

How do the levels of mercury in volcanic emissions and lava impact the water cycle?

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Home of the Cardinals

Introduction

Our question is "How does the level of mercury in volcanic emissions and lava impact the water cycle?"

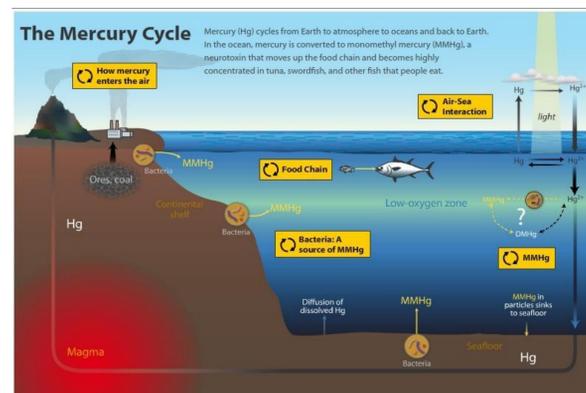
We chose this question because we know we have a volcano (Mt. St Helen's) in America that erupted in the 1980's. We are curious about how modern volcano might add mercury to water.

Scientists are studying Mount Nyiragongo in the Democratic Republic of the Congo. The scientists are trying to determine when Mount Nyiragongo will erupt again. Scientists have not been able to get into the Democratic Republic of the Congo (DRC) due to the war going on. A team of scientists went to Mount Nyiragongo and they wanted to know more about the Mountain. They went to the mountain and studied rocks and gas samples.

The scientists are worried that the mountain could become a modern day Pompeii. Pompeii was an ancient Roman city that was destroyed and buried by the eruption of Mount Vesuvius. When the scientists went to Mount Nyiragongo they could feel the heat from the volcano at the temperature of 1800 degrees F. The mount erupts differently than usual because it doesn't erupt out of the top it erupts out of cracks on the side.

Results

Below is a picture of the Mercury Cycle. It shows that Mercury can move from mountains to clouds and air to oceans. We scooped the dragonfly nymphs out of the water with a net. Then we sent them to dartmouth lab to test for levels of mercury. If the dragonflies had a lot of mercury then the river at saint gaudens had a lot of mercury.



Conclusions and discussion

Volcanoes blow up and when it does lava and ash comes out over the sides. Sometimes ash and lava has mercury in it. The mercury that is in the ash and lava can get into the air and water.

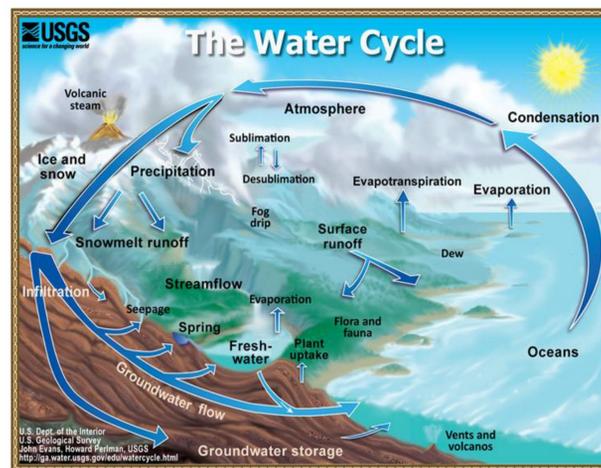
Materials and methods

My biology class went to the Blow- Me-Down river at Saint Gaudens National Park in Cornish, N.H. We collected macroinvertebrates by using nets to catch them. After we put all of the specimens in a bag and identified and named each type. We used the technique "Clean Hands/Dirty Hand" to keep the samples clean. Our dragonflies were sent to the Chen Lab at Dartmouth College.

After all of that, we went on a tour at Saint Gaudens and walked around the park. We went inside of buildings and saw all of the weapons the people back in time used for the war.



Below is a picture of the Water Cycle. The water cycle is important because the dragonfly babies live and grow under water.



Literature cited

"Nyiragongo Volcano." - *Pictures, More From National Geographic Magazine*. National Geographic, n.d. Web. 21 Jan. 2014.

Acknowledgments

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