At the Intersection of Technology and Artistry

IDIGBIO’S 3RD ANNUAL DIGITAL DATA IN BIODIVERSITY RESEARCH CONFERENCE

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FROM MERCURY TO EARTH?
A meteorite like no other

IN FEBRUARY 2012 A SCATTERING OF 35 GREEN STONES was discovered in the Sahara Desert of Morocco. Their texture and shape indicated that they belonged to a meteorite, but their olive-green color was unique. Where did this meteorite—known as NWA 7325—come from?

Most meteorites originate in the asteroid belt between Mars and Jupiter. However, based on its chemistry and mineral composition, some are known to have come from Mars or Earth’s moon.

With its high magnesium and chromium content—and low amount of iron—the chemistry of NWA 7325 is unique among meteorites. And its low magnesium perfectly matches the known magnesium of Mercury. Together these traits suggest a Mercelian origin for NWA 7325.

NWA 7325 is the only potential fragment of the planet Mercury on Earth. Presented here—for the first time—is the largest fragment recovered.

A meteorite fragment, length 28 mm, width 15 mm. The green material is hardened volcanic rock that formed on Mercury’s surface. The high magnesium content suggests it was derived from the planet’s core.

The story continues...

While the magnesium, low iron content, and high levels of potassium of this fragment are unique, the origin of NWA 7325 is still a mystery. Some argue that it originated from the Moon or Mars. Others suggest it may be a fragment of Mercury, which orbits the Sun at a distance of about 50 million kilometers. It is possible that such a fragment could have appeared on Earth through a collision with another asteroid or comet. Further analysis is needed to determine its true origin and origin theory.
Displayed here is Northwest Africa (NWA) 5000, one of the largest lunar meteorites ever discovered.

**A Coveted Stone**

Of the approximately 15,000 meteorites that have landed on Earth, only 125 are from the Moon. Of the more than 500,000 meteorites found on Earth, only 125 are from the Moon. The exact reason is unknown. The stone weighs 11.53 kg—the largest sample received.

Northwest Africa (NWA) 5000

As the closest and largest object in the sky, Earth's Moon has fascinated mankind since the dawn of time. Its scientific investigation began on July 26, 1609, when Thomas Harriot first observed the Moon by telescope.

Three hundred and thirty years later—on July 24, 1969—the first Moon rocks were returned to Earth aboard Apollo 11, kicking off the lunar exploration era. With these specimens, a new chapter in the study of extraterrestrial rocks began. The Apollo samples allowed for the recognition of a new, previously unknown type of meteorite, those originating from the Moon.

Northwest Africa (NWA) 5000, one of the largest lunar meteorites ever discovered.
The exact site here (right) shows the rough appearance of NWA 5000. Smaller fragments of the original meteorite were distributed worldwide to museums and collectors. This 1.166 kg (2.58 lb) end piece (left) contains remnants of the fusion crust remaining from atmospheric entry and the meteorite was exposed to Saharan winds chipping the darker, speckled area. The surface offers a glimpse into the meteorite's true color and composition.
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