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## Major Oregon Meteorite finds new home at the Rice Museum

HILLSBORO, OREGON (December 10, 2018) – The Rice NW Museum of Rocks and Minerals announced today the acquisition of the famed Morrow County meteorite, a 40-lb. specimen discovered by Donald Wesson in 1999 in Morrow County, Oregon. The cone-shaped space rock was already on display as part of a loaned exhibit, but is now a part of the permanent collection.

The Morrow County meteorite is noteworthy as an oriented specimen, meaning it did not tumble as it fell through Earth's atmosphere. Instead, it settled into a fixed position, much like NASA's famed Apollo spacecraft as they returned to Earth. The exterior of the Morrow County meteorite has distinctive flow lines left behind as heat from its fiery passage through the atmosphere melted away its surface. It also has a distinctive yellowish color due to weathering.

There is a notable anomaly to the Morrow County specimen. There is speculation that the tip of the meteorite's cone was broken off when farm machinery encountered it. More recently, scientists sawed off a large section from the base to aid in identification.

The Morrow County meteorite is of great interest to scientists. A team of researchers at The Cascadia Meteorite Laboratory (CML) at Portland State University positively identified the rock as a meteorite. Further research by CML scientists Melinda Hutson, Alex Ruzicka, and Dick Pugh revealed that the Morrow County meteorite was once part of an asteroid that collided with another object 460,000 million years ago. The collision produced multiple fragments, one of which would eventually become the Morrow County meteorite after its journey to Earth.

"This is fantastic news for Oregon collectors and meteorite enthusiasts," noted executive director Julian Gray. "We have been trying to acquire this specimen for years, and we are especially proud to be able to bring this specimen 'home' to Oregon. This important acquisition reinforces the Rice Museum's commitment to the Pacific Northwest rockhounding community and to the preservation of scientifically important specimens. We hope that stories like the discovery of the Morrow County meteorite will spur other collectors to find the next Oregon meteorite." he added.

Gray also expressed thanks to the Rice Museum curator. "This was a great trade. I want to express special thanks to curator Leslie Moclock, who completed the trade with famed mineral collector Ed Thompson. We appreciate Ed's dedication to our museum."

The museum also acquired a new 125-pound Campo del Cielo iron meteorite specimen, and it, too is on immediate display. The two new meteorites were traded for the museum's 200-lb. Gibeon meteorite specimen, a common iron meteorite from Namibia. The Campo del Cielo iron meteorite is an interesting addition to the museum's "hands-on" display, because unlike many mineral specimens, the Campo actually *benefits* from human contact. The surface, when first discovered, tends to be rusty and can flake. The oils in our skin, combined with handling, tends to clean and polish the surface. "The oil from human hands is like magic for the care and curation of any Campo Del Cielo," Thompson explained.

The museum invites visitors to explore the entire meteorite collection to learn more about these fascinating rocks from space.



Figure 1. Rice Northwest Museum of Rocks and Minerals curator Leslie Moclock, left, and mineral collector Ed Thompson showing off the Morrow County meteorite.

## About the Morrow County Meteorite



**Figure 2.** The 40-pound Morrow County meteorite has distinctive flow lines.

The Morrow County meteorite was discovered in 1999 by Donald Wesson and his wife Debbie. They discovered the interesting rock in a ditch, carried it home, and stored it in various places, including under their deck barbecue. A television show about meteorites inspired Mr. Wesson to take the rock to a local county fair in Castle Rock, Washington in 2009, and a member of the Southern Washington Mineralogical Society referred him to Western Washington University geologists in Bellingham, Washington. Ultimately, the Cascadia Meteorite Laboratory at Portland State University confirmed the specimen as an L6 ordinary chondrite. There is no known crater associated with the Morrow meteorite.

## About the Campo del Cielo Meteorite



Figure 3. The new Campo del Cielo specimen

The Campo del Cielo group of iron meteorites was discovered in 1576 in northern Argentina by the Spanish military in response to Native legends. Indigenous people in the area had been using iron collected from the area for many years to fashion into weapons, and called the place *Pigueum Nonralta*, which the Spanish translated to “Field of Heaven,” or Campo del Cielo. Subsequent expeditions in 1783 and 1803 verified that the material was not iron ore, but a meteorite. By 1969, scientists had located a 26 impact craters in a strewn field measured about 2 miles wide and almost 12 miles long. The largest single piece unearthed was named Gancedo, for the nearby town that aided the excavation, and weighed about 31 tons. The el Chaco fragment, named for Chaco province, weighed almost 37 tons, and the combined mass for the field is over 100 tons, which if intact, would have made it the largest such mass in the world, ahead of the 60-ton Hoba meteorite of Namibia. Examination of charred wood from beneath larger Campo del Cielo specimens yielded an impact date of about 4,000 – 5,000 years ago. The metallic composition of the Campo fragments is 92.6% iron, 6.7% nickel, with cobalt, phosphorous, germanium, gallium, and iridium also present. Specialists classified the Campo del Cielo meteorite as a coarse octahedrite to granular hexahedrite, group IAB.

## About Oregon Meteorites

<b>Name (county)</b>	<b>Type</b>	<b>Discovered</b>	<b>Weight</b>
Willamette (Linn County)	Iron	1902	15.5 tons
Morrow County	Stone	1999	40 pounds
Klamath Falls (Klamath County)	Iron	1952	30 pounds
Sams Valley (Jackson County)	Iron	1894	3.6 pounds
Fitzwater Pass (Lake County)	Iron	1976	65 grams
Salem (Linn County)	Stone	1981	61 grams

## About the Rice NW Museum of Rocks and Minerals

The Rice Northwest Museum of Rocks and Minerals, an affiliate of the Smithsonian Institution, houses a world-class collection of rocks and minerals recognized as the finest in the Pacific Northwest and one of the best in the nation. The Museum is in Hillsboro, Oregon just west of Portland (exit 61 off Highway 26). Its educational programs include organized school field trips as well as ongoing educational outreach throughout the community at large. A variety of public and private events are hosted throughout the year as well. The Museum is listed on the National Registry for Historic Places for its unique architectural style and its use of natural stone and extraordinary native Oregon woodwork throughout the building.

For more information about the Rice Northwest Museum of Rocks and Minerals, call (503) 647-2418 or visit [www.ricenorthwestmuseum.org](http://www.ricenorthwestmuseum.org) or [www.facebook.com/RiceNWMuseum](https://www.facebook.com/RiceNWMuseum).

## References

Space.com article about the Morrow Meteorite: <https://www.space.com/8522-ancient-40-pound-meteorite-pulled-ditch-oregon.html>

Edwin Thompson Meteorites: <http://www.etmeteorites.com/home.html>

Wikipedia page for Campo del Cielo: [https://en.wikipedia.org/wiki/Campo\\_del\\_Cielo](https://en.wikipedia.org/wiki/Campo_del_Cielo)

Rice NW Museum of Rocks and Minerals: <https://ricenorthwestmuseum.org/>

Northwest Meteorites: <http://meteorites.pdx.edu/northwest.htm>

Cascadia Meteorite Laboratory: <http://meteorites.pdx.edu/>

The Meteoritical Society: <https://meteoritical.org/>