PHOTOGRAPHING THE NORTHERN LIGHTS

An airline ticket and the right gear are the key to epic aurora photos

Text and photography by TONY PUERZER

DESPITE living in southwestern British Columbia, I've managed to enjoy some surprisingly good northern lights displays over the past several years. But for the most dramatic showings, the best strategy is to travel to a location where a portion of the vast auroral oval is directly overhead, especially since the 11-year solar cycle that governs the aurora is currently on the wane. Recently, I took advantage of a seat sale and flew to Iceland to photograph the aurora borealis from a location where auroras occur frequently. If you're considering a similar trip, here are some suggestions to help you return with great images.

GETTING IN GEAR

The first item on your packing list should be a sturdy tripod and ball head. Even with the increasingly strict size and weight restrictions for checked baggage on most airlines, you don't want to skimp here. A heavy-duty support will guarantee steady pictures and could prevent a costly tip-over of your precious camera and lens when shooting on uneven terrain or in windy conditions—a frequent occurrence in Iceland.

When it comes to choosing lenses, be sure to opt for a wide-angle model—the wider the better. This allows you to capture sky-filling displays, while also incorporating some foreground landscape to add scale and interest to your images. Unlike normal wide-field astrophotography, where the subject is stationary, a northern lights display changes very quickly—sometimes on a timescale of just a few seconds, particularly during an active aurora. That's why a fast lens (with an opening of f/2.8 or wider) is preferable. Such an optic will shorten exposure times, which is crucial to retaining fine detail as the aurora dances across the sky.

Once set up, focus your lens on a distant streetlight or a bright star. You'll likely need to switch to manual focus and utilize maximum magnification on your camera's live-view screen to make sure everything is tack-sharp. Take your time here—there are few things more heartbreaking than discovering that all your images are slightly out of focus when you review them on a big computer screen the next day.

GLACIAL LAGOON On a recent trip to Iceland, the author took this photograph of the northern lights dancing over an iceberg-filled glacial lagoon. Ultrawide lenses, like the Canon 15mm fish-eye used for this shot, allow you to capture dramatic swaths of sky while still including an interesting foreground. A Canon EOS 6D DSLR camera was used for this 13-second exposure at ISO 1600 with the lens fully open at f/2.8.

KIRKJUFELL REFLECTION On a calm (but cold!) Icelandic evening, the author photographed the mirrorlike reflection of Kirkjufell (Church Mountain) and a "ribbon" aurora. A Canon EOS 6D DSLR camera was used for this 13-second exposure at ISO 1600 with a Canon 15mm fish-eye lens fully open at f/2.8.

RURAL WIDE ANGLE Despite thin, high clouds, this site near the small town of Selfoss, in southern Iceland, proved to be a good location for aurora photography. The author used his Canon EOS 80D DSLR camera fitted with a Canon 10-22mm zoom lens set to 10mm at f/3.5 for a 20-second exposure at ISO 1600.

Next, put your camera in manual mode and set the lens to its widest aperture. For image type, select RAW (not JPEG) and use the highest resolution your camera is capable of. This offers the greatest flexibility during postprocessing for bringing out highlight and shadow detail and allows you to tweak the white balance after the fact.

Starting with a shutter speed of around 15 seconds at ISO 1600, take a number of test shots, varying the exposure times to see what produces the best results with your specific gear and the current sky conditions. When evaluating your tests, don't rely solely on the camera's viewscreen, especially if you're inspecting it in the dark. Instead, use the RGB histogram display. A well-exposed image will have the individual red, green and blue histogram "humps" fully separated from the *left* side of the graph but without extending much past the halfway point. Also, ensure that you don't see a spike at the right side of the histogram, which would indicate overexposure. During active displays, check your results regularly—the aurora can brighten dramatically in a short period of time, causing your images to suffer from blown highlights.

SHOOT TO THRILL

While it's tempting to point your camera straight up to frame as much of the aurora as possible, you'll get a more compelling

portrait if you include an interesting foreground, such as a building, trees or distant mountains. If the night is calm, nearby lakes and rivers can act as mirrors to reflect the sky, thereby increasing the impact and adding symmetry to your photos.

Once you've aimed and levelled your camera and found the appropriate exposure time, take plenty of shots—one right after another—to increase the chances of getting an appealing image of the rapidly changing light show. A cable release is really handy, since you can put the camera in continuous drive mode, lock down the exposure button and snap away while you take in the view.

Of course, all this advice assumes that the weather cooperates and that there's something to photograph in the first place. Auroral forecasting sources, such as the Aurora Watch page on the *SkyNews* website (www.skynews.ca/aurora-watch), are certainly helpful, but inevitably, you'll need to rely on luck for trips that are often planned months in advance. During my three-week visit to Iceland, everything came together on only three occasions, resulting in the photos you see here. Even if all you get is a single clear, moonless night with just one fantastic aurora, I promise you the entire trip will be worthwhile! ✦

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CITY LIGHTS A bright aurora can be photographed even from urban locations in southern Canada. The author was able to record this May 2017 display without venturing any farther than the front deck of his house. For the 15-second exposure at ISO 1600, he used a Canon EOS DSLR 6D camera and a 16-35mm f/2.8 zoom lens set to 29mm and wide open.

WELCOME TO THE GREATEST SHOW ABOVE EARTH

Aurora watchers the world over enjoyed countless spectacular displays during the peak years of the current solar cycle. Even now, as solar minimum approaches, flare-ups can (and do!) still occur. If you've never seen the aurora in person under a dark, moonless sky, you should definitely make the effort. Until then, we offer the next best thing: plenty of photos showing the splendour of the northern lights.

AWESOME AURORA While the basics of auroras have been understood for decades, researchers are still trying to explain many aspects of their behaviour. *SkyNews* contributor Tony Puerzer travelled to Iceland last autumn to photograph the phenomenon. He captured this sky-filling display from a location near the town of Selfoss, in southern Iceland, with a Canon EOS 6D DSLR camera fitted with a 15mm fish-eye lens. The exposure was 5 seconds at ISO 1600.