

# Northwest eclipses illuminate solar system's mysteries

Prepare to scare away sun-devouring monster on Aug. 21

After sunrise on July 18, 1860, the sky west of the mouth of the Columbia turned back to night, as if a cavern was opening between this and a darker world. Soon, all around, there was an "unearthly ghastly glow."

The 498 whites in Clatsop County and Pacific County's 406 — along with hundreds of equally human Native Americans the 1860 Census didn't deign to count — would have witnessed something like the following as a total eclipse formed offshore and began racing halfway around the planet:



MATT WINTERS  
Comment

"The western horizon was lost in darkness, and the conical hills to the north-north-west were invisible, while the clouds toward the east sent forth a bright glow of light, from the sun shining on their fronts. At this moment bright waving lines of light flickered one after another over the ground parallel to my line of sight with the sun. On looking upward from these I found the sun had already disappeared, and that I had missed the formation of the corona. The black circle of the moon was already surrounded by this crown of glory; two stars shone brightly a few degrees from the sun, and so magnificent was the spectacle above, as glorious as the spectacle below, that I could not help looking a few moments from the one to the other. A bright light, I think of a greenish-yellow colour, skirted the horizontal sky, and the banks of cumuli shone with a brilliant glow. The darkness was not intense; the light from the corona and the distant refractions far surpassed the brightest moonlight ...

"Though much occupied with these observations, the impression produced by the total eclipse is one which can never be effaced from the mind."

Described in Tedula, Spain, by University of Dublin teacher R.A. Thompson, this very eclipse began over the ocean just southwest of Oregon's Cape Disappointment. It ripped across North America — mostly through unpopulated areas of Canada including Hudson's Bay — over the Atlantic and through Spain and Northern Africa before evaporating three hours later into nothingness above the Red Sea.



TOTAL ECLIPSE of the SUN.

New York Public Library Digital Collection

This was the total eclipse of the sun as observed July 29, 1878 at Creston, Wyoming Territory.



Columbia River Maritime Museum/Jack Edwards photo

North River Packing Co., which operated near the north shore of what is now called Willapa Bay, issued this creative depiction of the 1878 eclipse.

Totality — the time the sun's disc was completely covered by the moon — lasted one minute and 46 seconds in Astoria. But this deepest shade also extended north and south. *The New York Times* described it as "a black belt seventy miles wide, traveling at the speed of 1,850 miles an hour, or four times the velocity of a cannon-ball!"

It took 51 seconds for the center of the moon's shadow to pass over Washington Territory, a dark angel in silent flight.

If anyone in these parts made their own eloquent observations, I haven't found them. Perhaps it was a foggy gray morning and folks only commented, "Gosh, even gloomier than usual today!"

**Great eclipse of 1878**

The eclipse of July 29, 1878, began near Mongolia and arched

over Southwest Alaska before petering out east of Cuba. It wasn't total in our area, but it appears to have made a keen impression.

Two different coastal salmon canneries soon began using "Eclipse Brand" labels — one like a giant black melanoma and the other a celestial waltz between sun and moon above the Shoalwater Bay wilderness.

Up in the Olympic Peninsula town of Queets where the sun was 89 percent shrouded, a Quinault Indian quoted in the book "Coquette Thompson" recalled, "The old people made all the noise they could. They got on top of their houses and pounded on the roofs with sticks. They shouted, shot off their guns, and beat on their drums." It was thought the racket would scare away whatever demon was eating the sun.

Elsewhere in the country the 1878 eclipse ignited an almost equally frenzied reaction — by scientists. It was the stuff of legend when I was growing up in Wyoming, having attracted 31-year-old Thomas Edison to the territory. As school kids we were taught he realized how to make a long-lasting light bulb filament when a bamboo fiber curled up from his fly rod and snagged his imagination.

Sadly, this "light bulb invented while trout fishing" story is untrue. But the celebrity inventor of the phonograph did in fact come west to the Union Pacific Railroad boomtown of Rawlins, Wyoming as a guest in a scientific expedition led by astronomer Henry Draper.

Edison managed to find a shared hotel room, where his first night was interrupted by an ardent fan.

"After we retired and were asleep a thundering knock on the door awakened us," Edison recalled years later. "Upon opening the door, a tall, handsome man with flowing hair, dressed in Western style, entered the room. His eyes were bloodshot and he was somewhat inebriated. He introduced himself as 'Texas Jack' ... and he said he wanted to see Edison as he had read about me in the newspapers."

During the precious minutes of the eclipse, Draper's efforts to photograph the sun's corona

succeeded, a major research coup for the time. Edison's attempt to measure any eclipse-related change in air temperature failed.

**This summer's big event**

My first partial solar eclipse was on July 20, 1963. Already a little science nerd at age 5, two things stuck with me:

- Daddy thoroughly warned that looking at the sun, even partially eclipsed, would burn my eyes out. Recently given a magnifying glass I used to burn holes through scraps of paper and — may their gods forgive me — a few hapless ants, I could easily picture the sun punching tiny smoking craters into the backs of my eyeballs. This image still flashes through my mind whenever sitting at Ilwaco's lone traffic light on September mornings, the rising sun crouched straight ahead like a waiting archer aiming at its prey.

When buying a telescope 40 years ago that may have been built for or inspired by the 1878 eclipse, I was partly sold by its specialized "sun lens" — blackened in such a manner that the sun and its spots may be "safely" observed.

- The genuinely cautious way to monitor progress of an eclipse is to create a simple camera-like device. Using a pin to make a hole in a stiff piece of cardboard, you hold it between the sun and a sheet of paper, adjusting the distance between the two until a sharp circle of light is formed on the target. Even after half a century, I recall a fast-growing bite forming in that glowing cookie of light. It was a convincing demonstration of interconnectedness — our solar system as living thing, humans as beings of the sun, illuminating it with our understanding.

The coming eclipse on the morning of Aug. 21 won't be total in Umatilla and Morrow counties, but will come as close as most of us will ever experience. NASA's convenient online tool says the sun will be nearly 95 percent covered in Pendleton, for instance.

The remaining 5 percent will still be enough to damage eyesight, and our newspapers will contain ample advice on how to observe the eclipse.

That small percentage is also likely to make the corona — the sun's frizzy Einstein hair — invisible to us. And we'll be spared the throngs expected along the path of totality that includes John Day and Baker City.

I hope many locals will take the morning off to watch from some promontory. Take your kids. Scream and shout. Save our sun from the monster.

Matt Winters is the publisher and editor of the *Chinook (Wash.) Observer*, a sister paper of the *East Oregonian*.

## Quick takes

### Legacy of Frank Harkenrider

He was a wonderful ambassador for all of Hermiston. Proud to have known him.  
— John Tolan

Very sad. Hermiston would not be Hermiston without him.  
— Sandi Higginbotham Greene

One of a kind. RIP Harkie.  
— Dallas Morris

### Bike Week, Whiskey Fest jolt Pendleton economy

Omg — whiskey fest was awesome. It was great to have something other than country singers. I cannot wait for next years.  
— Shelly Christensen

I cannot tell you how many people that I saw drinking and smoking the big "m" and getting on the bikes and riding off into the sunset, no cops around to bother the out of town people.  
— ChrisandToby O'Malley

There will always be Round-Up, but that doesn't mean that's the only thing the city should be. Pendleton should be doing more of these, it's great to see the town growing.  
— Zack Shannon

### State struggles to identify ways to cut PERS debt

Wait one cotton picking minute. State assets belong to the citizens of the state. Tread lightly.  
— Kelly Tolman

The property around prisons is super desirable. That would fix it instantly. Kate is a genius! Put a Goodwill on each one so the escapees can stop in for some fresh duds.  
— Jeremy Clark

One of the great lessons of the Twitter age is that much can be summed up in just a few words. Here are some of this week's takes. Tweet yours @Tim\_Trainor or email editor@eastoregonian.com, and keep them to 140 characters.

## Fair, rodeo volunteers are separate from EOTEC

By DENNIS BARNETT  
Friends of the Fair and Rodeo

As the preparation for the 2017 Umatilla County Fair and Farm-City Pro Rodeo continues to increase in pace, the board of directors of the Friends of the Fair and Rodeo Inc. wanted to take a moment to reflect on the relationships and needs of the four entities involved in the events.

This may help clarify the understanding of what is happening next to the Hermiston airport.

First, the fair and rodeo facility is owned by the Eastern Oregon Trade and Event Center — EOTEC. EOTEC is a joint activity of Umatilla County and the city of Hermiston. It is charged with building and maintaining the facilities located on 90 acres next to the Hermiston Airport.

Those facilities include an event center, a common area, barns and a rodeo arena. Those facilities are currently being completed from funds that were provided by the city, county, the state of Oregon and donations from individuals and businesses across Umatilla and Morrow counties. The facilities are limited by these funds, because EOTEC has built these facilities without any bonded debt.

Secondly, a brief review of the makeup of the Umatilla County Fair and the Farm-City Pro Rodeo. The Umatilla County Fair is run by a fair board appointed by the Umatilla County Commissioners. These

board members are non-paid volunteers who manage the annual event. The fair is actually part of Umatilla County. This board and hundreds of volunteers come together each year to produce the fair.

The Farm-City Pro Rodeo Company is a nonprofit whose volunteer board is involved in producing a Professional Rodeo Cowboys Association rodeo each year. The rodeo also has many volunteers who help the board manage the event. The rodeo is completely independent of the Umatilla County Fair. The fair and rodeo cooperate with each other to hold the events in conjunction with each other each year.

Thirdly, the Umatilla County Fair and the Farm-City Pro Rodeo do not own any of the facilities. They merely rent the facilities to hold their annual events at the EOTEC site. Both entities have long-term leases with the landlord, EOTEC, to hold their events there.

The fair and the rodeo both have made substantial leasehold improvements to the facilities to assist in the operations of the fair and rodeo outside of what EOTEC has provided. These improvements are not owned by the fair or rodeo.

This all brings us to the discussion of what the Friends of the Fair and Rodeo is. The Friends of the Fair and Rodeo is a charitable nonprofit formed to support the

needs of the Umatilla County Fair and the Farm-City Pro Rodeo.

This entity was formed to allow businesses and individuals a way to donate for the benefit of the fair or rodeo, or both. Because the Friends of the Fair and Rodeo

is a charitable nonprofit, all donations to it are tax deductible.

The board of Friends of the Fair and Rodeo is made up of two rodeo board members, two fair board members and an outside member, independent of each board.

As EOTEC comes to the completion of the first phase of its development — and the Umatilla County Fair and Farm-City Pro Rodeo gear up for their first event at the new location — please keep in mind the effort in man hours and money that has been expended for the benefit of our county and our communities.

If you have interest in helping with the needed funds to put the finishing touches on the facility, and assist the fair and rodeo in putting on their events, please do not hesitate in contacting one of the Friends of the Fair and Rodeo board members. They are Dan Dorran, David Dickmeier, Roe Gardner, Lucas Wagner and Dennis Barnett.

Dennis Barnett is a member of the Friends of the Fair and Rodeo.

## CONTACT YOUR REPRESENTATIVES

### U.S. Senators

**Ron Wyden**  
Washington office:  
221 Dirksen Senate Office Bldg.  
Washington, DC 20510  
202-224-5244  
La Grande office:  
541-962-7691

**Jeff Merkley**  
Washington office:  
313 Hart Senate Office Building

Washington, DC 20510  
202-224-3753  
Pendleton office:  
541-278-1129

### U.S. Representative

**Greg Walden**  
Washington office:  
185 Rayburn House Office Building  
Washington, DC 20515  
202-225-6730  
La Grande office:  
541-624-2400

### Governor

**Kate Brown**  
160 State Capitol  
900 Court Street  
Salem, OR 97301-4047  
503-378-4582

### Senator

**Bill Hansell, District 29**  
900 Court St. NE, S-423  
Salem, OR 97301  
503-986-1729  
Sen.BillHansell@state.or.us

### Representatives

**Greg Barreto, District 58**  
900 Court St. NE, H-38  
Salem, OR 97301  
503-986-1458  
Rep.GregBarreto@state.or.us

**Greg Smith, District 57**  
900 Court St. NE, H-482  
Salem, OR 97301  
503-986-1457  
Rep.GregSmith@state.or.us