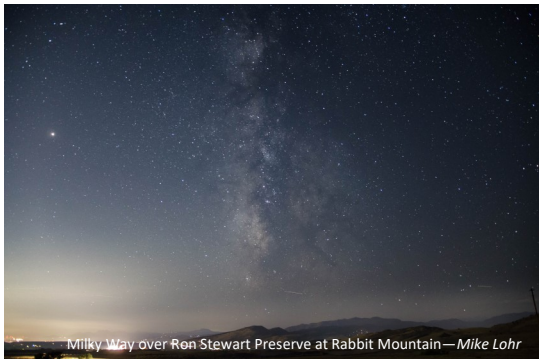
International Dark Sky Week 2021


Milky Way over Ron Stewart Preserve at Rabbit Mountain—*Mike Lohr*

Monday, April 5, 2021

How Many Stars Can You See?

What a beautiful sight it is to be in a dark place, look up, and be overwhelmed by the multitude of stars above your head! Light pollution blocks our ability to see the stars—the more light that is sent up to the sky from Earth, the less sky we see. Here's an experiment you can do, provided by the Longmont Astronomical Society:

Using a source like www.darksitefinder.com, identify a location where light pollution is less of a problem. Take a drive and take a picture of the night sky. Come home and take another picture. As much as possible, use the same settings on your camera. Compare the images to see the difference. Alternatively, use the camera of your eye. That is, go somewhere dark and count stars. Come home and count again. Obviously, there may be too many to count, especially at a dark site. You could make a circle with your thumbs and forefingers, and count stars in there as best you can. In both situations, after you go outside, give your eyes a few minutes to dark-adjust, and don't turn on any lights until after you have completed your experiment.

How Light Pollution Affect Wildlife and People

In addition to seeing more stars, darkness is important in other ways. Did you know over 200 species of birds migrate at night across North America each year? Light pollution can cause issues like throwing off their ability to see landmarks and collisions with lit buildings. Over half of the wildlife species are nocturnal, and need darkness for survival. Human health also depends on darkness. Too much constant light has been shown to contribute to certain types of cancers and other diseases in humans.

From the International Dark Sky Association:

Nocturnal animals sleep during the day and are active at night. Light pollution radically alters their nighttime environment by turning night into day.

According to research scientist Christopher Kyba, for nocturnal animals, "The introduction of artificial light probably represents the most drastic change human beings have made to their environment."

"Predators use light to hunt, and prey species use darkness as cover," Kyba "explains. "Near cities, cloudy skies are now hundreds, or even thousands of times brighter than they were 200 years ago. We are only beginning to learn what a drastic effect this has had on nocturnal ecology."

Glare from artificial lights can also impact wetland habitats that are home to amphibians such as frogs and toads, whose nighttime croaking is part of the breeding ritual. Artificial lights disrupt this nocturnal activity, interfering with reproduction and reducing populations.

Find out more about how light pollution affects wildlife .

Dark Sky Tip:

LED lights save energy, but blue LEDs are extremely bright. When using lights outside, stick to the "warmer" colors like amber and red to keep the sky dark, and to cause less harm to birds, insects, and other animals. It also allows your eyes to better adjust to seeing in the darkness.