

# The Outside Story



## April Showers

By: Carolyn Lorié

In the pre-dawn hours of April 22, the Lyrid meteor shower will peak. About 15 to 20 meteors will be visible each hour, which really is not very many. By comparison, the Perseid meteor shower in August averages about 60 to 70 an hour, and the Geminid in December can top 120. But I am most fascinated by the Lyrid.

Here's why: More than 2,700 years ago, someone in China looked to the heavens, observed this meteor shower, and left a written record of what he saw. And so this yearly event has been happening for millennia – it is perhaps the oldest meteor shower known to humans. I love that when I step outside to watch the Lyrid, I am connected to that long-ago human being from a far off place, and to all of those who have followed. We are fleeting observers of an enduring phenomenon.

Meteor showers are the byproducts of comets, which are giant balls of ice, gas, dust, and rock orbiting the sun. As comets approach the sun, the heat melts some of the surface ice and pieces of

dust and rock are shed. The debris can continue in the orbital path, creating a tail behind the parent comet. When the earth crosses one of these tails in its own orbit around the sun, some of those fragments enter the earth's atmosphere. The particles are moving at such a high velocity that they disintegrate as they hit the atmosphere, creating the flashes of light we know as meteor showers.

These celestial phenomena are named for the constellation that occupies the part of the sky, known as the radiant, in which they appear. In this case, it is the constellation Lyra, so named for the instrument played by the musician and poet Orpheus from Greek mythology. Though it is a relatively small constellation, it contains one of the sky's brightest stars, Vega.

While meteor showers are named after constellations, the comets that produce them bear the moniker of the person credited with discovering them. The Lyrid parent comet is Thatcher, after A. E. Thatcher, an amateur astronomer from New York. He discovered the comet in 1861, when Abraham Lincoln was in the White House and the American Civil War was about to erupt. Comet Thatcher orbits the sun every 415 years, meaning it will pass our way again in 2276 – 258 years from now. That's not a lot of time in astronomical terms, but I – and you, dear reader – will be long gone by then. So will the great-great grandchildren of a child born today.

It is difficult to fathom that remnants from a cosmic snowball that has not been seen from Earth in 157 years continue to hurtle toward us. Even more amazing is the fact that these rock particles may have been shed long before the comet's most recent orbit, according to Dartmouth professor of astronomy and physics John Thorstensen. "Tiny

particles get blown away quickly, but bigger ones tend to stay in orbit, just as dust is blown in the wind but pebbles stay on the ground.” In other words, the Lyrid’s largest pieces of debris may have departed from Comet Thatcher centuries ago, but may enter our atmosphere this April. Or next.

While 15 to 20 meteors per hour is the average during the Lyrid shower, every few decades there is an outburst in which there can be as many as 100 shooting stars within 60 minutes. Outbursts were noted in 1922, 1945, and 1982. Astronomers have not been able to identify a predictable pattern for these outbursts, so there is no way to know what this year will bring.

As it has for centuries, the Lyrid meteor shower will occur between April 16 and 25. When it peaks this year in the early-morning hours of April 22, the moon will have already set. This will create ideal viewing conditions, assuming the weather cooperates. The shower is best viewed from an open space, far from ambient light. Give yourself plenty of time to adapt to the darkness, which will increase the likelihood of seeing as many shooting stars as possible. No special equipment is required to view the Lyrid. Like the observer from 2,700 years ago, all you need are clear skies and a sense of wonder.

*Carolyn Lorié lives in Post Mills, Vermont. The illustration for this column was drawn by Adelaide Tyrol. The Outside Story is assigned and edited by Northern Woodlands magazine, [www.northernwoodlands.org](http://www.northernwoodlands.org), and sponsored by the Wellborn Ecology Fund of New Hampshire Charitable Foundation: [wellborn@nhcf.org](mailto:wellborn@nhcf.org).*

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