



Starlight

THERE IS a place in the heart of Maine where, even in early March, winter shows no sign of relinquishing her rule. In this land of deep, soft snow, Canada lynx, marten, moose, and snowshoe hare are in their element. For a couple of days last week, I was too.

The Appalachian Mountain Club owns 70,000 acres in this region and runs several wilderness lodges. The ski to reach Gorman Chairback Lodge is eight-miles through forests of spruce, fir, and cedar, and then across the windswept expanse of Long Pond. I could describe for you the beauty of the twilight golds on the fresh snow. I could write about the moon shadows that striped the night forest or the trail of the otter that slid on its belly uphill and down. I am sorely tempted to write about the complete absence of the background rumble of civilization. What struck me most, however, was stepping outside at 3 in the morning to look at the sky—I have never seen so many stars. The familiar bright stars and constellations twinkled in their places, but, between them, every inch of the celestial dome shone with tiny points of light.

The 2016 “World Atlas of Artificial Night Sky Brightness” documented the extent of light pollution using satellite data and sky brightness measurements. The atlas reveals large portions of the planet swathed in a fog of artificial sky glow. Even the darkest skies in Vermont are impacted by light pollution. The largest island of pristine night sky in the northeast is found in Maine, the sky above my cabin that night.

Dark night skies, the waxing and waning moon, and the patterns of the stars have been among the few constants as life on Earth evolved.

Birds have been found to use the stars to orient themselves while migrating. Light and dark are used as cues by many species to trigger behaviors and life events such as mating or migrating. Light levels regulate activity levels for many species.

Studies have shown artificial lighting has a detrimental impact on amphibians, birds, and hatchling sea turtles. The Leibniz-Institute of Freshwater Ecology and Inland Fisheries in Germany found that the regions with the highest declines in insects also have the highest levels of light pollution.

Streetlights are responsible for most of the light pollution. The push to convert to energy-saving LEDs has often resulted in more lights being installed. This light is at the blue end of the color spectrum, which scatters more than other colors and causes more light pollution.

There are plenty of things we can do. Red filters can be used on LED lights. Lights can be shielded so they only shine where illumination is needed and can be motion-activated or set on timers, so they only shine when needed. We can make do with a lot fewer of them.

These simple, inexpensive, and painless actions could make a big difference to the many creatures with whom we share the night. The International Dark-Sky Association has web resources that can help with everything from conversations with your neighbors to writing a town lighting ordinance. Someday, you might not have to travel to the darkest place in Maine to see the heavens in their full glory. For all of the splendor of winter in March, maybe.