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The Great Emerald Meteorite Cyberspace Hoax



Ashtabula Star Beacon -- C1

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few billion years ago, a giant asteroid collided with the Earth right about where you are sitting.

It left behind green, glassy meteorites with metal spheres suspended inside. About three years ago, Youngstown-area diver Bruce Watson discovered these rocks and started asking questions. At first, he thought they were gem stones stashed in Lake Erie 1,000 years ago by the Vikings. Then he took them to a gemologist for analysis and discovered something even more amazing: those green rocks came from outer space.

Thus was born the "Emerald Meteorite," a meteorite so rare scientific experts are simply unable to identify or explain it.

That's one version of the story, the version that appears on The Emerald Meteorite Group's website (www.emeraldmeteorite.com). It's a version with more loopholes than a millionaire's tax accountant and speculation than a 1928 Wall Street investor.

Here's the other version. From 1943 to 1980, Union Carbide and Carbon's Ashtabula Township furnaces produced alloys of silicon, manganese, magnesium, iron, boron and chromium. Dross or slag, a furnace byproduct consisting of glass and metal impurities, was also produced. Thousands of tons of the stuff were hauled out of the plant every month. Docks and roads were built upon it. Not surprisingly, some of it ended up in Lake Erie.

Industrial artifacts or a previously unknown meteoritic material? That's the debate stirred by emeraldmeteorite.com, a Website posted by Watson and his marketing assistant Dan Cononico last year. It's a debate that's getting white hot as it enters the meteorite community from Cyberspace. Watson, who ties the meteorites to a Norse presence in northeast Ohio, has been called a "charlatan" and "phony" by scientists. Meanwhile meteorite hobbyists are being lured by the beauty of the rocks and engage in lively Cyberspace debate (www7.pair.com/arthur/meteor/archive/Nov97). And investors have dropped at least \$100,000 into the submerged mystery.

All this from green rock harvested from a secret location off the Ashtabula County shore.

One of a kind

The debate begins in Cyberspace, where Watson and Cononico promote their find as "the world's only Emerald Meteorite" (a trademark).

"Our specimen was found in North America by accident while doing research on another project pertaining to the Vikings in America," state the men in their introduction page.

"The discovery of this specimen has astounding historical significance. We will prove the Nors (sic) settled in Northern Ohio along Lake Erie and that they first discovered our specimen. We believe we have found evidence that they smelted this meteorite for metal. We also believe that this settlement better fits The Ancient Vineland (The Land of the Grapes)."

Watson discovered the rocks while diving in the underwater trenches off Saybrook, Geneva and Conneaut. His theory is that the trenches date from a millennium ago and were built by Vikings lured to this area by the iron content of the meteorite. They planted their grapes, smelted their iron and pursued other Viking-like activities along the Lake Erie shore.

As further evidence of Viking habitation, Watson points to the 1876 Williams Brothers "History of Ashtabula County," which speaks of pioneers finding ancient cemeteries with large-boned skeletons buried in them. Watson said he discovered an underwater foundry, complete with silvery ingots, and attributes both to the Norse. He's even found a metal "tooth" in the rubble around the foundry.

He contends that all this is plausible because, according to Dr. Charles F. Herdendorf, a hydrologist, lake levels have risen a couple feet per century. Thus, the trenches were at one time lakeshore homes and industrial parks for the Vikings.

A green rock retrieved from one of the trenches was taken to Michael Williams of West Shore Gemological Services for study. Williams is a certified gemologist who operates an independent testing lab. He analyzed the sample under a microscope and stated that the metallic spheres in the sample were "very interesting."

"Upon searching for a metallic crystal of this shape I found none," he wrote in a memo to Watson. "This appears to be something new. They are similar in color and texture to Hematite, the structure of Hematite is different."

A more recent, but undated memo from Williams, states that the chemical composition of the green glass looks like something in the beryl family of gem stones, which includes green beryl and emerald. As for the metallic spheres, his testing (method not specified) revealed them to be nickel and iron.

But the clincher for Watson was the presence of xenon gas and a Widmanstatten structure in the sample. Both are unknown on terrestrial rocks.

"The very high concentration of zenon (sic) gas in the samples is many times higher than in terrestrial rocks, indicate an origin other than here," wrote Williams. "After examining all the test results, I have come to one conclusion. This material has an origin outside the earth's environment, the metal spheres can't form in any environment other than `0' G. It is my opinion that this material is some form of newly discovered form of Meteorite."

This analysis led Watson to conclude that his rock is a pallasites meteorite, which is distinguished by nuggets of olivine set in a meshwork of metal. Olivine is a magnesium-iron silicate the color of a dried-up green olive.



ABOVE: Real meteorites are shown on the left. No. 2 is a palisites, the type Bruce Watson associates with

the Emerald Meteorite. No. 3 is a piece of slag broken open; 4 and 5 are pieces of "Emerald Meteorite" that were sent to NASA for analysis. A former UCM worker identified No. 3 as a piece of silica-manganese slag.

Second opinion

Williams could not be reached for comment. However, Cononico provided copies of Williams' analysis and they were shown to Aloysius. F. Hepp, a senior research scientist with NASA's Lewis Research Center and adjunct professor in inorganic chemistry at Baldwin Wallace College in Berea. Hepp said the analysis appeared to have been done using X-ray fluoroscopy, a testing method that could not accurately detect xenon gas. As for the claim that the spheres can't form in anything except zero gravity, Hepp dismisses it as inaccurate. He said molten metal and ceramic mix like water and oil -- anyone who has shaken a bottle of vinegar and oil dressing knows that spheres of the heavier oil will float through the water.

Hepp obtained samples of an "Emerald Meteorite" cut into sections. He ran a spectrographic analysis using the dispersive energy technique. Under a scanning electron microscope, the sample is hit with a blast of energy. The electrons emitted from the sample are then measured. The analysis does not measure the abundance of elements, but does identify what is present.

Hepp's findings varied significantly from those of Williams. He found no nickel in the sample, a component of virtually all meteorites. The two major metals in the sample were iron and chromium. Silicon was also detected in the metal portion, as well as in the ceramic element. There were many other metals in the ceramic portion, including magnesium, molybdenum, aluminum and cadmium, a toxic heavy metal. Under the right pH conditions, the cadmium could be released from the ceramic element and pollute the water. Hepp said under real-life circumstances, however, the danger is probably minimal.

Hepp said there is no doubt in his mind that the samples he studied are nothing more than "industrial artifacts." He told Watson the same, but said Watson chose to ignore his analysis and continues to promote the slag as an "Emerald Meteorite."

But Hepp's analysis is not the only one Watson has ignored. The Cleveland Museum of Natural History also dismissed the material as slag. So did Tim McCoy, associate curator at the division of meteorites for the Smithsonian in Washington, D.C. McCoy had one of his postdoctoral fellows analyze an "Emerald Meteorite" sample under a scanning microscope, the same technique used by Hepp. Here's what he found:

- The metallic spheres are composed of manganese, with lesser amounts of iron and silicon. There was no nickel.
- No Widmanstätten pattern was noted. McCoy said in a phone interview that Watson's claim of such a pattern is based upon a similar pattern in the glass but caused by rapid cooling. Further, for a Widmanstätten pattern to occur, two minerals, kamacite (low nickel content) and taenite (high nickel), must be present. But there's no nickel in the "Emerald Meteorite."
- The glass was composed of silicon, calcium, aluminum and magnesium. McCoy noted that the grain size of the glass is quite fine, suggesting the minerals crystallized rapidly during fast cooling.

Writing in an opinion letter posted on the Internet, McCoy concluded "All of this evidence taken together strongly indicates that this material is a man made industrial product ... in short, there can be no doubt that this material is not of extraterrestrial origin, but rather is a man made industrial product."

Worker confirmation

McCoy's analysis is right on, according to a man who worked around the slag more than 30 years. Don Booth of North Kingsville was furnace room manager for Electromet and immediately identified the "Emerald Meteorite" sample as "silica-manganese slag." Booth said the Union Carbide furnaces produced two types of slag, "standard," which was an iron/manganese mix that was crushed and returned to the furnace to reclaim the metals, and silica-manganese, which was discarded by the dump-truck load.



RIGHT: Bruce Watson displays a piece of what believes is a meteorite during a recent tour of Ashtabula County. Al Willoughby on the left helps Watson hold the hunk of metal and glass, most likely industrial slag dumped in Lake Erie 40 years ago.

Sam Bucci, also a Union Carbide retiree, said Pinney Dock is built on silica-manganese slag. "They hauled that slag red hot in squares, about 1 1/2-tons each, and dumped it into the lake," Bucci said. "Standard slag from Youngstown was also hauled up to Pinney Dock." Gordon Davis, a 42-year veteran of the plant,

confirmed Bucci's story and said the slag was dumped wherever the plant could find a location to get rid of it. Another area resident who worked for the Operating Engineers for 50 years and hauled slag for the company said it was dumped along the shoreline and might have been hauled out into the lake on a barge and dumped.

Standard slag had metallic spheres embedded in the green glass like BB shot. It's possible that some of the standard slag got mixed in with the silica-manganese, which is dark green and may be found with light green crystal structures scattered throughout. It shatters when hit with a hammer and has sharp edges.

It is likely that dredging around the dock disturbed some of the smaller pieces of slag, which may have been transported to the "trenches," where it was trapped. Wave action also could have deposited the slag. Or, the industrial artifacts may have been dumped directly into the lake, especially during the World War II years when winning a war took precedence over the environment.

But Watson claims the material is widely dispersed in the Lake Erie basin and that Herdendorf has found it in the glacial till. He said a piece was even found in Cleveland by someone excavating a foundation for a house.

Solid as a rock

Dr. Ron Corey, professor of geology at Baldwin Wallace, also examined the samples and called them "industrial artifacts." He said the green color is probably from chromium. The sample is definitely not an "emerald," for emeralds have beryllium in them. The analyses of the "Emerald Meteorite" show no traces of that element. Hepp attributes the green coloration to chromium.

Corey said meteorites have a "fusion crust," a black, crusty exterior "Emerald Meteorites" lack. And remember that piece of metal Watson found near the underwater foundry? Both Hepp and Corey identify it as some type of silica-manganese alloy.

More evidence against the meteorites comes from New England Meteorite Services (www.meteorlab.com), which studied the meteorite last year. "We saw absolutely no evidence of meteoritic material," said Russ Kempton, director of the independent lab.

Dr. Alan Rubin, a meteorite researcher at UCLA, said he and several colleagues looked at an "Emerald Meteorite" sample and decided it wasn't worth testing. "We concluded it's just slag," he said.

Rubin said Watson took his assessment of the rock out of context. "It is a beautiful rock," he said. "They got me to elicit a comment that 'I'd never seen anything like it before.' Nevertheless, it is not a meteorite." On the Website, Rubin's comment is twisted. "An expert in meteorites, while stating that he has never seen anything quite like it before, fell short in declaring that this is a meteorite after only a 'visual analysis.'"

Determination

Despite the overwhelming evidence that the "Emerald Meteorite" is a hoax, Watson and Cononico won't back off. Cononico said he is convinced that the Smithsonian, NEMS and other meteoric scientists have banded together to discredit their findings because Watson refuses to share the location of the rocks with them.

"I don't think anything is going to stop Bruce," Cononico said last week when confronted with the findings. "(The meteorite) will not get certified until he gives up the site and follows protocol." Cononico characterizes the meteorite scientists as a "close-knit organization that acts like it's a bunch of little gods."

"We did not follow proper protocol and kiss butt and they're upset with us," he said. However, Cononico said that by publishing their Web page, they have fulfilled their obligation to the scientific community to make their findings public.

"We put (the Web page) up for the world to see," Cononico said. "I don't want to stomp on any toes, but that's what the First Amendment allows us to do."

But Hepp, McCoy and Kempton are concerned the "Emerald Meteorite" will progress from scientific hoax to a financial scam if Watson attempts to sell the artifact as meteorite to unsuspecting consumers. Hepp calls him a "charlatan."

John Walters, publisher of "Voyage" magazine in Providence, R.I., became interested in the meteorite last year but quickly grew frustrated at Watson's refusal to provide complete information. He said he plans to print an article in his magazine that will expose Watson. Walters believes that Watson has purposely withheld the majority of the information he has about the material, choosing to release only that data that supports his

theory. He wants Watson to release all the analyses, not just Williams'. And he wants Watson to produce an "Emerald Meteorite" with the tell-tale fusion crust exterior. Walters is still waiting for it.

Cononico said he "smells a rat" because the gemstone side has "embraced" them while the meteorite experts are calling them phonies. He stands by his belief that the meteorite people are holding out for the location so they can cash in on the find. But Walters said he told Watson that there's little economic value to the "Emerald Meteorite" because there's such an abundance of it. Rubin said he doubts if Watson could even begin to recoup his investment. "My guess is they're not going to sell much of it because all the dealers are going to be aware of the fact it's not meteorite," he said.

Watson, who quit his job as a truck driver to pursue this theory, said he and others already have invested \$100,000 creating and posting the Web page, looking for the rocks and getting them analyzed. Earlier this year, Watson said he had investors willing to put \$1 million into the project. He said his goal, however, is not financial, but to become known as the truck driver who made the greatest scientific discovery of the century. Despite mounting evidence that his theory may be a hoax, he and Cononico are sticking with it.

"I think he's still 95 percent right on," Cononico said.

"I think we have something different from the rest," Watson said. "It's just that it's never been found before because it's been mixed in with the (slag)."