

Silly holiday traces roots to astronomy

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Groundhog Day will roll around again on February 2, and we will once again be subjected to “news” about the ability of ground-burrowing, garden-destroying rodents to predict the duration of winters.

We now mainly observe Groundhog Day as just another silly “holiday” on the calendar – coming just before Bubble Gum Day on February 3 – but its roots can be traced to ancient astronomers who carefully tracked the movement of celestial objects through the year.

Like some other unofficial holidays, Groundhog Day falls on a cross-quarter day, which is a day about halfway between the start and the end of a particular



season of the year. On February 2, we’re about six weeks past the winter solstice, marking the start of winter, and six weeks away from the spring equinox, marking the end of winter and beginning of spring.

At this time of year, we often hear people commenting that the “days are getting longer,” meaning that they’ve noticed that it’s no longer pitch dark at 5 p.m. We say this in casual conversation because we live in a modern time of central heating



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This photo of Comet ZTF was taken by Alan Sheidler of the Popular Astronomy Club from his home in Moline on Jan. 10. The comet will remain visible throughout February and be at its brightest early in the month.

Skywatch

From: A3

and well-stocked grocery stores, but tracking the length of days was a much more serious matter for our prehistoric forebears, whose stock of fuel and food was surely dwindling as they came to the month we now call February.

So, the fact that the sun was once again visibly progressing ever higher in the sky, and the natural world was on its way to spring, was surely a cause for celebration for a hunter-gatherer.

Archeologists have unearthed plenty of evidence that ancient peoples around the world carefully tracked the movement of the Sun, planets and stars throughout the year, and knew when the seasons began, ended, and reached their

halfway points. Stonehenge in England is just one example of a site that seems to have been used many centuries ago as an observatory, arranged in a manner that marks the passage of the Sun and other objects in the sky, serving as a sort of calendar.

The pre-Christian Celts who occupied the British Isles a millennium after Stonehenge was built celebrated all four cross-quarter days, and named them Imbolc (February 1), Beltane (May 1), Lughnasadh (August 1), and Samhain (November 1).

You'll note that the latter approximately marks what is now the most famous cross-quarter day of all, Halloween – a day of joyous candy collection by children which still retains themes of darkness and terror that hark back to a time when the inevitable march to

winter was something truly to be feared.

May Day is another cross-quarter day, still widely celebrated in Europe with dances around a maypole decorated with spring flowers gathered from green pastures. The cross-quarter day falling in the middle of summer has no well-known holiday associated with it but is still known in some parts of England as Lammas, a day when loaves of bread baked from the first grains harvested that year are brought to church for a blessing.

Given this history, the cross-quarter day we now call Groundhog Day should remind us of what we share in common with these humble rodents. Like all animals, groundhogs track the progress of the seasons. It's a matter of survival for them, just as it once was for us.

In those ancient times, the viewing of a comet in the sky was a cause for concern. Comets came and went unexpectedly and moved about the background of fixed stars in unpredictable ways, and so could be seen as portents of bad times ahead.

We now understand much about the structure and source of comets and so no longer fear them, even though they still make sudden and unexpected appearances. Such an appearance is happening in February, when we have the opportunity to view Comet C/2022 E3, known as ZTF for short.

ZTF was first spotted by astronomers in March 2022 and became widely visible in December of last year. The comet, which is green in color owing to its chemical composition, will be at its brightest in early February.

You can see ZTF with your naked

eye, but you'll likely need to be in a dark location far from city lights. The comet will be close to Mars on February 10, making it easier to spot. Sometime in March, ZTF will descend too far south to be seen by observers in the Northern Hemisphere.

If you're searching for information on comets or other objects in the sky, search for the Popular Astronomy Club on the web or on Facebook. There you may find information on upcoming public events, including our observing nights at Niabi Zoo, which will resume in March whether or not the groundhog sees his shadow. Join us at the zoo at around sunset on March 18, and on the third Saturday of every month through November.

Meanwhile, there's plenty to see in the night sky, so keep looking up!