THE MACOVICH COLLECTION

The largest and most celebrated collection of aesthetic iron meteorites in the world

LOVINA

Bali, Indonesia | Found 1981 | Iron (ataxite, ungrouped) | 4780 grams

"The most bizarre, unreal meteorite I've ever seen in 30 years"
—Marlin Cilz, Montana Meteorite Laboratory

While searching for shells at Lovina Beach in Bali, Indonesia in 1981, a 13-year-old boy recovered an unusual metallic rock from the shallows. He knew nothing about meteorites—had no idea what they looked like—but this did not prevent him from earnestly reporting to his family that he found a rock from outer space. Extremely exotic, the rock looked nothing like any meteorite documented. With two dozen one-inch metallic pyramids on a coral-like base, magical thinking was stretched to the breaking point as this would have to be the most unusually shaped meteorite known to exist.

As the years went by, the boy was entirely content to hold onto his find. He moved to Canada with his family, kept his rock in a tackle box and went to work in a nickel mine. In 2008 he ran into a paleontologist who introduced him to scientists at Western Ontario University (the same researchers who pinpointed the location of the September 25th, 2009 Grimsby fireball). When the rock's extraterrestrial origin was confirmed, the owner was nonplussed and later conveyed, "Over all these years, I've never had as much faith in anything as this being a meteorite."

An ataxite, Lovina is one of only a handful of underwater finds—and the only find recovered from a body of water where there was not an additional meteorite from the same event first recovered from the shoreline. The extraordinary ziggurat (pyramidal) structures are believed to be rich in tetrataenite. With its 34.5% nickel content, Lovina has the 4th largest nickel concentration of any meteorite; as a result, it was selectively resistant to the oxidizing effect of the tropical waters in which it was immersed for centuries. The internal structure of Lovina is only somewhat less anomalous than its matchless pyramids. An abundance of globular troilite nodules organized in a novel latticework comingle with similarly organized vugs—a consequence of troilite oxidation.

Dan Richer, finder

"Lovina is unbelievable. You can take whatever you thought you knew about meteorites — and it just doesn't matter anymore."
—Robert Haag, Robert Haag Meteorites

Lunar and Planetary Science XXXIX (2008)