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Goliath vs. Goliath

The sun rose diffusing light upon the landscape surrounding Mt. Saint Helens. The morning seemed uncomfortably still, yet peaceful. May 18th, 1980 was the date when researcher David Johnston began taking measurements on the volcano early in the morning. Suddenly, a frantic radio call came at 8:32 a.m. from Johnston stating, “Vancouver! Vancouver! This is it!” Moments later he fell victim to the waking volcano. Ending one hundred and twenty three years of silence, Mt. St. Helens erupted with violent force. A 5.1 magnitude earthquake tore the weakened volcano apart launching rocks, trees, and debris down the volcano at an excess of 175 miles per hour resulting in the largest landslide in recorded history (Smith). Rock and ash were hurled violently at the surrounding areas flattening two hundred and thirty square miles of timber, enough to build three hundred thousand two-bedroom homes (“Volcanic Fury”). The volcano spewed an ash cloud skyward, which reached 18 kilometers high in just the first fifteen minutes of the eruption. The snow that lay on the mountain was quickly melted into water, which swept tremendous mudflows down the mountain destroying bridges, roadways and homes. Fifty-seven people lost their lives as a result of the eruption, and the fish and timber industries in the area were devastated (Smith). Despite the large amount of destruction Mt. Saint Helens caused, there is a lesser-known volcano that deserves to be implanted in the American psyche. Approximately eleven years later, three thousand miles away, a volcano sat waiting for the

perfect time to erupt. The volcano was Mt. Pinatubo, which deserves credit for being the larger volcanic eruption of the two.

I first learned about Mt. Pinatubo in a Burger King on Clark Air Force Base, Philippines. I witnessed smoke coming from a distant mountain and asked my father to explain the unfamiliar occurrence. He stated that the mountain was a volcano, and that it could erupt anytime. The volcano lay only ten miles from Clark Air Force Base, and military personal were anxiously awaiting evacuation orders just in case the volcano awakened. Six months later, the military personal would get their wish. The school year was nearing its end as my brother and I made our way outside to play on a warm Saturday afternoon. The date was June 15th, 1991. From the distance, my brother and I watched a large mushroom cloud rise up into the sky. Fearful, we ran inside to inform our mother what was happening. My mother turned on the TV and learned that Mt. Pinatubo had just had a major eruption. To add to the destruction of the volcano, typhoon Yunya swarmed in and soaked all the ash into a white muddy substance (Hays). The eruption turned day into night as an endless pelting of ash and rocks rained down on us. A couple of hours after the eruption, the power and water were disconnected. My brother and I curled into my mom's bed and prayed the volcano would not overtake our house. The morning finally came. White ash surrounded our entire house, as well as the entire area of Angeles City, which is where we lived. Filipinos were leaving their houses in masse trying to escape the thundering volcano. I didn't realize at the time that I was in one of the largest eruptions of the century. I was always raised to believe that Mt. Saint Helens was the larger eruption, but I have found evidence to prove otherwise.

Mt. Saint Helens and Mt. Pinatubo both erupted with remarkable force, which unfortunately produced numerous casualties, as well created economic difficulties. After one hundred and

twenty three years of dormancy, Mt. Saint Helens blew its top with a force of approximately 24 megatons of thermal energy (Smith). The bomb dropped on Hiroshima during World War II only released 20 kilotons of energy (Taillefer). In contrast, Mt. Pinatubo erupted with a force of approximately 25 megatons, which is slightly more energy than Mt. Saint Helens. However, the destruction of a volcano is not measured just of sheer power. Mt. Saint Helens claimed fifty-seven lives, twenty-one of which were never recovered (Smith). Mt. Pinatubo also claimed a considerable amount of life, which is estimated to be 320 fatalities (Hays). Most of Mt. Pinatubo's fatalities were linked to roof collapses due to the heavy amount of rain-soaked ash the volcano emitted (R. Decker and B. Decker 271). Both volcanoes would have had more fatalities if it weren't for the evacuation efforts. Approximately two months before the eruption of Mt. Saint Helens, "Red Zones" and "Blue Zones" were set up all around the mountain in an effort to keep tourists away from the mountain. People living in the Red Zones were asked to leave the area due to the scientists' inability to predict exactly when the volcano would erupt (Smith). Similarly, Mt. Pinatubo had extensive evacuation efforts as well. Clark Air Force Base, which lay just ten miles from Mt. Pinatubo, was completely evacuated. Military personnel evacuated over a quarter of a million military personnel and civilians, which was the largest peacetime evacuation in U.S. history (Hays). Economically, both volcanoes cost a lot of money to cleanup. Mt. St. Helens cost \$1.1 billion dollars (the \$1.1 billion does not cover property loss or cleanup) due to the destruction of local logging and fishing industries (Smith). Mt. Pinatubo's eruption, however, was estimated to cost five billion U.S. dollars to cleanup. Clark Air Force Base alone was estimated to cost \$300 million to cleanup (Albor).

Indeed, Mt. Saint Helens and Mt. Pinatubo were very large eruptions, but Mt. Pinatubo affected the earth's climate much more profoundly. When Mt. Saint Helens erupted, the volcano

sent ash skyward approximately 18 kilometers high which took only 15 days to circle the earth (Smith). However, the height of the ash from the volcano barely even reached the stratosphere and was significantly less than Mt. Pinatubo (R. Decker and B. Decker 241). The eruption of Mt. Saint Helens only cooled temperatures in immediate surrounding areas for a few days. Other than that, no widespread weather effects were ever recorded (Phillips). Pinatubo, however, sent an ash cloud approximately 40 kilometers high, which reached high into the Earth's stratosphere (Phillips). Approximately 20 million tons of debris was lifted into the stratosphere resulting in a block of about 2 percent of direct sunlight from the earth ("Antarctic Ozone Hole"). The large amount of blocked sunlight resulted in approximately a half-degree Celsius decrease in temperature throughout the entire planet (Birch). Furthermore, the large amounts of climate-modifying chemicals released by Mt. Pinatubo destroyed roughly four percent of the Earth's ozone layer (Birch).

Finally, Mt. Saint Helens caused considerable damage to the surrounding environment and communities, but the effects from Mt. Pinatubo's eruptions were much more felt. When Mt. Saint Helens blew its top, the mountain was 9,677 feet high. After the eruption, the volcano was a little more than eight thousand feet high (Smith). From one volcanic eruption, Mt. Saint Helens went from Washington's fifth highest mountain to its thirtieth (Thompson 109). The local wildlife was devastated. Over sixty-five hundred elk and deer were killed in the blast, as well as millions of fish and birds. Additionally, large amounts of timber and debris were launched into nearby Spirit Lake, which made the lake uninhabitable and caused the lake to increase its height by an astounding one hundred feet (Smith). Mt. Saint Helens covered approximately 22,000 square miles with ash, which reached as far away as Montana ("Volcanic Fury"). The lateral blast of the mountain flattened two hundred and thirty square miles of the

surrounding areas. Pyroclastic flows, liquid rock fragments from the volcano, also destroyed six square miles of land (Smith). On the other hand, Mt. Pinatubo caused even greater damage to the surrounding environment. The large amount of ash that Mt. Pinatubo emitted eventually covered fifty percent of the planet (Phillips). The pyroclastic flows that were released from the mountain covered four hundred square miles of the surrounding landscape. Typhoon Yunya unleashed tremendous amounts of rain onto the surrounding areas, which mixed with the ash causing lahars (mud flows or landslides) that poured down streams and rivers throughout the area (R. Decker and B. Decker 271). The lahars and ash caused \$180 million U.S. dollars of damage to the surrounding bridges, roads, and schools (Albor). The drenched ash poured onto buildings and homes all over Clark Air Force Base and Angeles City. As the ash began to mount up, thousands of structures began to collapse under the tremendous weight (Thompson 289). If the ash didn't cause buildings to collapse, the thousands of earthquakes did. Most deaths were due to the amount of ash and earthquakes (Thompson 290-291). Due to numerous collapsed buildings, and mounting damage (Approximately \$300 million worth), America decided not to renew its lease with the Philippines and gave Clark Air Force Base back to the Philippines on July 17th, 1991. Mt. Pinatubo's eruption rushed the desertion of America's best strategic base in the Pacific (Thompson 292).

In conclusion, I believe Mt. Pinatubo was the larger eruption. Mt. Saint Helens did erupt with a tremendous amount of force causing major damage to the surrounding environment. However, Mt. Saint Helens failed to affect the climate. Aside from devastating the timber industries, Mt. Saint Helens also did little to affect the surrounding communities. Scientists were ill prepared for the eruption and provided little warning, yet only 57 lives were lost. Over 200,000 people were evacuated from Pinatubo, and the volcano still caused over three hundred

fatalities. Mt. Pinatubo also lowered the earth's temperature by an amazing 0.5 degrees Celsius. In addition, Mt. Pinatubo devastated America's position in the Pacific as they lost Clark Air Force Base. As a final point, Mt. Pinatubo is by far the larger eruption of the two, and it deserves credit and recognition when compared to Mt. Saint Helens.

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