

Abstract

On June 30, 1908, the Tunguska event occurred in Siberia, devastating a large area of taiga. The probable cause was an explosion of a celestial object in Earth's atmosphere. The affected area remains of active interest to scientific organizations and expeditions and is protected as a nature reserve. Most research has focused on the processes that caused the disaster, with much less attention given to its consequences. Numerous samples collected during various expeditions now allow for the study of environmental damage caused by the event. This thesis aims to summarize current knowledge on the environmental impacts of the Tunguska event through a literature review. This event is considered a model example of a medium-sized impact event (i.e., a (i.e. collision of the Earth with another space body), which can be studied, and which is important to study, due to its recent occurrence. Similar impact events are estimated to have a periodicity of several hundred years and represent a very dangerous type of natural disaster. Smaller events of this type occur even more frequently. This work summarizes findings from contemporary witnesses and modern studies of natural archives such as tree rings, lake sediments, and peat. Environmental damage near the Tunguska event's epicenter was due to several processes, primarily extensive fires and vegetation damage from the shockwave. The area was also subjected to acid rain, increased nitrogen deposition, and changes in vegetation cover. These processes led to changes not only in terrestrial ecosystems but also in aquatic ecosystems.

Keywords: impact, taiga, disturbances, aquatic ecosystems, lake sediments, paleoecology