

April 15th 2010

Iceland Volcanics 934 - 1783 - recent

The southern coast of Iceland is an isolated thinly populated expanse of treeless meadowland, interspersed with boggy deltas. It is bordered by an arc of mountains stretching between two icecaps. To the north lies Vatnajökull, the largest icesheet in Europe, which has Oreafajökull as an active volcano 2120 m high. To its south west lies Myrdalsjökull. Both of these icecaps cover systems of volcanic fissures, that erupt into life from time to time. Katla lies under Myrdalsjökull, and Grimsvotn is the most active under Vatnajökull.

Katla erupted in 934 ad spewing out 19.6km of basaltic lava, the largest flood basalt to occur on earth in the last 2000 years. Grimsvotn erupted in 1783 on 6th June Whit Sunday a very large fissure erupted southwest of Laki Mountain. Ash and Pele's hair type glass rained down for hours over the lowlands. Things got much worse over the next few days. The ash erupted in several columns as the fissure lengthened. Rain began to fall mixed with more ash, and smelt of Nitrate and Sulphur. This was acid rain at its best. Witnesses counted a line of 27 vermilion fountains spurting skywards. 12th June the lava flows had reached an area 35km from the fissure or 7km per day.

20th June meat milk and eggs were in short supply for the 50,000 Icelanders. 23rd June eruptions started harder again after a lull. More ash lava fountains and flows. On the 29th July another repeat of these phenomena occurred when another valley was filled with lava flows and more coastal plain was covered. From mid August the eruptions seemed to decline. It continued till late October and eventually died out by February 1784. No one died but farms were destroyed and animals as well causing a famine. The eruption liberated about 8 Megatonnes of Fluorine and the Sulphur dioxide combined with the humidity in the air created sulphuric acid rain in the order of 150 Megatonnes. This created a dry Blue Fog that spread all over Europe in the following year and later. The Icelanders later called it the "Haze Famine".

For those of us who were there as recently as 2006 will remember Leirubaki is where we stayed near Mt Hekla. This is very close to the Volcano in today's event.

Eyjarfjallajökull the name of today's volcano is a good example of what happens when a volcano erupts under an icecap. Here the crater fills up with melted, even superheated water which further melts the bottom of the icecap allowing hot water build up to escape under the ice and speed downslope like a lahar (a mud flow). In Iceland these are called Jokulhlaup.

From similar eruptions where ash is erupted high into the atmosphere/stratosphere, there will undoubtedly be consequences to mankind in the form of blocked out sunlight causing unusual sunsets, hazes as mentioned before, disruption to weather patterns and crop failures as evidenced in the past, ie. Krakatoa eruption of August 1883.

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