

distance from the volcano, and believe that many of these burns were *chemical* and were due to the fact that the mud was heavily charged with strong acid.

"Chemical examination had long before demonstrated the fact that the waters of one of the crater lakes contained sulphuric acid in sufficient quantity promptly to attack the skin of one's hands. It was furthermore noted during this eruption that the thinnest coating of mud sufficed to kill green leaves and grass. The volcanic ejecta are still so strongly acid that it has proved impossible to raise crops where they have fallen in any considerable quantity. Suffocation was undoubtedly also an important cause of death."

In regard to the devastating blast, the author says: "There is no doubt that an immense body of steam and gases, heavily charged with fine volcanic ejecta, swept downward and outward in all directions from the crater rim. It stripped Volcano Island bare of all vegetation; caused a huge wave to extend outward over the surface of the lake; blew houses to bits; broke off many great forest trees; bent saplings, bushes, bamboo, and tall grasses to the ground, on the mainland; and dealt instant death to every living creature fully exposed to its fury. The human beings who escaped owe their lives to the fact that they were blown into the lake, or were in especially protected spots."

The article is accompanied by an impressive series of photographs, most of them made by Mr. Charles Martin, the government photographer at Manila.

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THE EARTHQUAKE OF THE AGUSAN VALLEY AND THE EASTERN COAST OF MINDANAO, July 12, 1911. By REV. MIGUEL SADERRA MASÓ, S. J. Bulletin of the Weather Bureau for July, 1911.

The Agusan Valley on the island of Mindanao, and the region lying between it and the Pacific Ocean, appears to be the area of the highest seismicity in the Philippine archipelago. In the last seventeen years sixteen earthquakes have occurred within that zone with intensities between VI and IX R.-F. scale.

"The greater number of these earthquakes of the Agusan make themselves felt chiefly, and possibly even have their origin, near the central part of the valley, which is characterized by a broad expanse of level, marshy ground, partly occupied by three principal lakes of permanent character which, however, in times of extraordinary heavy rainfall coalesce into one having a length of about 50 kilometers and a