

PORTFOLIO:

Images from the Heartland

A darkroom printer goes digital to achieve creative goals by **RON HARRIS**



Plowed Field and Trees

In fall 2003, I took a six-week photography/camping trip, my fourth in seven years, driving some 6,000 miles through the heartland, from Illinois all the way to Oregon and back. A Garmin iQue GPS real-time mapping system helped me take the back roads without getting lost, and wander among farms, dairies, and small, friendly towns—America at its best.

My first three trips resulted in disappointing images, partly because I wasn't there at the right time and didn't try hard enough to find interesting fields. More importantly, it took time to develop a good visual understanding of the area, to develop the skills necessary to capture the scenes and make expressive prints.

I always search for something unique, artistically pleasing and

exciting. Finding an image like this is rare for me, but I know I've found one as soon as I look through my viewfinder. On this trip, I realized that I had been responding to the abstract patterns created by the farmers in the fields.

The hilly areas were the most interesting. The farmers naturally plow in a serpentine fashion, making beautiful patterns. However, you must find the fields in the right



Plow Waves

state of cultivation. In the fall, the crops are cut and plowing begins, the exact timing depending on the weather. Arrive too early or too late and there are no patterns to photograph. Too often there are no clouds to add drama to the scene or it's raining. Many miles have to be driven out into the farming areas to find these scenes.

Darkroom vs. digital

My goal always has been to make an expressive image, a personal view, an image that captures the spirit of the scene as well as the details, conveying more than a

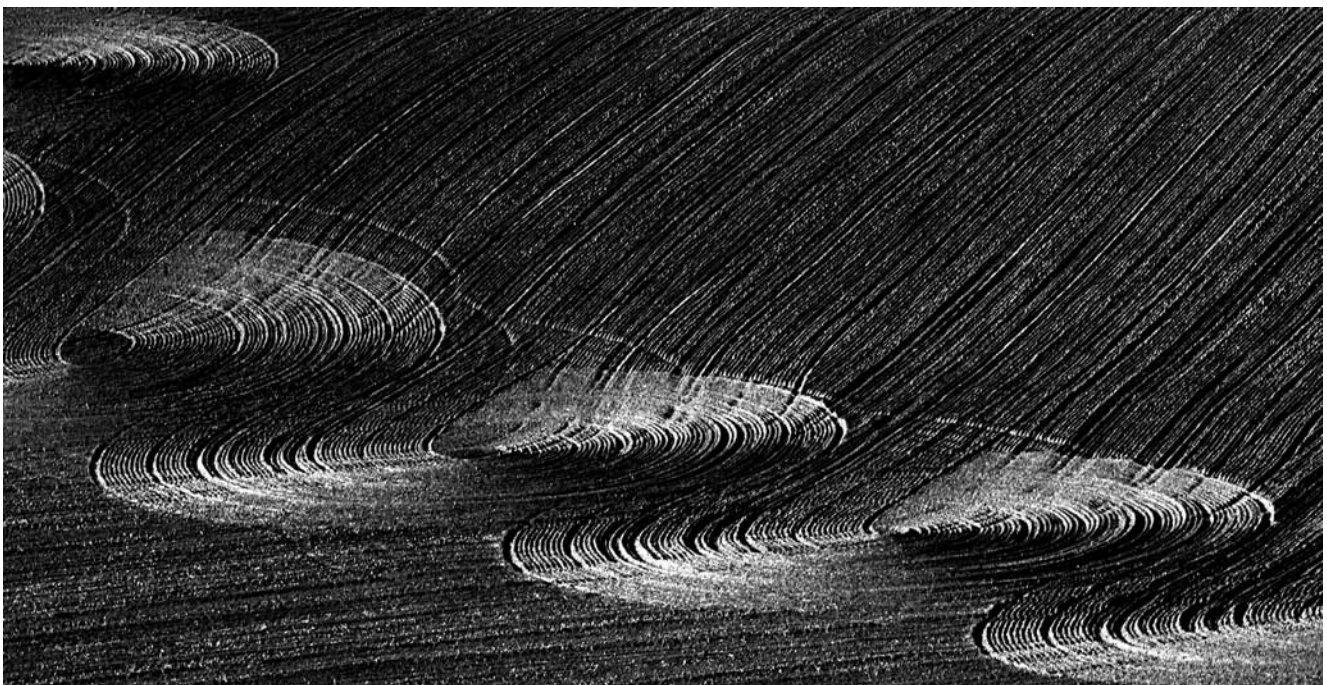
documentary representation of the subject. I agree with Ansel Adams, who has referred to the final print as a "performance."

Having been a film/darkroom photographer for many years, I began to find darkroom work too slow for my way of creatively exploring the potential in an image. Too many ideas to try; too many test prints. If I had been able to consistently pre-visualize the final image, the process would have been quicker. Not feeling bound by traditional processes, I eventually decided to explore digital methods. Initially, I continued to shoot film,

but scanned the film into Photoshop. This was very liberating, letting me explore many ideas and variations quickly, while working toward a final image that conveyed my visual and mental interpretation of the scene.

On my first three trips, I used a Hasselblad with slow black-and-white film (TMax 100 or Technical Pan). Faster films had more grain, so I ruled them out. As a result, I had to use a tripod, which slowed down my image selection process and limited my viewpoints. With the introduction of professional digital cameras, I found digital images could be of comparable quality to film. Since the images are already digital, migration into Photoshop is very easy. No film handling or scans are required.

On the fourth trip, I used a Canon 1Ds digital camera with two image-stabilized lenses—a Canon 28–135 *f*/3.5–5.6 IS and a Canon 70–200 *f*/2.8L IS. This camera has a full-sized imager using CMOS technology (a different type of sensing technology than that used in many digital cameras). Noise



Wheat Field Swirls

levels are very low; I've found I can produce excellent prints up to at least 11×14 inches. The image stabilization facilitated high-quality, hand-held photographs at ISO 400–800. (In some cases, I used Noise Ninja, www.picturecode.com, to reduce noise with higher ISO values.) This eliminated the need for a tripod, and let me photograph more quickly, with an expanded choice of viewpoints.

Black-and-white conversion

I shoot with the 1Ds in RAW mode, using Adobe's Camera RAW plug-in to convert the RAW image into a 16-bits-per-channel AdobeRGB image. Using 16 bits in Photoshop is important, particularly if large tonal adjustments will be made to the image.

I use one of the following six methods to convert the initial color image to black-and-white:

In Adobe Camera RAW

1. Reduce saturation to –100 in Camera RAW, adjusting Temperature and Tint (and perhaps adjusting other sliders as well). Then, change the Mode to Grayscale after bringing the image into Photoshop.

In Photoshop

Bring the image into Photoshop as a 16-bit Adobe RGB image using Camera RAW, then, one of these choices:

2. Change Mode to Grayscale, possibly making an AutoColor adjustment first.
3. Convert to Lab Coordinates and use only the Lightness Channel.
4. Use Channel Mixer.
5. Use two Hue/Saturation Layers (see Russell Brown method at www.adobe.com/tips/phs8colorbw/main.html).
6. Use Calculations—start with Mix Red and Green Channels, 70%.

The advantage to methods 1,4,5 and 6 is that you can

construct an infinite variety of black-and-white filters, equivalent to using them with black-and-white film. One method is not necessarily “best.” Working with duplicate screen images, I try several, until I find the optimum conversion for that image.

Photoshop adjustments

Using a Wacom tablet and pen, I stay close to what can be accomplished in the darkroom. Cropping is very important, particularly since I want to isolate the abstract patterns in the fields. Distracting objects, such as small fallen tree limbs, are removed using the Clone Tool.

I spend a great amount of time adjusting the luminosity and tonal range of all parts of an image. It is here that mood is created. I make much use of the Selection tool, and Levels, Curves and Contrast Adjustment Layers. I also use



Wheat Fields 1

other techniques in optimizing an image—ones that you learn by trial-and-error over a long period of time. I want the final image to look entirely photographic and free of digital artifacts. Image areas, such as clouds, should consist of smooth tones, without posterization, and the boundary between sky and foreground should be smooth and natural. I avoid distracting areas of solid black or white, and completely integrate retouched areas into their surroundings.

Calibrating monitor to printer

To get agreement between the image displayed on a monitor and the resulting print, good monitor calibration is critical. Some use calibration hardware and software, but this usually doesn't work well for black-and-white. I find it helpful to make a 1x7-inch, 32-step

grayscale image in Photoshop that ranges from pure black (0,0,0) to pure white (255,255,255), then adjust the monitor to match a print of that.

I use a simple approach, which involves making adjustments in Adobe Gamma (which is part of Photoshop), then adjusting the monitor controls. In Photoshop's Color Settings, I use Adobe RGB with a gamma of 2.2 and Grayscale Gamma 2.2. This gamma value is a standard Windows setting, and insures that images put on web sites and embedded in email display properly. Otherwise, they will be too dark or too light, even though they may agree with the printer output.

The image on a monitor is a luminous image, which has a possible contrast ratio of at least 400:1. Print contrast is much lower, usually somewhere between 50:1 and 100:1. As a result, a

screen image may look very good, while the print looks muddy, lacking in contrast. In many instances, the image must appear quite contrasty on the screen to produce a good, full-tonal-range print with strong blacks.

Printing

Until the past few years, digital printing of black-and-white images left something to be desired. The best prints were made using color inks, but they weren't archival and suffered from color casts, color crossovers (different parts of the image have a different tint) and metamerism (prints viewed under different lighting took on different color casts, moving toward magenta under incandescent lighting and green under ambient window lighting).

To remedy this problem, several companies introduced grayscale ink sets, which replaced a printer's



Wheat Fields 2



Plowed Wheat Field on Hill

standard color inkset. This brought forth a new set of issues, such as nozzle clogging, batch consistency, image color, maximum black and black fading. I was able to make some fine black-and-white prints using two of these systems: MIS (www.inksupply.com) and PiezoTone (www.inkjetmall.com). Some photographers, particularly those using large-format printers, use these approaches to make beautiful prints, many utilizing customized workflows and RIPs (which control the printer instead of the printer's standard driver).

Currently, all of my prints are made using an Epson 2200 printer with archival, Epson UltraChrome inks, but I replace the Epson printer driver with ColorByte Software's (www.colorbytesoftware.com) ImagePrint RIP.

ImagePrint is easy to use and produces beautiful black-and-white prints that compare very favorably to darkroom prints. The yellow UltraChrome ink is not used. This ink is said to shorten print life and be the cause of metamerism when printing black-and-white with the full-color inkset. Consequently, ImagePrint prints should have a longer life and exhibit essentially no metamerism.

According to Wilhelm Imaging Research (www.wilhelm-research.com), display permanence of black-and-white prints made using the full-color Epson UltraChrome inkset and the Epson driver, is greater than 140 years on Epson Enhanced Matte (EEM) paper and greater than 150 years on Epson Velvet Fine Art (EVFA) paper (when sprayed with PremierArt Printshield). ImagePrint prints should last even longer since the yellow ink is not used.

EEM and EVFA papers have the same coating, producing blacks with a high density of 1.8. (These same inks produce a Dmax of only 1.6 on the popular Hahnemuhle Photo Rag paper.) EEM paper is less expensive, but contains brighteners and acid. In time, the paper yellows as the brighteners fade out, and after many years, the acid will begin to affect the paper. EVFA, on the other hand, is an acid-free, 100% cotton paper with little or no brighteners, is slightly warmer and has a very nice texture.

I use the less expensive EEM for test and proof prints, switching to EVFA for beautiful archival prints having a slight texture. To prevent scuffing and chipping of EVFA's surface (a problem with all cotton papers), I apply two light coats of

PremierArt spray. More spray will lower Dmax.

Conclusion

The development of the professional digital camera with image-stabilized lenses, of archival inks and papers and high-quality printer RIPs, along with continuing improvements in Photoshop, contributed greatly to the creation of this portfolio.

Even though I shot all these photographs during a six-week trip, it required four trips over seven years to create this portfolio. I needed time to understand my artistic response to the fields of the heartland, and to learn how to photograph the abstract patterns that excited me. ■

Ron Harris has been a university physics professor, an observational astronomy researcher and the owner of an oil field service company. He attended Fred Picker's Zone VI workshop in 1982 and Ansel Adams' workshops in 1983 and 1984. He's published numerous articles, and teaches photography workshops. Harris photographs mostly in black-and-white. Check www.harrisimages.com for his images of farm fields, Anasazi Indian Ruins, Western ghost towns, landscapes and botanicals.