



A meteor streaks through the night sky during the Perseid meteor shower early Monday morning, Aug. 12, 2013, near Meacham. The Perseid meteor shower is an annual event that occurs every August when the Earth passes through the debris trail left by the comet Swift-Tuttle.

E.J. Harris Photo/East Oregonian, File

MORROW METEORITE

Portland museum trades for piece of Eastern Oregon's astrological history

By PHIL WRIGHT
East Oregonian

One of Eastern Oregon's oldest and most-traveled residents is back in the state for all to see.

Some 460 million years ago, a collision in the vastness of the asteroid belt between Mars and Jupiter hurled a chunk of rock on a trajectory toward Earth. Washington residents Donald and Debbie Wesson discovered that meteorite in 1999 in a ditch in Morrow County. The space rock resided in private hands and often out of the public eye. That changed in December when the Rice Northwest Museum of Rocks and Minerals, Hillsboro, acquired the 40-pound Morrow County Meteorite.

"We made a deal where we traded for it," Rice executive director Julian Gray said. "And we are ecstatic."

The Rice had the piece on loan from mineral collector Ed Thompson, and Gray said the museum wanted to own it outright for years. Meteorites from the moon and Mars can go for \$1,000 a gram, but even common meteorites sell for a few dollars a gram. At near 18,200 grams, Gray said, the Morrow County Meteorite was outside what the Rice could afford to pay. But there was a way.

"We had a meteorite from Gibeon, Africa, and they wanted it — badly," Gray said, "and were willing to trade us for that meteorite and give us a replacement."

The museum gave its 200-pound Gibeon piece for the Morrow County specimen and a 125-pound Campo del Cielo iron meteorite. Most meteorite displays are hands off, but not the Campo del Cielo.

"We love having these touch pieces that allow museum visitors to actually touch something that has been in outer space," Gray said.

The Rice also is pretty keen on the Morrow County Meteorite. Gray said six meteorites have been found in Oregon, and the Rice has displays of five, although some are only a few pieces. The Cascadia Meteorite Laboratory at Portland State University analyzed the Morrow County specimen in 2010, declaring it the real deal and naming it Morrow County. Gray said Wesson has never revealed the exact location of where he found it in the midst of wheat county.

"That's kind of frustrating for us because scientists like to be exact," he said.

The meteorite is the first found east of the Cascades and the second-largest from Oregon. The largest is the 32,000-pound Willamette Meteorite, earning it the title of largest in North America. The American Museum of Natural History in New York City has it on permanent display.

The Morrow County is an L6 ordinary chondrite, or, Gray said more simply, a stony meteorite. But there is plenty that makes it extraordinary.

The Morrow County is an oriented meteorite, meaning it did not tumble on its fiery fall through earth's atmosphere but stayed in one position. Gray explained the heat and friction from the drop melted the surface and rounded the front edge, creating flow lines that dripped off the back. The Cascadia Meteorite Laboratory called the Morrow County's cone shape "very nice for such a large specimen." Gray said NASA looked to the shape of oriented meteorites to create return capsules to bring astronauts home from space.

Weathering gave the meteorite a yellow tint. The Cascadia lab reported the look is different from meteorites from the deserts in Africa or Antarctica, and the Morrow County shows evidence a farm plow struck it.

Gray also said the analysis revealed the structure of the meteorite recorded the tremendous collision that created it so long ago and far away. He said meteorites reveal much more.



Photo contributed by the Rice Northwest Museum of Rocks and Minerals

The Morrow County Meteorite now is on public display at the Rice Northwest Museum of Rocks and Minerals, Hillsboro.



Photo contributed by the Rice Northwest Museum of Rocks and Minerals

Rice Northwest Museum of Rocks and Minerals curator Leslie Moclock, left, and mineral collector Ed Thompson show off the Morrow County Meteorite. The museum traded with Thompson in December to acquire the rock from space that was discovered in 1999 in Morrow County.

"We actually know the age of the earth from meteorites," he said, and they allow us to see how the solar system changed over time. He said we know more about Mars and the Moon from meteorites than from samples from their surfaces. The Apollo missions to the Moon, for example, vis-

ited six sites, and only one mission included a geologist. Gray said meteorites from the Moon provide a much wider sampling.

He said he calls meteorites "rocks from space," and the Morrow County is a "very cool rock."

You can see it at the Rice

Museum, at 26385 N.W. Groveland Drive, Hillsboro, which is open to the public 1-5 p.m. Wednesday through Sunday. Gray said the museum also has the world's largest opal-filled thunderegg from Opal Butte near Heppner. For more information, visit <https://ricenorthwestmuseum.org/>