



A fast click of the shutter, just as this male lion approached the female, captured a powerful moment. Maasai Mara, Kenya.

After spending more than a decade photographing exotic wildlife and tribes across the African continent, I suddenly hit a plateau. I was still extraordinarily passionate about my subjects, but I was desperate to rejuvenate my creative vision. Infrared photography became the tool that unleashed my creative block, adding an element of mystery, excitement and grandeur back into my photography. The results were wildly unexpected and pushed the boundaries of my artistic style.

Reflected infrared (IR) light produces a fascinating array of surreal effects that differ vastly from that of the visible light spectrum. With its longer wavelength, infrared is just beyond the range we can detect with our eyes. Anything that's alive will reflect infrared light—leaves, foliage, grass and skin reflect the greatest amounts. Vegetation can appear nearly white, whereas skin can take on a milky, smooth, bluish tone. Colors are unpredictable; browns become blue, greens become reds, and reds become white. Cloudy blue skies take on a much more dramatic appearance.

EXPLORING INFRARED PHOTOGRAPHY

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Challenge
yourself
creatively
by capturing
light outside
the visible
spectrum

When converted to black-and-white, infrared images can create a “wow factor.” The tonality differs greatly from that of visible light. The world simply takes on a whole new style, adding an element of mystery, creating a desire to explore the familiar from an entirely unique and extraordinary perspective.

I had been in awe of the infrared work of several photographers for many years, but I dragged my heels because of the constant warnings about all the challenges. Did I want to convert one of my expensive DSLR bodies to dedicated IR—and carry the weight of the third body? Could I accept the focusing limitations, especially when I worked with moving subjects and usually have only one click of the shutter to capture the perfect moment? Did I have time for extra postprocessing work? And did I want to invest myself in the learning curve of “seeing” invisible light?



TOP LEFT: I was careful to frame in the tree in the background to give a little more balance to the composition. Kitirua Conservancy, Kenya. **BOTTOM LEFT:** This cheetah was scouting in a vast meadow of green foliage, the light diffused by cloud cover, creating the mystical blue tones. Ndutu, Tanzania. **ABOVE:** I framed this image to isolate the elephants at play, using the dark foliage in the background to keep the viewer pushed toward the action. Central Serengeti, Tanzania.

Filter or Convert?

While you don't need to convert your digital camera to shoot infrared, there are downsides to the alternative of using an IR filter to block the visible light from your sensor. The filter is very dark, requiring you to pre-focus before you attach the filter. You also lose up to eight stops of light, resulting in much longer exposures and requiring a tripod, which is fine for landscape photography, but would be impossible for capturing moving subjects.

Converting a camera isn't as complicated as it may sound. There are reliable companies such as LifePixel that can convert one of your older DSLRs by removing the traditional anti-aliasing filter and replacing it with one that permits IR light to pass through. This allows you to shoot as you normally do with your color digital camera. The main drawback is that once it's converted, your camera will only

shoot IR, and for many photographers, that means carrying a third body when they travel.

The most challenging part of converting a body is deciding on the type of conversion: Standard IR, Enhanced IR, Deep BW IR, Super Color IR, Super Blue IR, Full Spectrum and more. On the LifePixel website, you'll find a comparison chart and a comprehensive video explaining all of the choices. I went with the Standard IR, as it allows me to create dynamic black-and-white and sepia images, with the ability to capture discreet touches of color, which I feel is the mystical element of IR.

If you're hesitant about taking the plunge, rent a converted body and take it out for a test drive. If you're still hesitant about converting an expensive DSLR body, consider converting an inexpensive point-and-shoot.

INFRARED ADVICE

Some things to remember as you start out on your IR photographic journey:

- **IR photography is an experimental process of discovery.** You never quite know what you're going to get when you click the shutter.
- **IR photos don't always need to be sharply focused.** The allure of this art is the surreal atmosphere and mystical appearance.
- **You can shoot almost all day because the sun is the primary source of infrared light,** working best when captured in direct sunlight or bright, open shade. This is great when you've traveled very far to shoot in an exotic location with limited time.

Focusing Infrared

Infrared light focuses differently than visible light. This causes a shift in focus to a point other than what we see through the lens. This shift varies depending on the lens and focal length you're using. There are several ways to overcome this challenge:

- Calibrate your camera for the visible spectrum, and use the focus marks on your lens to correct the focus manually.
- Calibrate your camera and the lens you plan on using the most (or a specific focal length for a zoom) for infrared.
- Manually focus using your camera's Live View mode, which shows you exactly what your image sensor is recording.
- Convert a camera that offers AF in Live View mode, which will provide AF function for infrared images.

Perhaps the best solution is to accept that soft focus can be part of the infrared artistic challenge, especially when photographing moving subjects. Like many other creative techniques such as pan blurs, painting with light and long

exposures of moving water, there's a greater possibility of getting it wrong, that the image will fail; but when successful, you're rewarded with a dynamic, powerful and creative image.

This was difficult to overcome, since I spend half of my time in the field as a wildlife photographer, in which one of the most important image qualities is a tack-sharp photograph, and you only have a few seconds to capture the action. However, I approached using IR with wildlife differently. My goal was to broaden my creative horizons, pushing myself to go beyond the paradigms with which I was familiar, to capture a more timeless, dramatic, artistic vision of exotic wildlife that are facing the threat of extinction. I quickly became enthralled with what I saw in the back of my converted Canon EOS 5D Mark II, and I reached for that camera with a 24-70mm lens about 80 percent of the time over my 1D X with my 500mm.

Exposure Considerations

Hot spots are another inherent part of infrared photography, depending on the lens, and can be described as any area in the image that appears to be lighter or brighter than the rest of the image. This

is because lenses are designed for visible light photography and the coating on the inside of the lens barrel can be reflective of IR light. Since IR contains no real colors, in a subtle sepia capture, you may find a slightly light blue spot in the middle of the frame. This can be corrected in post, by using a larger aperture (stopping down increases the problem) or using a lens that's less known to have this problem.

One important step I would highly recommend before shooting is to set a custom white balance, or you'll be viewing a tonal fuchsia/red image on your LCD, which is very uninspiring. This is fairly easy to do in the menu section of your camera. Use green foliage in direct light as your target for setting white balance.

Matrix metering or evaluative metering mode is the default metering mode on most digital cameras and is still the safe bet. However, depending on the lighting conditions, I find it's normal to adjust the exposure compensation up by two stops. Aperture, shutter speed and ISO combination will work with one another just as they do with your regular digital camera, but I find that IR is more sensitive to noise and recommend keeping a lower ISO. It requires experimenting to get your balance and recognize when



The composition and simplistic, almost nonexistent background grabbed my attention. Maasai Mara, Kenya.

you've properly exposed an IR image, but that's part of the creative process.

Infrared Postprocessing

The complexity of IR photography becomes more apparent in the processing of the IR file, but this is where the real art of infrared begins. This is where you'll create the spectacular ethereal look that defines infrared. However, it requires a higher skill level of technology and multiple software programs for the best results.

Most common editing programs, such as Adobe Lightroom and Photoshop, won't be able to read the custom white balance you created because of the temperature range limitations. This can be very frustrating when you've properly set your custom white balance in your camera. It looks great in the back of the camera, but when you import your images into the editing software program, they pop back to a bright tonal pinkish-red. The workaround for this is to create a DNG profile using the Adobe DNG converter. This will allow you to move the white balance sliders of temperature and tint past their respective current limitations of

2000 and 150, which is especially important for obtaining the subtlest colors in an IR image. An alternative would be to use Nikon Capture NX or Canon DPP, as they will also allow for greater white balance adjustments, though not as much as the Adobe DNG converter.

In the same way that you need to experiment with your camera settings, you'll also need to experiment in post to discover which tools work best for your vision and define your style. The channel mixer in Photoshop is a must-have to switch color channels. This can create what's known as a false color, giving an image a mystical look. You may also find yourself using a split-tone filter or the Hue/Saturation adjustment layer for unique toning.

Nik Silver Efex (part of the Google Nik Collection and now offered for free) is a great plug-in when turning your photos into black-and-white or sepia images. I've found that most IR images require extra structure/clarity, contrast and noise reduction to really make them stand out. As with anything new, it will require a commitment of time to achieve the IR results you've envisioned, but with patience and

persistence, your processing time won't be much more than the time it takes for your standard digital processing.

Even through all the challenges, IR photography is an exciting alternative way of looking at the world that goes beyond the visible, with an explosion of self-expression that nurtures the creative soul. I was in Kenya leading a safari while writing this article, and although I had my Canon EOS-1D X and 7D, I found myself reaching for my IR-converted 5D Mark II body every shoot, even in the best light. By nature, many of us resist change if we think it will be difficult. When we become stagnant in our art, we need to push forward and take some risk, to continue to push our creative curiosity beyond the ordinary. In a world inundated with millions of images, dramatic infrared photographs stand out from the crowd. OP

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This portrait of a Cape buffalo was photographed in full light against the solid sky background. Infrared brought out subtle color tones. Maasai Mara, Kenya.