Digital Photography on the Fly, While Hiking in Switzerland

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When you only have time for one picture and the sun is high, what is the digital equivalent of a safe exposure?

I developed a solution for taking digital photos quickly while hiking with a group in Switzerland last summer. A native-Swiss member of our local hiking group generously led us on a hiking trip to the Engadine region of Eastern Switzerland and later to the Interlaken area. We stayed in Zuoz in a combination of apartments and hotel rooms for the first part of the trip, and then in a hotel in Spiez for the remainder. The weather was perfect and the mountains were full of wildflowers in late July; there was snow on the mountain tops, picturesque villages and fine mountain restaurants. Hiking trails were well marked and are note in books and on the many festivals in the small towns can be found on the internet. All transportation was by train, bus or ski lifts.

On this trip, I had a lot working against me: We hiked in the middle of the day; we were moving fast (no tripods, compose quickly, no bracketing and go); and I had trouble keeping up in the first place. I had purchased a Canon Digital Rebel XT for the trip because it was light enough to carry, had enough Megapixels for cropping and had plenty of compensation modes. I used the Canon 18 to 55mm lens supplied with the camera to save weight.

My first photos were overexposed when I used the camera meter setting, aperture priority, no filters or lens hood. I watched the histogram for a number of shots and finally decided that the safest mode was to underexpose by two-thirds stop giving me details in the highlights so that I could fix the photo later in PhotoShop. A polarizing filter also helped immensely. I shot all photos in the finest JPEG mode because I cannot process the RAW mode on my MAC with OS9.2.2. (I bought the lens hood specified for the lens but it did not fit.) Most photos were shot at ISO 400.

With this setting, often the sky was properly exposed but the ground underexposed. When I open an image in PhotoShop, the first step is to correct the exposure. I start with an "image adjust threshold" command and move the pointer to the white part of the histogram. Watching the white areas disappear, I move the mouse to a point illuminated in the image that I wish to be white and record its brightness in the info pallet with a shift click of the mouse. I repeat for a black point and then push CANCEL to return the image to normal. Then I select areas where I want to increase contrast and correct exposure with a

Figure 1. Original Histogram and Info palettes

Figure 2. Final Histogram and Info palettes

Hikers with cows

Damon Blue Butterfly (Agrodiaetus damon) feeds on sole food source, sainfoin (Onobrychis viccifolia).

selection tool. (Usually this is everything but the sky.) I make an adjustment layer and then move the sliders in the red, blue and green windows to make the whites, 255 and blacks, zero. This makes a satisfactory image. Further adjustments can refine the image, if necessary, such as color, contrast and saturation in other layers.

For example, in *Hikers with Cows*, I set the white (my friend's hat), and black points (the cow's tail) with the threshold command in the ground portion of the photo (Figure 1). I selected only the lower part of the photo with a selection tool, to adjust the exposure leaving

Chapel viewed from tower of Spiez Castle.

Mountain Burnet Moth (Zygaena exulans) feeds on compositae sp.

Flowered stairs, Blaunca, Switzerland.

Swiss hiker with lunch at a mountain restaurant

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Tourist dances with Swiss lady at festival in Zuoz, Switzerland

the sky as taken. Then, I corrected these values to black and white in a curves adjustment layer(Figure 2). (Levels could have been used with less flexibility.) The sky was thus masked and retained its lower exposure. (I also brightened the foreground cow substantially and increased the color saturation.) The *Spiez Church* photo was corrected similarly.

Insects were numerous and very intent on feeding. I found I could approach quite closely

to them. *Damon Blue Butterfly feeds on Sainfoin* is shown with the white balance, exposure range, and saturation corrected in Photoshop. I cropped the photo to put emphasis on the butterfly for nature submission at my local camera club. I was able to identify and obtain Latin names for both the butterfly and the wildflower on the internet. *The Mountain Burnet Moth* also was oblivious to my taking its picture.

The lovely village of Blaunca is not accessible to the public by car. For us it was a beautiful hike following mountain footpaths and streams. There, I found the rustic steps image I titled *Flowered Stairs*. I was lucky that the sky was overcast so there were no harsh shadows. All I needed to do at home was to correct exposure and saturation. Another day, I caught our trip leader eating lunch (*Swiss Hiker with Lunch*) at one of the fine mountain restaurants that are along the hiking trails. I had my elbows firmly planted on the table to retain sharpness and depth of field while using a slow shutter speed. There was a festival in Zuoz and our landlady danced with a man from our group on the cobblestones to a Dixieland band (*Tourist Dances with Swiss Lady*). This time I carefully selected the dancers and only brightened them.

Another useful technique I learned on this hiking trip was using the camera's fill flash to

Swiss lady in costume

Swiss cat

balance mixed lighting or bright sunlight. The close-up of *Swiss Lady in Costume* with daylight on one side of her face and shadow on the other. The fill flash set 1.5 stops below exposure balanced the light.

Of course as a first time digital user, I also brought my film camera (Canon Elan IIE with Canon 28-135 IS lens) and tripod as well. However when I went out early in the morning or late in the evening, I found I preferred my digital camera so I knew that I had the shot. When I got home, I learned that I took approximately the same image at 7:10 AM on my digital camera (*Zuoz at 7:10 AM*) as I took on another morning

at 8:00 AM with my film camera (*Zuoz at 8 AM*). The time is on the steeple clock and legible. Both were tripod mounted but unfortunately I did not use the same lens and the depth of field is different. The Velvia film shot was treated almost the same way as my digital images: I made a dark scan for the sky and a light scan for the foreground and combined them. There were the usual contrast and color adjustments.

My advice? Don't be discouraged that the time-of-day/lighting is wrong. Experiment and find a setting that works for you on your digital camera. Use the histogram! The instant feedback is wonderful! 📷

Barbara Mallon

Zuoz at 7:10 a.m. taken with a Digital Rebel XT. (Tripod mounted, f10 18-55 Canon EF-S lens)

Zuoz at 8 a.m. Taken with an Elan IIE and Velvia film. (Tripod mounted, f16 28-135 IS Canon EF lens)