

Bell Farm Interconnected with Everything Else

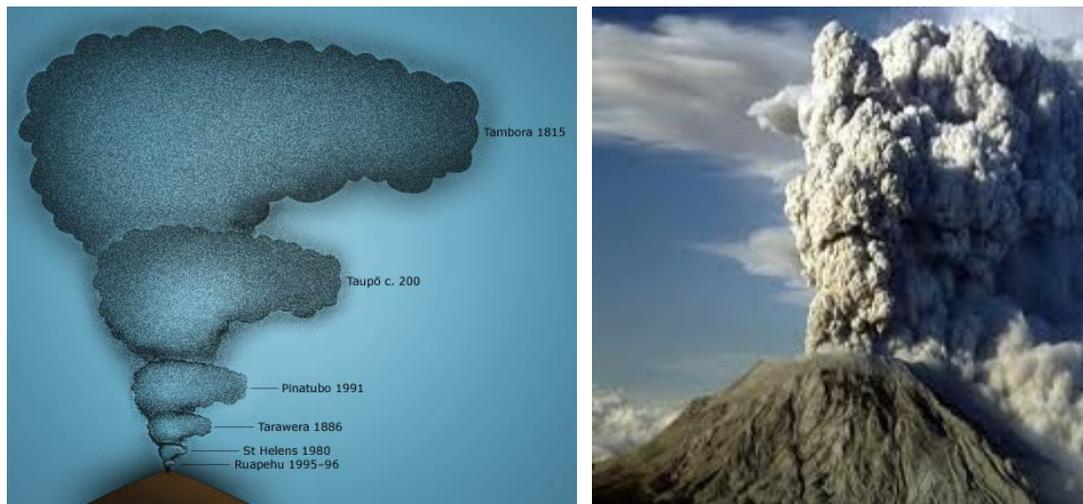
by Bill Armstrong

In his delightful journal recording his experiences working as a shepherd in the Yosemite River Valley and the Sierra Nevada, naturalist and ecological thinker John Muir observed, “When we try to pick out anything by itself, we find it hitched to everything else in the Universe.”

Muir made this observation in 1869, and today we have more scientific understanding of how things are interconnected, affirming that his homespun statement was essentially correct.

What does this have to do with the Bell Farm at Indian Head? A crop failure that contributed to the demise of the Bell Farm indicates how interconnected things can be.

In 1815 Indonesia’s Mount Tambora erupted in what is considered the largest volcanic eruption in recorded history. The explosion was heard on Sumatra, 2,000 kilometres away, and heavy volcanic ash falls were observed as far away as Borneo. The ash also created what is called a “volcanic winter”, causing average temperatures to fall around the world. In North America and Europe 1816 became known as “the year without summer.”



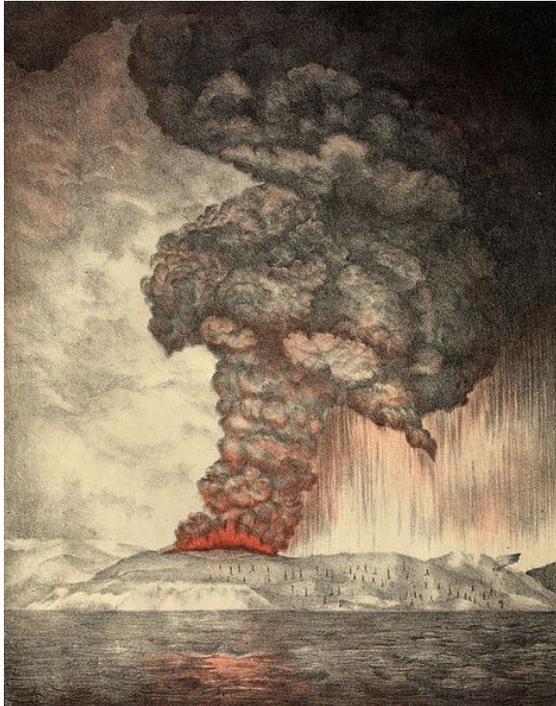
The massing of the Tambora eruption compared with selected other eruptions, including Mount St. Helen’s in 1980; and Tambora volcano today.

Sources: (left) <http://www.teara.govt.nz/en/diagram/6885/sizes-of-new-zealand-volcanic-eruptions>
(right) <http://java-travelling.blogspot.ca/2010/07/top-10-deadly-volcanoes-eruption-in.html>

While Mount Tambora is regarded as the granddaddy of volcanic eruptions, we are likely more familiar with Krakatoa, perhaps in part because scientists more closely monitored it

when it exploded in 1883. Krakatoa has also been profiled in movies and on TV, and so has entered the public imagination as an example of the power of volcanoes.

Throughout 1883 seismic activity around the volcano was intense, with steam and ash clouds observed in May. A major series of eruptions began on August 25th, with a final cataclysmic explosion the following day that sent a black ash cloud 27 kilometres into the air, and unleashed destructive tsunamis that inundated other islands throughout the region. This following lithograph was created in 1888, and is likely based on reports of earlier, smaller eruptions and the artist's imagination.



Sketch of the Krakatoa eruption in 1883.

Source:

http://en.wikipedia.org/wiki/1883_eruption_of_Krakatoa

Like Tambora, the Krakatoa ash cloud affected weather patterns around the globe, and may have lowered the average global temperature by as much as 1.2 C for as long as five years. Which brings us halfway around the world to the Bell Farm. On September 7, 1883 crops on the Bell Farm suffered a killer frost. According to the Bell Farm's 1884 Annual Report, published Jan. 9th, 1884: "The Bell Farm had the good fortune to enjoy almost absolute freedom – not from the frost, for *it* came, but from its ravages." Coincidence, or an after-effect of Krakatoa's ash cloud? In his book *Clearing the Plains* (published in 2013) author James Daschuk attributes the killer frost to the ash cloud's cooling influence on global weather patterns. He may be correct, but even without Krakatoa we know with the benefit of hindsight that Major Bell's corporate farm was a huge gamble. Even though the Major employed the most advanced agricultural equipment and techniques on the farm, he – and all of the settlers who followed him – had much to learn in order to farm successfully in an area where the growing season averaged only about 114 frost-free days.



A scene showing the mechanized harvest operation on the Bell Farm, probably in 1883, about the time of the Krakatoa eruption. (Source: Bell Barn Society) Unfortunately, there were too few successful harvests in the 1880s for the enterprise to succeed.

The *Red Fife* wheat sown on the farm, while an excellent milling wheat, took too long to mature, even without the cooling influence of volcanic ash. Poor crops caused by both frosts and drought led to the eventual break-up of the Bell Farm. Ironically, the disappointing crops were one of the main reasons why the Canadian government established the Dominion Experimental Farm at Indian Head, on land purchased from the Bell Farm. The *Marquis* wheat developed and tested at Indian Head was equal in quality to *Red Fife*, but matured in about 100 days. For many years various strains of *Marquis* wheat were the mainstay of Saskatchewan's farmers. Today, agricultural research into crop rotations, crop choices, agronomic practices and pest and weed control are big business on the Prairies, because we have a greater understanding of how these interrelated factors can all affect crop productivity. To paraphrase John Muir, we're still learning that when we pick out anything, we find that it is hitched to everything else in the Universe.

Sources:

Mount Tambora: [Mount Tambora - Wikipedi#50B13A](#)

Krakatoa: [1883 eruption of Krakato#50B15F](#)

Clearing the Plains: [An Unsettling Prairie Hi#50D9D4](#)

Agriculture in Saskatchewan: [Agriculture in Saskatche#50B668](#)

Dominion Experimental Farms: [The Encyclopedia of Sask#50C413](#)

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