, do these things have to weigh four pounds with a lens on them? Hopefully smaller, lighter, more ergonomic bodies and lenses are coming as well.

[PORTFOLIO]



[PORTFOLIO]



Exposure for Digital Capture

DETERMINING THE “CORRECT” EXPOSURE WITH DIGITAL ISN’T AS EASY AS IT SEEMS

While it may not seem like a big deal, determining the optimum exposure for digital capture is quite different than it was with film if you shoot RAW and want the best possible image quality. Unlike our eyes which are non-linear devices a digital camera is a linear device. Our eyes can adjust the brightness of the sky so that we can still see detail in the shadows and not have the sky go completely white. By comparison, a digital camera is basically measuring the brightness of a light source, hence if you double the amount of light emitted by a light source the sensor of a digital camera reads that as twice the amount of light.

And the physics of how a CCD or CMOS sensor works also affects image quality. For a 12 bit sensor, half of the sensitivity (and hence the information it can record) lies within the 1st brightest stop of light - that means 2,048 bits of the 4,096 total rest in the farthest right third of the histogram. Hence if you underexpose an image you

“THE RULE OF THUMB THESE DAYS IS TO EXPOSE WITH YOUR HISTOGRAM AS FAR TO THE RIGHT AS POSSIBLE WITHOUT BLOWING OUT ANY HIGHLIGHTS.”

Glossary:

1 Bit = one pixel with two possible values, either black or white.

8 Bit = a pixel with bit depth of 8 has 2^8 possible values which equals 256 tonal possibilities.

12 Bit = a pixel with bit depth of 12 has 2^{12} possible values which equals 4,096 tonal possibilities.

16 Bit = a pixel with bit depth of 16 has 2^{16} possible values which equals 65,536 tonal possibilities.

are throwing away massive amounts of data that your sensor can record. So in light of this - what is the best exposure? The rule of thumb these days is to expose with your histogram as far to the right as possible without blowing out any highlights - or at least not any important highlights. The reality is that you are going to blow out some highlights if you have any metallic surfaces or a bright background. That is no different than it was with film.

Now, of course if you expose in this manner all of your images will be a bit overexposed and look washed out. That is fine. The images can be adjusted in the raw processing stage to look as they should. Just keep checking your histogram on the back of the camera and forget what the image looks like on the LCD save for composition. A nice by-product of exposing to the right is that you also have less noise in an image no matter what ISO you are shooting at. And please note this technique is only if you are shooting raw. If you are shooting jpegs then they are cooked as soon as you shoot them and overexposing those won't help you out at all.

Now the only fly in the ointment is that the histogram on the back of your DSLR is a histogram calculated from a jpeg rendering of that image. Hence it isn't showing you the full histogram and you normally have about 1.5 stops more headroom on the highlight end of the histogram. To see just how much, compare the histogram on the back of your camera to that created when you open the image in Adobe Camera Raw or Lightroom. This will give you a guide as to how big the fudge factor is. And then when out shooting and checking the cameras histogram you can say ok, there are a few highlights blown out but I know I have a little headroom so that is ok.

For portraits I prefer to not have any channels blown out because this can lead to strange skin tones. And of course for silhouettes you need to underexpose quite dramatically to make the subject go completely black. Digital in fact sees so much detail in the shadows that it can sometimes be very difficult to get a pure silhouette image. Here again in the post processing you can adjust the shadow detail to make your image a pure silhouette without having to underexpose dramatically. And last, digital capture has an even smaller latitude for the perfect exposure than slide film had - about a 1/3rd of a stop so make good use of your histogram and if in doubt bracket.



Ruth Glacier, AK

In this new section of the newsletter, I will go into detail on how one of my portfolio images was created. For this issue I have chosen an image shot in Alaska on the Ruth Glacier. My three friends, Tim Beynart, Jason Smith and Jason Ham were hiking for turns above our basecamp on one of the very few days we actually had decent weather. We had scouted around camp quite a bit and found no crevasses, hence it was safe to hike unroped as you see in the photo. Since we had been tent-bound for weeks on end and had heard and seen hundreds of avalanches all around us, everytime we had a bluebird day we had to wait for all of the slopes to clear before we could start climbing. To stem the boredom we went skiing around camp even in some nasty weather. On this day we saw a number of large avalanches, including one that fell from the top of the icefall in this photo.

I was shooting with certain clients in mind when I framed up this image, chiefly among them Patagonia and Black Diamond. The image was shot with a Nikon N90s and Fuji Provia 100F back in the film days. I used an 80-200mm f/2.8 Nikkor lens and took the meter reading off the sky. As it turned out Patagonia ended up using this image as a spread in one of their catalogs the next year. It remains one of my best selling stock images and while technically it wasn't difficult to create, three weeks sitting in a tent waiting for good weather that never came was a bit rough. Even so, the Ruth Glacier is one of the most beautiful spots on planet Earth.

A New Digital Horizon *by Michael Clark*

With the latest batch of digital SLR cameras released by Nikon and Canon last month we have glimpsed just a bit of what the future holds for photography. As I wrote in my “Where do we go from Here?” article on page 6 of this newsletter the future is bright for digital photography and for photographers in general. We can now, with the release of these new digital cameras - the Nikon D3, Canon 1D and 1Ds Mark III - capture images we could not have captured on film. What this means for the pro and advanced amateur photographer is that we can now push the envelope of what is photographable and we can push it pretty far. Imagine shooting at 6400 ISO and having the images look like they were shot on 200 speed film. This is revolutionary.

On my recent trip to Devils Tower, Wyoming I was hanging 500-feet above terra firma waiting for last light on a rock climb (see

“WE CAN NOW SHOOT WITHOUT FILL FLASH IN A DIMLY LIT ROOM AND HAVE SO MANY MORE OPTIONS THAT A WHOLE NEW WORLD OF PHOTOGRAPHY HAS JUST OPENED UP.”

the image on the cover of this issue of the newsletter). I had to crank the camera up to 800 ISO so I could get a decently fast shutter speed for critically sharp images. While 800 ISO is pretty good on my Nikon D2x it is nowhere near what these new cameras can produce. And while the images I shot at 800 ISO with my Nikon D2x are very usable - as photographers we are always on the hunt for the best image quality we can get. I have printed that image up to 13x19 inches and there was only a small amount of noise visible on the print - if you looked closely.

Sometimes a little noise (i.e. grain or texture) is a nice effect to make an image feel real. But with the new cameras we can now shoot without fill flash in a dimly lit room and have so many more options that a whole new world of photography has just opened up. Add to the lower noise the fact that, when printed well, the new high resolution DSLR images look like they were shot with medium format or in some cases even large format film cameras of yore and it is easy to see editorial photography has made huge leaps and bounds in the last eight years since the introduction of the Nikon D1.

The upgrade to 14 bit processors is also a huge step forward for digital photographers. Larger bit depth helps with color transitions and highlight blooming. Resolution has pretty much topped out for the DSLR market - 21 to 24 megapixels supersedes what most 35mm lenses can resolve so that will force camera manufacturers to work on other improvements such as better auto white balance, even lower noise levels, faster framing rates, and overall more photographer friendly cameras - and hopefully at some point lighter cameras as well. And if the technology keeps improving at it's current pace the future looks very bright for photographers.

parting shot

Jessica Kilroy clinging to *Mr. Clean* (5.11a) on Devils Tower, Wyoming.
Nikon D2x, Nikkor 28-70mm f/2.8D, Sandisk Extreme III CF Card