

Buried Forest: Creation

Analysis of the layers of soil surrounding the Buried Forest has helped scientists reconstruct the events that led to its burial and preservation. Approximately 4,000 years ago, Mt. Sanbe began to erupt. Pressure from within the volcano caused its northern side to collapse, sending an avalanche of rock, sand, and mud crashing down into the northern valleys below. This layer of mud and debris makes up the lowest layer filling the valley, between 20 and 12 meters below the surface.

Next, pyroclastic flow—a scorching wave of gas, ash, and stone particles called lapilli—burst from the mountain, covering the avalanche material with a thick layer of ash. The extreme heat of that flow is evident from charred bark and chips of burned wood mixed into this layer, which ranges from 15 to 10 meters below the surface.

Debris from the initial avalanche blocked the river that flowed through the Azukihara valley, causing it to flood. As more ash and volcanic sediment was carried to the valley by the current, it had nowhere to go, and it accumulated there. This secondary layer of accumulated ash stretches from 10 to 2 meters below the surface. Today, the top two meters of earth consist of soil and modern deposits of river sediment.

Before the eruption, the trees of the forest are thought to have reached much higher than their preserved trunks do now. The tallest remaining trunk segment, for instance, measures only 12.5 meters in height, but scientists estimate that some of the trees were as tall as 50 meters before their upper portions were broken off by the force of the eruption.