

VILLAGE VIEW

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The weather this past June has been more typical of the month of April: chilly, raw, windy and rainy; what the balance of summer will bring we don't yet know. According to the Farmer's Almanac, July and August will be not too different from most summers, but long-range forecasts are little more than educated guesses and can be thrown off by the unexpected.

On the heels of last winter's severe storms, our common sense tells us it'll take quite a while for the sun to warm the ocean to normal summer temperatures. Because the Atlantic's temperature has a strong influence on our climate, until the water warms up, the Cape will continue to be cool. In the last week of this year's sixth month, ocean temperatures off Nauset were still in the low 50s and, even in our shallow and sheltered Sounds, the waters barely registered 60°F.

Lots of sunshine is needed to bring Cape Cod's surrounding seas up to the balmy 70s enjoyed most summer seasons. And lots of sunshine we just might not see this year.

There are reasons. In the past few years this planet has experienced more than usual volcanic activity. In May 1980, Mt. St. Helens in Washington State blew its top with a mighty roar, spewing ash over hundreds of square miles. The lightest particles of ash were sucked aloft, caught up in the whirling winds of the upper atmosphere, and are still circulating Earth in an immense cloud that may take several years to dissipate. Each particle will eventually descend surrounded by a drop of rain or a flake of snow.

Add to the atmospheric ash-cloud from Mt. St. Helens, ash from Mt. Etna in Sicily, a volcano that erupted in March of 1981, causing direct damage of more than \$10,000,000. And add more ash from Mt. Sakurazima in Japan. It erupted eleven times last year beginning the same month that Mt. Etna came alive again. Consider, too, that Krafla in Iceland, Langila in New Britain, Suwanosezima in Japan, and White Island in New Zealand were all unusually active during the past two years.

Volcanic activity is far less common than earthquakes are. As a general rule, around ten major earthquakes occur for every one major volcano eruption.

Back in 1883, Mt. Krakatau, a volcanic island in the Java Straits between Sumatra and the Island of Java, exploded on August 27. The resulting tidal wave mounted to 120 feet and caused widespread devastation. More than 36,000 people died as a direct result. So powerful was that explosion that the sound was heard in Japan, Australia, and the Phillipine Islands. Effects of the tidal wave were evident as far away as London, England.

Mt. Pelee on the island of Martinique in the West Indies, in May of 1902, blew up and killed 40,000 people when the city of St. Pierre entirely disappeared.

And in 1912, Mt. Katmai in Alaska released its pent-up boiling lava on June 6. Dust and haze in the atmosphere during the summer of 1912 so obscured the sun's direct rays that 20% less solar radiation reached Earth. Globally, there was a 13° drop in Earth's average temperature that year.

Although several other, less destructive, volcanic eruptions occurred between 1902 when Mt. Pelee erupted and 1980 when Mt. St. Helens exploded, there were only two other major incidents of volcanic activity that we know about. The first, in 1951: Mt. Lamington (New Guinea) in which 3,000 perished; the second, in 1963, when 1600 died on Bali when Mt. Agung erupted.

Unquestionably there have been numerous instances of volcanic activity of which we are unaware, for many volcanos lie beneath the seas which cover four-fifths of the earth's surface. Submarine eruptions tend to go unnoticed because icy waters pour onto the molten lava and quickly cool the contents of the fiery craters.

In some cases, however, undersea volcanos spout enough material from Earth's core to create new islands; the Hawaiian chain is of volcanic origin. So, too, is a recently formed island off the coast of Iceland. One day the ocean waves rolled majestically shoreward without interruption; the next day, a new land mass reared up from the ocean's floor, lifting its smoking head above water, lava streaming from its crest and clouds of ash darkening the sky. No one can venture a guess about the time it took in its building. Volcanic islands can disappear with the same suddenness.

Geologists have speculated that the legendary lost city of Atlantis may have been a volcanic island in the Mediterranean Sea; it could have disappeared overnight with a devastating roar. It's even been postulated that the Biblical story of Moses leading the Israelites out of Egypt when the Red Sea parted, allowing them to escape, and then closed and swallowed up the pursuing Egyptian armies, was an enormous tidal wave caused by volcanic action. The Great Flood may have followed a similar phenomenon.

If you were to cruise among Greek Islands, you'd see, especially at Santorin, clear evidence that the island's harbor is the remains of a volcanic crater. In an almost perfect circle, the jagged tips of the cone emerge from the Aegean Sea, all that's visible there of a long-quiet volcano.

Beginning in May of 1980, with Mt. St. Helens eruption, volcanic activity has increased to an unusual degree. The climatic effects may be felt in all parts of the world. Cape Cod could experience a cool wet summer. Drought conditions in other parts of the world may be alleviated. Crops needing

long hot days may fail; those requiring plenty of water could thrive. Places where farmers and orchardists count on irrigation in most years may receive bounteous rainfall. Colder winters could increase pressure for development in Sun Belt areas. Polar icecaps could grow, over the next decade, and cause sea levels to fall.

It's too early to predict whether the unusual amount of volcanic activity of recent years will have long-range effects on world climate, economics, demographics, and food supplies, but it's not too early to predict the summer of 1982 may be cooler and wetter than we think "normal" for Cape Cod.

Nor is such a result without precedent. In April 1815, an Indonesian volcano in Sumbawa, Mt. Tambora, exploded; 12,000 people died in the blast that was ten times more violent than Mt. St. Helen's eruption.

The summer of 1816 proved an agricultural disaster for all of northern Europe and the eastern United States. Parts of New England lay beneath a ten-inch blanket of snow that June; July and August temperatures seldom exceeded 50°; freezing night temperatures ruined vegetable gardens and fruit orchards from the Atlantic Ocean to the Mississippi River.

Weather, of which everyone talks, but about which no one does anything, controls the destiny of the human race to a far greater extent than most of us are aware. Only when natural forces combine to bring the unexpected do we realize how puny our efforts truly are. Should this summer's weather prove less than ideal for the Cape's economy, there will be one consolation. At times the western horizon is visible at day's end, the sunsets should be glorious.