



This photograph, taken at Waterton National Park, shows what can be accomplished when photographing the night sky. | ROBIN AND ARLENE KARPAN PHOTOS

Photographing the night sky an ideal pandemic pastime



ARLENE & ROBIN KARPAN

Night photography can open up a whole new world. With travel advisories still affecting how far afield we should go, visiting familiar locales close to home at night is almost like discovering new places. Something simple like a tree in the pasture might seem unremarkable during the day, but photograph it against the core of the Milky Way

or a rising full moon and it's like seeing it for the first time. The main extra piece of equipment necessary for night photography is a tripod because exposure times can run several seconds. A wide-angle lens is best for starry sky photos. To make the stars look like points of light rather than blurry lines, a handy guideline is the 500 rule. For a

full-frame camera, the slowest shutter speed to use to prevent the stars from being blurred by the Earth's rotation is 500 divided by the focal length of your lens. For a 50 millimetre lens, for example, this comes to 10 seconds, and for a 20 mm lens, it increases to 25 seconds. It's essential to set the camera on manual mode. Once the shutter speed is determined, set the lens

aperture to its widest opening (the f/stop with the smallest number, such as f/2.8), then adjust the ISO setting until you get a proper exposure. A reasonable starting point is around ISO 3,200, but this will vary depending on the lens and light conditions. It may take some trial and error. The higher the ISO the more noisy (or grainy) the image will be. The longer the shutter speed, the less need to



The northern lights are one part of night sky photography that is difficult to plan because they happen with little notice. To increase your chances, sign up for free Aurora Watch Alerts operated by the University of Alberta.



CLOCKWISE TOP LEFT: The ordinary can become extraordinary when photographed at night.

The moon can make an excellent photograph subject.

The moon can be photographed throughout its phases, but the highlight is the full moon.

increase the ISO.

Consider including some foreground interest in front of the starry sky, perhaps a tree, a big rock, or a piece of farm equipment, and look for a spot where it stands out against the sky.

To increase interest even more, try some light painting, which is simply shining a light on the subject during part of the exposure. It's surprising how little light is needed for a long exposure. If you use a narrow light, such as a flashlight, keep it constantly moving so as not to get hot spots on one part of the photo.

While we can photograph the moon throughout its phases, the highlight is full moon, especially around moonrise or moonset with that rich orange colour low in the sky. Unlike starry night photography where it helps to have a wide-angle lens, moon photography benefits from longer telephoto lenses. The wider the lens, the smaller the moon appears in the frame of the photo.

To get the moon looking large in relation to our subject, we need to photograph from a distance. So to capture the moon coming up over a church steeple, for example, the farther back from the church we set up the camera, the larger the moon will appear. A telephoto lens in the 400-600mm range makes it possible to photograph from a kilometre or more away, resulting in an impressive-looking moon.

The best is to plan night photos ahead rather than to simply wander around in the dark. A useful resource is the Photographer's Ephemeris, a program that is free to use on a computer (upgraded versions and apps for mobile devices come with a cost). On the map, select a spot anywhere in the world to see a wealth of information such as moonrise time and where it will come up. We can then plan where to go to photograph the moon rising over a point of interest. Another useful free program is Stellarium where, among many other things,



we can see when and where the core of the Milky Way is visible for any location in the world.

One part of night sky photography that is difficult to plan is northern lights, which happen with little notice. To increase your chances, sign up for free Aurora Watch Alerts (aurorawatch.ca), operated by the University of Alberta. They monitor geomagnetic activity in the Edmonton area, making it relevant for much of Western Canada, and

send out email alerts when conditions look promising.

The main issue facing night photography is light pollution, especially around cities. Living in rural areas is a big advantage, making it much easier to see the night sky and capture its many intricacies.

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