

TUNGUSKA

UFO UPDATE

By James Oberg

A genuine UFO appeared over Siberia in 1908, startling thousands of witnesses before it exploded with a thunderous detonation whose echoes still reverberate around the world. Tens of thousands of trees were flattened by the tremendous blast. Many theories have bitten the dust as scientists sought to explain what happened that day in June near the Tunguska River.

The Tunguska event, as it has come to be called, produced an explosion comparable to that of an H-bomb. More puzzling, the blast occurred high in the air, leaving no craters on the ground and no recognizable traces. Weird scenarios of antimatter meteors, miniature black holes, lithium asteroids, fiery whirlwinds, ball lightning, and other exotic phenomena have all been proposed as scientific explanations for the Tunguska event. The favored hypothesis today is that the blast was caused by the collision of Earth with a small comet, probably a chunk off a dying "space snowball," named Encke's comet.

But many ufologists have adopted the Tunguska event as proof not of our limited scientific knowledge of natural phenomena but of a visitation to Earth by an alien space probe, which accidentally destroyed itself in a thermonuclear immolation. Opinions differ as to whether the explosion was a deliberate signal or an accidental overload of the starship's propulsion system. The fact of the explosion itself is thought to be convincing proof for the existence of extraterrestrial nuclear-powered "flying saucers."

Narrating against a background of a man-made nuclear explosion, Leonard Nimoy told viewers of the television documentary "In Search of the Siberian Fireball" that "the evidence now indicates that a nuclear explosion may have occurred on Earth as early as 1908." The show, produced by Alan Landsburg Productions and first televised in November 1978, interviewed some scientists who supported the comet theory, but clearly the program's

sympathies were with more exciting suggestions: Thomas Atkins, coauthor of *The Fire Came By* (Doubleday, 1976), and Henry Gris, coauthor of *The New Soviet Psychic Discoveries* (Prentice-Hall, 1978), both argued that an alien spaceship had caused the Tunguska event.

"There is evidence," Atkins wrote, "to indicate that an extraterrestrial vehicle may explain the Siberian explosion. Though the proof is neither complete nor absolutely conclusive, the theory appears increasingly acceptable."

Gris, who refers to the object as the "Tungusky [sic] Miracle," quotes extensively from the testimony of Aleksei Zolotov, a Russian college professor whose frequent visits to the blast site have convinced him that the object was not of this world. Zolotov told Gris in Moscow in 1977, "When you hear the descriptions, you cannot help forming the opinion that this was no meteorite, but a giant UFO. The explosion [people in the area] saw was a perfect duplicate of what a nuclear blast looks like. . . . Everything points to a nuclear origin. . . . I have no doubt it was sent by inhabitants of outer space to attract our attention."

Zolotov often talks with Western reporters and is widely quoted in the Soviet press (the possibility that the first space visitors chose to land in Russia warms the hearts of all true patriots). Zolotov and the USSR's chief UFO expert, Feliks Zigel, take turns enthralled bored and news-hungry Western journalists in Moscow with their latest proof that the blast at Tunguska was produced by an object traveling here from outer space. It's a good story that piques the interest of the wire services and TV news producers about once a year.

The nuclear-blast theory favored by ufologists owes its origins to traces of radiation found near the site and to the fact that plant mutations and accelerated plant growth were detected by biologists (these effects have also been observed following H-bomb tests). A mysterious glowing cloud from the explosion drifted over northern Europe for several days, baffling scientists who were unaware of



The Tunguska event, visualized here by artist Christopher Foss, has lost much of its mystery.

the Siberian blast. The strange shape of the site itself suggested to some researchers that the explosion took place inside a superstrong hull and was directed outward. Testimony of eyewitnesses describes a cylindrical object that changed course several times before heading toward an uninhabited region just before the explosion.

A czarist expedition seems to have reached the site shortly after the event, but all of its records were obliterated, along with the personnel of the expedition, in the ensuing Bolshevik revolution; only tantalizing secondhand and thirdhand accounts have survived. An expedition arrived at Tunguska in 1928, after several years of scouting around the remote Siberian forest-swamp region. The expedition leader, a meteorologist named Leonid Kulik, persuaded the Communist government to finance the trip on the grounds that vast quantities of meteoric iron were probably lying around on the ground and could prove useful to Soviet industry.

Imagine Kulik's discomfiture when he arrived at ground zero and found thousands of hectares of flattened trees but not one fragment of iron! Decades later analysts discovered microscopic spherules in the local soil, but there is still a dispute as to whether these are in any way connected with the 1908 explosion. Kulik had some explaining to do when he got back to Moscow.

Years later, while surveying the atomic-bomb damage to Hiroshima, Russian science writer Aleksandr Kazantsev saw enough similarities with Tunguska to theorize that the Siberian explosion, too, had been nuclear in nature. He embellished this notion into a science-fiction story, published in 1946, which suggested that the explosion had been caused by a crippled spaceship from Mars, seeking to obtain fresh water from nearby Lake Baikal. The "Tunguska UFO" was born and has been thriving ever since.

As might be expected, "traditionalist" scientists do not subscribe to this theory. Even leading astronomers and space geologists in the Soviet Union tend to favor the comet hypothesis, leaving Tunguska to the private endeavors of Zigel, Zolotov, and other writers who try to give the impression that the UFO theory is the official Soviet version of the event. It is far from it.

American meteor experts, for example, may have uncovered new evidence linking the blast to a comet's impact. Ronald Oriti, a researcher with the Griffith Observatory in Los Angeles (who was interviewed on the *In Search of* program), vehemently rejects the spaceship theory. In 1975 he published a new analysis of the Tunguska event, drawing attention to parallels with a similar but smaller midair blast over Revelstoke, Canada, in 1965. That blast was in the kiloton range, yet it left no

craters. Fortunately, investigators at the scene noticed a thin layer of soot on some newly fallen snow. Laboratory analysis showed that the material was of meteoric origin, testifying to the complete pulverization of the meteor following its explosion. The explosive force was accounted for entirely by its kinetic energy and atmospheric friction; no chemical or nuclear fuels were needed.

"Use of the word *fireball* to imply that the Tunguska blast resembled a hydrogen bomb is false," Oriti claimed in an interview late in 1978. "Those of us familiar with meteor reports know that the term should properly be applied to the flaming objects crossing the sky, not to the final explosion."

Nor are the reports of radiation any more reliable. Although the UFO press quotes many prominent scientists as testifying to the nuclear nature of the blast, a more careful check of their opinions reveals a different picture. Willard Libby, father of

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the carbon-14 dating technique and a Nobel Prize winner, supervised tests of tree rings conducted after the 1908 explosion. Although he found trace fluctuations of radiation, he computed that an actual nuclear blast would have left residues at least seven times as strong as those that were found.

"Our test ruled out any such large nuclear reaction," Libby commented to an interviewer from *Astronomy* magazine late in 1976. When told that pro-UFO spokesmen were quoting his tests as having proved the existence of a nuclear blast at Tunguska, Libby objected: "No, it proves nothing of the sort. We found nothing to indicate a nuclear explosion of that size, and we had calculated that if a nuclear reaction had occurred, we *would* have found clear indications."

In support of Libby's claim of proof of the *absence* of any nuclear blasts on Earth in 1908, Norwegian chemists recently published the results of their own tree-ring tests. They showed no trace of any radiation.

UFO books suggest that the glowing skies over Europe were caused by

radioactive clouds, yet the explanation for this phenomenon is much simpler. Dust thrown up from an explosion in Siberia would have been carried by the stratospheric winds eastward, not in the opposite direction toward Europe. But had the object been a small comet, its tail would have been pointing downsun, toward the west, at the moment of the dawn impact. That direction would have placed the dust right over northern Europe.

Earlier this year a Czechoslovak astronomer repeated an earlier suggestion that the Tunguska object was a fragment from Encke's comet. Professor L. Kresak, of the Slovak Academy of Sciences, asserted that the blast occurred during a meteor shower that is associated with debris from the comet and that the computed direction of the object's trajectory coincides well with the comet theory.

Skeptics of the comet theory have asked why the fireball would not have been seen before impact. Astronomers counter that it was probably a very small comet, which was also located in the daytime sky during most of its approach to Earth.

Aerodynamics experts in Moscow conducted an experiment about 20 years ago in an effort to simulate Tunguska's blast patterns. The scientists used a charge of explosives suspended over a board covered with miniature "trees," represented by matchsticks. In addition to the single blast point, a string of smaller charges were added to reproduce the hypersonic shock wave of the object's ballistic passage through the upper atmosphere.

When the explosives were triggered, a blast pattern strikingly similar to the "butterfly" pattern of the actual Tunguska site was created in the matchstick forest. Although this experiment conclusively demonstrated that the strange pattern was due entirely to a large object that exploded naturally, the experiment's results were still being misinterpreted or misquoted years afterward. According to a 1978 *In Search of* program, "The evidence supported the Soviet contention that Tunguska was the result of a nuclear holocaust," a conclusion directly counter to that of the experimenters themselves and a statement that falsely implies that Soviet scientists in general contended that the event was nuclear in origin.

The most frightening aspect of the comet hypothesis, which is gaining in credibility, is that the natural phenomenon that leveled the forests of Siberia 71 years ago could happen again—at any moment. On a more densely populated Earth, and in a political climate in which nations have constructed their own nuclear arsenals to retaliate at a moment's notice if attacked, the idea of another Tunguska-like blast is a part of our future we might prefer to avoid. ☐