

The Knowledge Bank at The Ohio State University

Ohio State Engineer

- Title:** A Visitor From Mars?
- Creators:** Ireland, John D.
- Issue Date:** Feb-1939
- Publisher:** Ohio State University, College of Engineering
- Citation:** Ohio State Engineer, vol. 22, no. 3 (February, 1939), 12-13.
- URI:** <http://hdl.handle.net/1811/35570>
- Appears in Collections:** [Ohio State Engineer: Volume 22, no. 3 \(February, 1939\)](#)

A VISITOR FROM MARS?

By JOHN D. IRELAND

OLD mother earth is a poor host to interplanetary visitors. She is very unsociable in a universal way due to a layer of atmosphere about 150 miles thick. Every day 20 million or more interplanetary travelers endeavor to penetrate this gaseous armor. Shooting into the upper stratosphere at an approximate speed of 20 miles per second these little meteors produce spectacular luminous effects during the brief instant before they evaporate into the atmosphere.

There are a few pieces of matter which refuse to disappear in the air layers, continuing to fall at a tremendous speed until they strike the earth. When such an intruder does arrive, and luckily for mother earth only about 100 reach the ground each year, astronomers term the space visitor a "meteorite". Most meteorites are worn away to nothing by the action of the air, and despite their high speed, they do little damage upon impact.

At eight o'clock on the morning of June 30, 1908 the titan of meteorites made its way into the earth's surface. This was no tiny fragment, but a piece of metal weighing between 5 and 10 tons. Fortunately for humanity (but unfortunately for astronomers) this husky meteorite chose to fall in one of the most sparsely settled areas in the world—Central Siberia. There were no press agents to spread far and wide the unbelievable intensity of the meteorite's explosion. Only a few fear-struck peasants were within 50 miles of the center of impact.

Seismographs all over Europe registered slight tremors of the earth's crust at the time of the fall, but little thought was given to these tremors since the earth trembles almost continuously. Barographs in all parts of the globe recorded curious variations in pressure due to the explosion wave emanating from the point of impact.

The astonishing results of the fall were ignored by scientists everywhere, and slight credence was given the exaggerated stories told by the superstitious and ignorant peasants of the vicinity. In 1921, a Russian scientist-explorer, Leonid Kulik, visited the spot where the meteorite fell, and substantially verified the rumors which most astronomers chuckled about. Due to the lack of funds, and also to the unfriendly climate of the region, explorations are still incomplete; but enough facts have been gathered to dramatically describe the fall.

Kulik, the Russian explorer, questioned many people who saw the meteorite fall or felt its effects. The accounts of these eye witnesses were translated from the original Russian by Professor Lincoln LaPaz and Dr. Gerhardt Wiens of Ohio State. The following paragraphs are excerpts from the translation of the original Kulik papers.

A railroad agent of a station some 400 miles from the place of fall relates: "Just at the time of the fall I happened to be on duty awaiting the arrival of freight train No. 92 from Kansk. Suddenly I felt something like a strong vibration of the air and heard a rumbling sound. I became very much confused, thinking that this was an earthquake or some other natural phenomenon. The locomotive engineer on No. 92, Gryasnov, was so frightened by the rumbling sound and the vibration of the air that he stopped the train, fearing that it was derailed, and, after arriving at the siding, he even proposed that the train be inspected to see whether an explosion of some freight might not have occurred."

A man employed in the town of Kansk, about 370 miles from the center of explosion, was washing wool with some others on the banks of the Kana River, that June morning. "Suddenly there was heard", he recounts, "first a noise like that from the wings of a flushed bird, the noise passing from south to east . . . and along the river there came up against the current a wave like a surge. After this occurred a sharp clap, and after it, dull reverberations like subterranean rumblings. The clap was so strong that one of the workers fell into the water. With the occurrence of the clap, there appeared in the air something like a luminous mass, of a spherical form, in dimensions about half that of the moon, with a bluish tinge, which flew swiftly in the direction from Philomonovo to Irkutsk. After the luminous mass, there remained in the sky a trail in the form of a bluish streak, extending almost along the entire path. The duration of the phenomena I could not ascertain, but it was very brief."

The most dramatic account of the fall came from a peasant who lived at Vanovara, about 60 miles from the scene. He relates: "I sat on the open porch (of his hut) with my face toward the north and at that time there arose, in a moment, a conflagration which gave off such heat that it was impossible to remain sitting—it almost burned the shirt off me. And it was such a flaming wonder that I noticed that it occupied a space of not less than two versts (1.3 miles). I had time only to cast my eyes in that direction and see how large it was when in a moment it vanished. After this vanishing it grew dark, and at the same time there was an explosion which threw me off the open porch about seven feet or more; but I did not remain unconscious for very long; I came to myself and there was such a crashing sound that all the houses shook and seemed to move from their foundations. It broke the window panes and window frames in the houses, and in the center of the square, near the huts, a strip of earth was torn out."

Another peasant, living also at Vanovara was preparing to work in the fields that same June morning.

He remembers that he needed a nail. Not finding any he went out into the yard and began pulling a nail out of a window with his pincers. Suddenly something very strongly scorched his ears. Reaching for them and thinking the roof was burning, he raised his head and asked a neighbor who was on his porch, "Say, did you see anything?" "How could one help seeing it?" answered the neighbor. The peasant immediately went back into his hut, but no sooner had he crossed the threshold than the explosion occurred. The sod fell from the ceiling, and the door of the stove burst from its hinges and flew on to a bed opposite the stove. One window pane crashed to the ground. After this there was a sound similar to thunder vanishing gradually to the north.

A rich tungus peasant who owned 1500 head of reindeer suffered the most financial loss from the meteorite. He was accustomed to allowing the reindeer to roam at will over the hills and in the forests of that region.

In order to oversee his herd, he had built and furnished several sheds throughout the pasture lands. Each shed was complete, even to a silver samovar or Russian teapot. (Every good Russian prizes his samovar above his wife.) Down came the meteorite and flattened the woods. It killed most of the reindeer, cooking some of them to a turn. Every shed was burned, and the valued samovars were melted.

In 1929 Kulik visited the blown-down woods. The trees lay along radial lines from the center of the explosion. Not a stick of timber was left standing over an area whose diameter is about 40 miles. A careful survey showed that at least 80 million pine and birch trees of large diameter had been thrown down. The trees have never been disturbed, they are lying yet just as they fell in 1908; their tops still show signs of intense heat. It is a ghost forest and natives shun the place.