

Mount St Helens— exploding the old-earth paradigm

A review of
***Footprints in the Ash: the
explosive story of Mount
St Helens***
by **John Morris and
Steven A. Austin**
Master Books, Green Forest,
AR, 2003

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The significance of the Mount St Helens eruptions to catastrophism and Flood geology are explained at a layman's level in this brilliantly illustrated book. Creationists, indeed all geologists, around the world can learn much from the events, which began on 18 May 1980, at this now-famous mountain. And thanks to the detailed investigations carried out by many scientists, the recent geological and geomorphological events at Mount St Helens can provide insightful analogs for past earth-shaping events, which are evident in the rocks and fossils. These analogies defy the principle of uniformitarianism—the guiding light for mainstream geological interpretation—and have fuelled the ideas of the neo-catastrophists, who have brought back catastrophism into secular geological thinking (although not on the scale of the Genesis Flood). Creationists can use neo-catastrophic ideas and research about the eruptions of Mount St Helens to better understand Flood and post-Flood catastrophic processes.

Catastrophic analogs

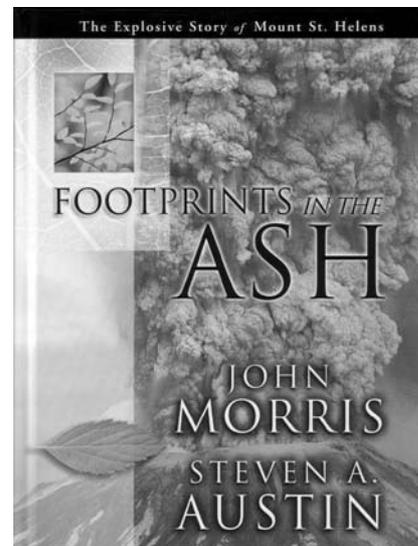
Rapid deposition is clearly evident from the historical record at Mount St Helens. During the initial and subsequent eruptions, about 180 m of *stratified* sediment were rapidly laid

down by dynamic processes (air blast, landslide, lake waves, pyroclastic flows, mudflows, air fall and stream water). These sediments contain dead plants and animals, some of which are now fossilizing. Cross-bedded and graded strata were formed rapidly and some of the strata were sufficiently lithified (within five years) to stand at near vertical slopes. Clastic dikes, which also indicate rapid deposition—to allow for soft sediment intrusion—were noted at several locations.

A pyroclastic flow, moving at 150 kph, deposited thousands of finely laminated layers in a few hours. Without the documented history, uniformitarian geologists would consider these strata to have taken long periods of time to form. For example, as the mode of sediment transport (pyroclastic or water lain) is often indistinguishable, couplets of such laminated layers would normally be considered varves, each thought to have formed during one year. But Mount St Helens demonstrated that layered sediment can form catastrophically within hours.

The events at Mount St Helens also show that many landforms can form quickly by catastrophic action. A 30-metre deep canyon (Lower Loowit Canyon) was cut in hard basalt as rock avalanched from the crater. Grooves and striations were formed on solid bedrock by avalanche and 'blast clouds' that tore loose boulders and dragged them with great force across the exposed rock. (Such grooves and striations—found all over the earth—are normally interpreted to be the result of an ancient glaciation.)

Craters were formed as steam exploded from superheated ice, which had been buried by hot sediments. Subsequent sloughing of sediments into these 'explosion pits' resulted in the rapid formation of badlands topography. Normally such topography would be



interpreted as being formed by slow erosion over hundreds of thousands of years.

Of great interest is the 19 March 1982 mudflow, which produced a 43-meter deep canyon in one day. This canyon is a one-fortieth scale model of the Grand Canyon of Arizona. After seeing this happen, we can now easily envision how large canyons could have been formed rapidly at the end of Noah's Flood.

Spirit Lake

An extremely energetic wave in Spirit Lake, north of the volcano, sloshed 260 m up the side of the adjacent mountain, with the return flow dumping one million trees into the lake. As these floating trees rubbed against each other, bark was dislodged and sunk to the bottom of the lake. Such bark, covered over with sediments, mimics a layer of peat that can turn into a coal seam, with subsequent sedimentation and time. This is a modern example of the creationist log mat model for the formation of coal.

Many of the trees in Spirit Lake have sunk into a vertical position, at different levels on the lake bottom. One can imagine, if Spirit Lake filled with sediments and was subsequently eroded, we would see many levels of vertical trees. These could easily be interpreted as multiple fossil forests that formed over tens of thousands of years. But they are not forests and they formed

quickly. This amazing process provides insights into how the famous multiple levels of fossil trees found in vertical positions at Yellowstone National Park and at Joggins, Nova Scotia, also formed quickly.

Although Mount St Helens has continued to show signs of activity, the landform has remained fairly stable since 1982. In the post-catastrophic period, vegetation and animals have returned rapidly to the surrounding area. This recolonization provides us with useful clues to understanding the rapid repopulating of the earth after the devastation of the Genesis Flood.

Radiometric dating

Mount St Helens also provided an opportunity to check radiometric dating methods. Samples of newly formed rock from the lava dome within the crater were dated up to 2.4 million years old by the K-Ar method, which is supposed to register the time since solidification of the lava. This is contrary to the known history of the lava cooling between 1980 and 1986. Such old dates for recent lava flows have been documented numerous times. Something is certainly wrong with the old ages derived from the radiometric dating methods.

Conclusion

Mount St Helens adds up to a real-life laboratory to understand a number of processes that occurred on a much larger scale, during Noah's Flood. At Mount St Helens, these processes were observed to rapidly form a wide range of geological features, in contrast to the thousands to millions of years assumed by mainstream scientists. Mount St Helens demonstrates that when we bring the Flood back into our thinking, a large percentage of the uniformitarian time challenges melt away.

This book wonderfully illustrates the many catastrophic events, which occurred at Mount St Helens, which can be used to improve our thinking about the catastrophic events that occurred during the Flood.