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feature on Stephen Johnson

from Stephen Johnson Photography

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With a New Eye

How Stephen Johnson's digital landscape photographs use high technology to reexamine art and nature. **By Russell Hart**

Film is a romantic medium," says Stephen Johnson. "It's part of what made me love photography." But the photographer's romance with film ended suddenly ten years ago, in January 1994. That was when Johnson's engineer friend Michael Collette presented him with a working model of what is now known as a digital scanning back. The device was shaped just like the 4x5 film holders with which Johnson had exposed countless sheets of film in his career as a landscape photographer. Like a film holder, it was designed to be inserted under a 4x5 view camera's groundglass, where it captured the image formed by a lens not with silver halide crystals but with a moving CCD.

Johnson, whose studio and gallery are in Pacifica, California, immediately took Collette's scanning back on a day-long field test to nearby San Francisco. He photographed each of his subjects with both the new device, which had to be tethered to a laptop computer for operation, and 4x5 film. "I was so stunned by the image quality of the scanning back that the thought of using it as a landscape camera was irresistible," Johnson recalls. "I always tell people that film died for me in January of 1994, when I saw how well digital photography could address film's failings." Johnson's subsequent photographs would be made with the new back, which first came to market as a Dicomed product and has since been sold by Better Light, a company started by Collette himself.

Within days of his first experience with the scanning back, Johnson had a grand plan. He would use the technology to create the first body of digital landscape photographs, shooting them entirely in America's national parks—ground

where he and countless other photographers had shot mountains of film. "It seemed to be the real test of this technology, to take it into places that were hard to get to and see if it could rise to the task."

The logistics were formidable. In addition to all his 4x5 gear (minus film holders) and the scanning back itself, Johnson would have to pack his laptop computer, the six-pound, 12-volt battery needed to power the back, and more than the usual quota of tools—for a total weight of around 65 pounds. And then there was the issue of exposure times. Because Johnson's digital back was and is essentially a scanner, its CCD array had to move slowly from one side of the lens-formed image to the other—a process that took almost four minutes at first, and even with advances in sensitivity still takes over a minute. "It really isn't well-suited for capturing moving things like blowing trees," says Johnson, who started to avoid shooting on windy days. "And it increases the chance that wind will move the camera and ruin the image."

Johnson's Epson inkjet prints of his digital landscapes, which he makes in sizes up to 40x50 inches from image files of up to 280MB, must be seen to be fully appreciated. The 300-dots-per-inch reproductions here simply can't do justice to the prints' awesome detail, naturalistic color, and rich tonality. Despite their genesis in high technology, Johnson's images are no more about process than were the arduously made photographs of America's 19th-century western expeditionary shooters. Yes, his 144-megapixel camera and its full-screen feedback allow him to see exactly what he's going to get, including a range of detail in highlights and shadows far exceeding that of film. "As the scanning software has evolved, I've gotten total interactive control of tone and color right there on site," says Johnson. "But that level of control actually *removes* the filter of technology from photography. It makes the creation of the photograph a more direct experience with light than it ever was with film."

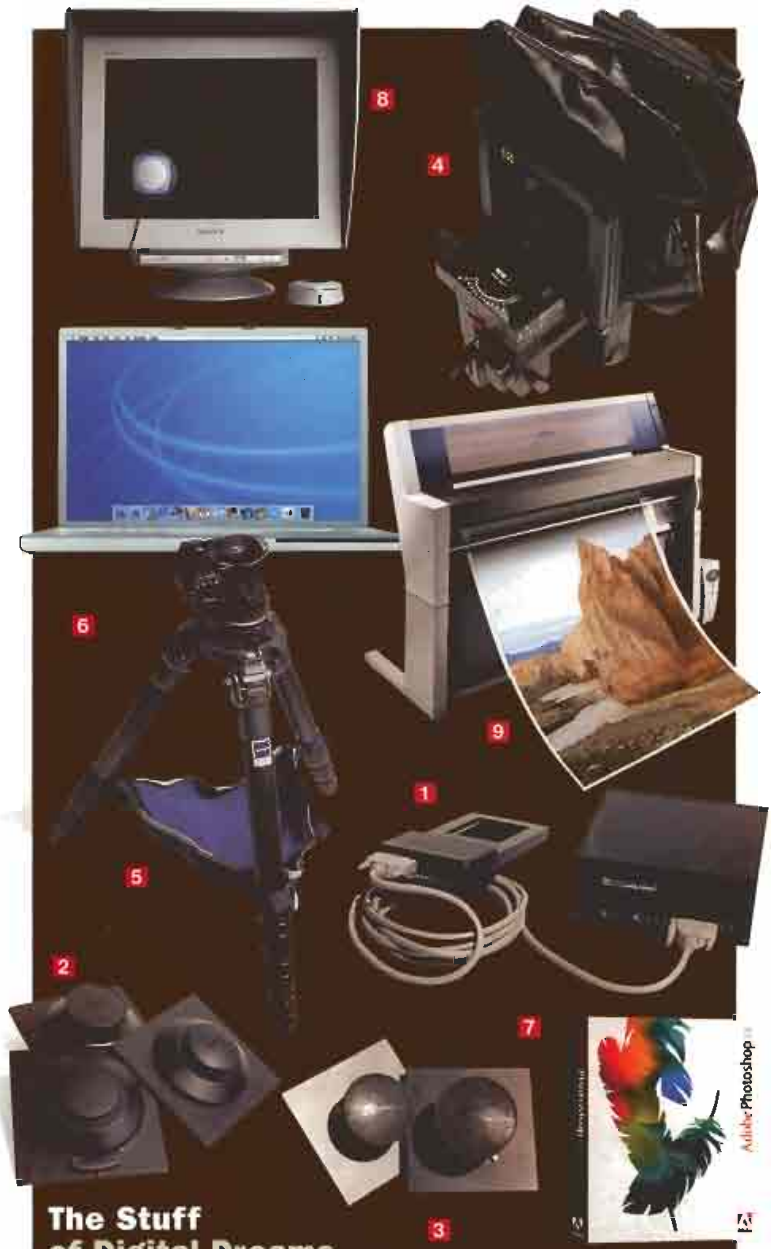
Johnson believes that digital capture is, in a sense, purifying the medium. "I think electronic capture has the ability to shift photography away from being a constant sort of reinterpretation of reality into a much closer rendition of the human visual experience," he says. "It takes the very recording power that amazed everybody about photography to begin with and moves it closer to its roots. So digital photographers have an opportunity not just to imitate the aesthetics of film."

As if to prove the point, Johnson's national parks project, which he originally thought might cover eight to 12 parks, has gone on for a decade—a time during which he has traveled over 75,000 miles to make pictures in more than 50 national parks. That duration has been made possible by working grants and other forms of largesse from the likes of Adobe, Apple, Better Light itself, Daystar, Digital Pond, Iris, FWB, NEC/Mitsubishi, Newer Technology, Radius, Ricoh, and Sinar Bron. But Johnson's magnum opus, officially called *With a New Eye: The Digital National Parks Project,* is finally winding down as the photographer winnows his years of work into a spectacular large-format book to be published soon, accompanied by museum and gallery shows. The book's publication has been delayed only because Johnson, ever the perfectionist, wants to get it just right.

If you can't wait that long to be inspired, Johnson offers an extensive print selection and workshop program. (Visit *sjphoto.com.*) Some of his workshops revolve around what he calls the Magical Digital Bus. This custom-equipped bus houses a mobile digital classroom with 10 workstations that include an Apple PowerBook G4 computer plus Epson Stylus Photo 2200 and HP DeskJet 5150 inkjet printers. Better Light digital cameras are also on hand. The bus made a recent stop at Mono Lake.

Workshop participants will still have to haul their own equipment into the wilderness, as their teacher has been doing for years. And that's as it should be. "This approach has forced a certain level of physical exertion on me," says Johnson. "But every time I get tired of carrying all this stuff, I think of Carlton Watkins hauling his 18x22-inch glass-plate camera all over Yosemite in the 1860s. Like him, I'm genuinely interested in the technology, but its purpose is only to help me make the most beautiful photos I can." ■

Ash Cliff and River, Katmai National Park, Alaska, 1995.



The Stuff of Digital Dreams

Stephen Johnson likes to point out that digital cameras are not fundamentally digital. "The essence of digital photography is that we're using an electronic sensor to capture the image, not that we're handling the image with computers and bits and bytes," he says. "We could store the information from the sensor in an analog form, but it just wouldn't be as convenient. What's different now is that instead of this drastic chemical reaction caused by light, we're holding actual light energy."

That light energy is gathered by Johnson's battery-powered **Better Light Super 6K-2 Digital Scan Back** 1, which scans the image formed by his **Sinaron** 2 and **Schneider** 3 **view camera lenses** with a 6000-pixel trilinear CCD. The back slides under the ground-glass of his **Sinar x 4x5 view camera** 4 just like a traditional film holder; because exposures typically run longer than a minute, Johnson needs a sturdy tripod, the **Gitzo Carbon Fiber G1548** 5. Once it's in the camera, the back is tethered to a laptop computer for exposure control and downloading and reviewing the image file; currently Johnson is using an **Apple PowerBook G4 17** 6, which has a big 17-inch-diagonal screen. In the field or at home, Johnson works on his images in **Adobe Photoshop CS** 7 with an Apple Power Mac G4 and a carefully calibrated **Sony Artisan monitor** 8. Then he prints them at up to 40x50 inches (and 33-foot panoramas) on his **Epson Stylus Pro 9500 inkjet printer** 9.

What does all this technology net Johnson? In a 16x20 digital print, image quality superior to that of a 16x20-inch contact print. "I can't prove that in line pairs per millimeter," says Johnson. "But when you look at the prints side by side, the measurement criteria just fall away and the eye says Yep, the digital print is better." —R.H.

With A New Eye

The Parks Project

With a New Eye is a digital photographic survey of selected American National Parks during 1994 through 2004. This project will culminate in a photographic portfolio, a touring art exhibition, a poster, a CD (cataloging the work, demonstrating the technology and discussing the National Park ethic and system), and an interpretive photographic book.

The project employs the Dicomed and Better Light 4x5 digital cameras, and the Macintosh PowerBook G3 for completely portable digital photography of very high quality. The camera is capable of color, black and white, and infrared photographs of extremely high resolution and dynamic range (up to 6000 x 8000 pixels, 140mb files with more than 9 stops of exposure latitude). The panoramic images are created by mounting the camera on a rotating head and making a continuous scan up to 370° (up to 6000 x 65,000 pixels, 1.12gig).

The photographs are previewed in the field, on screen, in order to determine appropriate contrast, exposure and color balance, and to check composition and focus. For documentary and archival purposes, a Global Positioning System Receiver (GPS) is being used to determine the longitude and latitude of the photographs.

Sponsors

Adobe Systems, Apple Computer, Better Light, DayStar Digital, Dicomed, Digital Pond, FWB, Iris Graphics, NEC Mitsubishi, Newer Technology, Radius, Ricoh, Sinar Bron

Biography

Landscape photographer Stephen Johnson has been photographing since 1973, teaching and lecturing on photography since *1977*. His books include *At Mono Lake*, the award winning and critically acclaimed *The Great Central Valley: California's Heartland* and *Making a Digital Book*. His studio-gallery is located near San Francisco in Pacifica, California.

Internationally recognized as a digital photography pioneer, Johnson's photographs have been exhibited, published and collected in Europe, the US and Japan. His work is part of the permanent collections of many institutions, including the Oakland Museum and the Getty. Photographic clients have included the Ansel Adams Publishing Trust, the Fine Arts Museums of San Francisco and the Friends of Photography. The Friends of Photography chose his work as their first digital image in their fine print collector's program.

His work in digital photography began in 1988 and has included software and product consulting for clients such as Adobe, Apple, BetterLight, Epson, Foveon, Kodak, Leaf, Radius and Ricoh. His work with Adobe includes the creation of the duotone curves shipped with Photoshop and ongoing consultation on product development.

In 1994 he embarked on an ambitious six-year major new endeavor, *With A New Eye,* the ground breaking all digital photographic look at American national parks. Now in its final stages, this project has already yielded photographic portfolios, preview exhibitions, scores of magazine articles and many posters. In development is a fine-arts touring exhibition, and an electronic disk (cataloging the work, demonstrating the technology and discussing the National Park ethic and system). The interpretive photographic book from the project is now in design.

Stephen Johnson Photography

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