

AN ARCHIVAL AND ORAL HISTORY OF THE TUNGUSKA EXPLOSION

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On the morning of June 30, 1908, an explosion occurred over Central Siberia that felled a significant section of taiga forest in what is considered one of the largest known impact events in centuries. Numerous witnesses saw a bolide in the sky before the blast and several later recalled suffering injuries. Research into the explosion only began in earnest in the 1920s when Soviet scientists inspected the site and surveyed eyewitnesses. The lack of a crater or a sufficient quantity of meteoritic material long puzzled investigators and prompted research into the event to expand in a variety of directions, including by examining the possibility that an active comet instead of a meteorite had triggered the explosion [1, 2]. The mysterious status of Tunguska also caused it to become the subject of science-fiction speculation, which in turn helped inspire voluntary research efforts.

While much has been written about the Tunguska event, including its history, there has not yet been a book-length treatment by a professional historian that approaches the topic from the stance of the history of science, environmental history, and Russian and Soviet history. This project has entailed deep archival work in repositories in Russia and the United States, exhaustive consultation with online databases and published materials, and oral interviews with many Russian and foreign Tunguska researchers, including some of the initial voluntary investigators who began visiting the site in the late 1950s. It also involved a visit to the Tunguska nature reserve in 2018.

The resulting study [3, 4] uses the theme of mystery in the history of science to tie together the trajectory of Tunguska investigations from the moment of the blast to the present. It proposes that the treatment of the Siberian landscape where the Tunguska explosion occurred has been largely shaped by the agenda of better understanding the event. This dominance of “mystery-solving” as a form of landscape interaction is a distinctive phenomenon in global environmental history. Moreover, the study links Tunguska to theoretical literatures on the history of natural disasters and scholarship that examines the role of alternative epistemologies in the scientific enterprise. Throughout the work, the author connects developments in the research on Tunguska to relevant historical contexts.

The forthcoming book, *Tunguska: A Siberian Mystery and its Environmental Legacy*, begins with the blast of 1908 and the terror that befell nearby communities. It seeks to bring to life the accounts of nearby witnesses and analyze the social vulnerability around this cosmic disaster. The book then moves to the attempts of Leonid Kulik and other scientists to study Tunguska in the 1920s and 1930s. At this stage various features of the Siberian environment complicated researchers’ efforts. But they did not ultimately prevent them from applying any and all techniques that they could think of to try to figure out what had happened. After the Second World War, the history of Tunguska entered a new stage when science fiction writer, Alexander Kazantsev, offered his own hypothesis about the blast. He proposed that instead of a meteorite, Tunguska had been caused by an accident involving a nuclear-powered spaceship piloted by extraterrestrials. This astonishing conjecture ignited the imagination of many throughout the Soviet Union and beyond who became convinced that this idea might be true. It also sparked controversy among meteorite scientists who denounced it. Yet for others it opened a flood gate of speculation, prompting a further slew of wild-sounding ideas about Tunguska espoused with the utmost earnestness.

At the end of the 1950s, voluntary researchers began regularly visiting the Tunguska site with hopes of discovering the truth about the blast. Many of them believed that aliens might have been involved. These groups nevertheless found ways to cooperate with professional meteorite specialists and eventually took over fieldwork from them altogether in the early 1960s. The Tunguska landscape became a site of sojourn for scores of Siberian students, who spent summers searching for answers to a decades-old puzzle and developed strong attachments to the place. By the late Soviet period an ultimately successful crusade had begun to cordon off the Tunguska environment from other uses beyond scientific expeditions. With the end of the Cold War in the 1990s, the previously fractured international conversations about Tunguska came together into collaborative efforts. Today Tunguska is widely understood as the result of an airburst explosion of a medium-sized near-earth object, but its history still offers much to consider about the varied environmental threats facing the planet.

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