

Cool summer no match for 1816's

Although we are assured by the Weather Service that the Alaskan summer of 1985 has not been abnormally wet and overcast, many long-time residents refuse to believe it. Long, lazy summer days seem to persist in the memory, while those "other" wet summers are recalled as isolated incidents.

Things could be worse. The winter of 1815-16 did not differ noticeably from any previous winter in Southern Canada and the Northeastern region of the United States. Spring began as usual, and the lengthening days of April brought the customary flowers and flocks of birds from the north. In May, the weather had not yet warmed appreciably, and people began to grumble about the necessity of keeping the fire going, of breaking ice daily in the water buckets, and of the frosts that kept them from having fresh greens and stunted their field crops. But they were patient and confident that the weather would soon right itself. Old-timers retold with relish their stories of years when it had snowed in May.

By June, it had become obvious that this summer was unlike that of any previous year. On June 5, cold winds swept out of Hudson Bay into New England and temperatures plummeted. A cold rain began and when it was over, New England was blanketed by up to a foot of new snow.

And it didn't get any better. Throughout July and August, early morning temperatures were in the 30s and 40s. Gardens and fields were devastated and the killing frosts came in September.

People faced the coming winter fearfully, and with justification. Had there not been some supplies left over from a bountiful harvest the year before, they might not have made it through what turned out to be an exceptionally severe winter in 1816-17. Fortunately, there was a normal summer in 1817, and nothing so severe as the 1816 summer has occurred since.

What was it that caused that awful weather? We now know that Mt. Tambora, a tremendous volcano just east of Java, had exploded in 1815. This giant spewed an immense amount of dust into the sky, apparently casting a screening cloak over the northern hemisphere and causing that bizarre summer of 1816.

Since that time, scientists have gained a greater appreciation for the effects that volcanic eruptions can have on the weather. In recent years, we have heard of the effects that the 1982 eruption of the Mexican volcano El Chich'on had on global climates (researchers at the Geophysical Institute calculate that the amount of direct sunlight reaching the ground on clear days in Alaska was reduced by almost 25%).

Few eruptions have so great an

impact. The Mt. St. Helens eruption a year earlier had little effect on the climate, and a 1976 eruption of Mt. St. Augustine in Cook Inlet was not particularly disruptive, although a cloud of fine ash from that eruption caused spectacular sunsets in Arizona and was detected as far away as Virginia.

In modern history, the eruption of an Alaskan volcano that had the most far-reaching effects was probably that of Katmai in 1912. The ash fall arising from that eruption covered an area of more than 3,000 square miles to a depth of a foot or more. Traces were reported as far south as Puget Sound, and observations from Africa recorded a haze which spread throughout the upper atmosphere. Acid fumes were strong enough at Vancouver, B.C. to weaken threads in garments hung out to dry, leading housewives to accuse local merchants of selling faulty goods. The ash cloud, carried worldwide by winds of the stratosphere, caused another (if less severe) "year without summer," and the average annual temperature of the northern hemisphere was reduced by 1.8° F.

But for those who insist that this summer is chillier and wetter than normal, it will be necessary to find something else on which to lay the blame. There just isn't any big ash cloud circling the earth at present.

