

# What do a cow, a mailbox, a boy, a car, and a roof have in common?

Each of them have been struck by a meteorite known as a hammer stone



## What's a hammer stone?

A **hammer stone** is a meteorite, or piece of meteorite, that has struck a man-made object (like cars, buildings, etc.), a domesticated animal, or a human. As you might imagine, being struck by falling space debris is pretty extraordinary, so objects that have been hit by hammer stones are referred to as hammer artifacts. Meteorites that were a part of the same fall event, but did not actually strike anything, are referred to as hammers.

Often, hammer stones will retain some marking as proof of their collision with an artifact like scuffs in their outer crust, or paint that has rubbed off from whatever they hit. Hammer stones and hammer artifacts are highly prized for their novelty. In fact, objects that have been hit by hammer stones are often worth more after being damaged than they were worth originally!



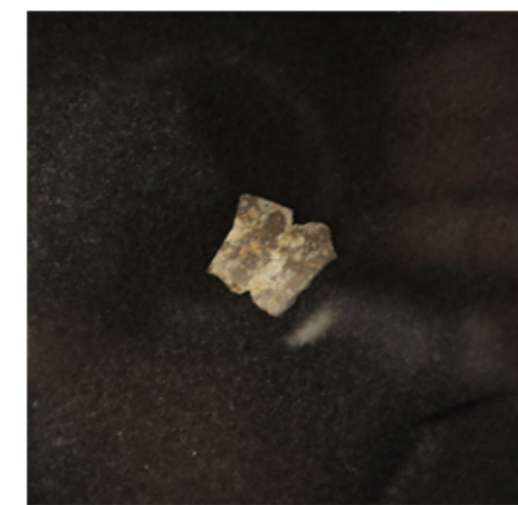
Partial slice of Peekskill meteorite displaying red paint on the fusion crust (top).



## VALERA

Trujillo, Venezuela  
October 15, 1972

Nicknamed "the Butcher of Venezuela", the meteorite that fell on Trujillo in 1972 struck a cow on the El Tinajero farm, nearly cutting the animal in half! Unfortunately, the cow met its demise due to the fallen stone, but the ranch owner, physician Argimiro Gonzalez, and his guest who discovered the poor bovine ate well that day! Gonzalez was unphased by the event, and actually used the stone as a doorstop for years. Long after his passing, Dr. Ignacio Ferrin reached out to the Gonzalez family to purchase the Valera meteorite, as it has special significance as one of the only documented fatal meteorite impacts.



**Valera**  
Fell: October 15, 1972  
Mass: 50 kg  
Classification: L5, chondrite  
Specimen Wt: 0.33 g  
Provenance: C. Whitford

## CLAXTON

Claxton, Georgia, USA  
December 10, 1984

Have you ever found an alien in your mailbox? In 1984, Carutha Barnard found just that when a meteorite struck her mailbox and punched it clean off its post. It was the first and only instance of a mailbox getting a special delivery from outer space, though plenty of cars and buildings have been struck. One of Barnard's neighbors actually watched the collision from his yard just 36 meters away, making this fall especially significant as one of only a handful of witnessed falls.



**Claxton**  
Fell: December 10, 1984  
Mass: 1455 g  
Classification: L6, chondrite  
Specimen Wt: 0.18 g  
Provenance: L. Cullen, C. Whitford



Staged image with Carutha Barnard, far right

## MBALE

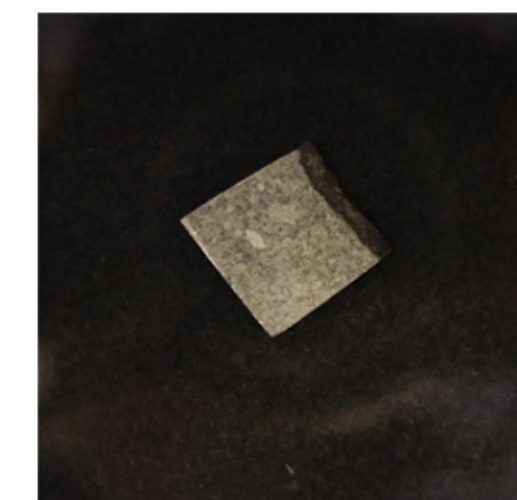
Malukhu, Uganda  
August 14, 1992

This small specimen fell as part of a larger meteor shower that rained hundreds of stones onto factory roofs, houses, and even a local prison yard. When a boy was hit by a meteorite ricocheting off of a banana tree, he became only the second authenticated person to be struck by a meteorite!



Courtesy of Michael Farmer Meteorites

Luckily, the meteorite had to travel through the leaves of the tree to reach the boy, and was slowed down enough to not cause him any harm. Though originally quite frightened, the residents of Mbale saw the shower as a positive gift from the heavens and ground up the recovered stones to be used in a paste they believed could help cure AIDS, which was devastating Africa at the time.



**Mbale**  
Fell: August 14, 1992  
Mass: 150 kg  
Classification: L5/6, chondrite  
Specimen Wt: 3.4 g  
Provenance: R. Wesel, C. Whitford

## PEEKSKILL

Peekskill, New York, USA  
October 9, 1992

In October of 1992 lucky spectators who had their video cameras out to record a sports event were able to capture a spectacular sight in the New York sky. A 4.4 billion-year-old meteorite with a brilliant fireball trail was making its way into our atmosphere, far from its home in the asteroid belt. Thanks to the local football game, this event is the most recorded of any fireball on record! Despite collectors and scientists searching for debris from this event, the only stone recovered from this fall was the single rock that hit a teenager's parked car. That car, originally purchased by the teen from her grandmother for \$400, was sold to a collector for \$25,000 after the strike and has been put on display in museums around the world.



Courtesy of Darryl Pitt / Macovich Collection of Meteorites



**Peekskill**  
Fell: October 9, 1992  
Mass: 12.57 kg  
Classification: H6, chondrite  
Specimen Wt: 1.7 g  
Provenance: NEMS, P. Marmet, Macovich Collection, C. Whitford

## WORDEN

Worden, Michigan, USA  
September 1, 1997

In 1997 in our very own state of Michigan, a father and his two sons heard a loud noise coming from their front yard. When they rushed to investigate, they found that a meteorite had crashed into their garage, smashing in the metal roof of their parked car. The family described the event as sounding similar to a car crash, loud and sudden. The new hole made by the meteorite let in sunlight, illuminating the debris of plaster and insulation that had been strewn about their garage. Talk about an unexpected guest!



**Worden**  
Fell: September 1, 1997  
Mass: 1.551 kg  
Classification: L5, chondrite  
Specimen Wt: 0.45 g  
Provenance: M. Morgan, G. Fujiwara, C. Whitford



Courtesy of Matt Morgan, Mile High Meteorites

Why are these meteorite specimens so small?

Pieces of hammerstones are typically more difficult to acquire and are broken up into smaller pieces so they can be held in more collections.