

Volcano Detectives: Locating, Predicting and Avoiding Ash Clouds

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A list of materials about this topic provided by Aldean Kilbourn,
Geophysical Institute Keith B. Mather Library



Internet Resources

General Information (all sites accessible as of 20 February 2009)

Alaska Science Forum - index of articles on volcanoes.

<<http://www.gi.alaska.edu/ScienceForum/volcanoes.html>>.

Alaska Volcano Observatory.

<<http://www.avo.alaska.edu/>>. This site has current information on volcanoes, a searchable "library", images of volcanoes in a myriad of formations, the ability to search, links to other websites.

Bulletin of Volcanology (SpringerLink database) Available online through Geophysical Institute's Keith B. Mather Library

Chile's Chaiten volcano spewing ash again. Reuters 19 Feb 2009 12:00P.M.

<http://www.reuters.com/article/homepageCrisis/idUSN19510984_CH_.2400>.

CUSVO: Consortium of US Volcano Observatories - Alaska, Cascades, Hawaii, Long Valley, Yellowstone. <<http://www.cusvo.org/>>.

Danger in the Air. *Science News* 13 September 2003; 164(11).

<<http://journals.iranscience.net:800/Default/www.sciencenews.org/20030913/bob8.asp>>

Geology.com: Volcanic Ash

<<http://geology.com/articles/volcanic-ash.shtml>>. Looking at articles by topic, there are many for volcanoes and ash.

Global Volcanism Program: world-wide Holocene volcano and eruption information.

<<http://www.volcano.si.edu/>>.

Gimmestad, G.G., et al. 2001. **Feasibility study of radiometry for airborne detection of aviation hazards.** *NASA Report* NASA/CR-2001-210855. June.

<http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20010072442_2001121416.pdf>.

Holocene Kamchatka Volcanoes: Institute of Volcanology and Seismology.

<<http://www.kscnet.ru/ivs/volcanoes/holocene/main/main.htm>>.

Hufford, G.L., L.J. Salinas, et al. 2000. **Operational implications of airborne volcanic ash.** *Bulletin of the American Meteorological Society* 81(4):745-756.

<<http://ams.allenpress.com/pdfserv/i1520-0477-081-04-0745.pdf>>.

NOAA Satellite and Information Services: Volcano Ash Advisory.

<<http://www.ssd.noaa.gov/VAAC/>>.

Perkins, S. **Volcanic suppression: major eruptions can reduce sea level.** *Science News* 5 November 2005, 168:294. <http://findarticles.com/p/articles/mi_m1200/is_19_168/ai_n15928102>

Perkins, Sid. **Global cooling: huge volcanic eruptions trigger chilling effects around the world.** *Science News*: 30 August 2008 174(5): Feature.
<http://www.sciencenews.org/view/feature/id/35245/title/Disaster_Goes_Global>

Reves-Sohn et al.; A. Soule and C. Willis/WHOI. **Under Ice / ASHDRIPTS.** *Science News* 25 June 2008. <http://sciencenews.org/view/generic/id/33630/title/Under_Ice>
Layers of volcanic ash blanket the Arctic seafloor 4,000 meters down. The ash is evidence of an explosive eruption, long thought impossible at those depths.

Rozell, Ned. 2002. **Eruption clues from a humming volcano.** *Alaska Science Forum*, # 1580.
<<http://www.gi.alaska.edu/ScienceForum/ASF15/1580.html>>. Shishaldin Volcano on Unimak Island in the Aleutians.

Rozell, Ned. 2006. **Fairbanks scientists wired into erupting Augustine.** *Alaska Science Forum*, # 1786. <<http://www.gi.alaska.edu/ScienceForum/ASF17/1786.html>>.

Rozell, Ned. 2003. **Golden anniversary of Anchorage's first blackout.** *Alaska Science Forum*, #1652.
<<http://www.gi.alaska.edu/ScienceForum/ASF19/1920.html>>. Mount Spurr ashfall.

Rozell, Ned. 2001. **The sudden disappearance of Mount Katmai.** *Alaska Science Forum*, # 1551.
<<http://www.gi.alaska.edu/ScienceForum/ASF19/1920.html>>. Mount Spurr ashfall.

Rozell, Ned. 2007. **Super eruptions are disasters like none other.** *Alaska Science Forum*, #1857.
<<http://www.gi.alaska.edu/ScienceForum/ASF18/1857.html>>. Mentions Krakatoa, Katmai and ashflow.

Rozell, Ned. 2008. **Tiny Aleutian island has big impact.** *Alaska Science Forum*, #1920.
<<http://www.gi.alaska.edu/ScienceForum/ASF19/1920.html>>. Kasatochi in central Aleutian chain.

Rozell, Ned. 2008. **Twenty years of the Alaska Volcano Observatory.** *Alaska Science Forum*, # 1904.
<<http://www.gi.alaska.edu/ScienceForum/ASF19/1904.html>>.

Rozell, Ned. 2008. **Volcanologists step on familiar but different ground.** *Alaska Science Forum*, #1924. <<http://www.gi.alaska.edu/ScienceForum/ASF19/1924.html>>.
Includes Umnak Island, Okmok volcano.

Schaefer, J.R., and Nye, Chris, 2008, **The Alaska Volcano Observatory - 20 years of volcano research, monitoring, and eruption response:** Alaska Division of Geological & Geophysical Surveys, *Alaska GeoSurvey News*, NL 2008-001: 11(1), p. 1-9,9.
<http://www.dggs.dnr.state.ak.us/webpubs/dggs/nl/text/nl2008_001.PDF>.

Volcanic Ash Fall—A "Hard Rain" of Abrasive Particles. <<http://pubs.usgs.gov/fs/fs027-00/>>.
U.S. Geological Survey Fact Sheet 027-00 Online Version 1.0

What is volcanic ash? <<http://volcanoes.usgs.gov/ash/>>.

When mountains fizz. *Science News* 30 January 2005: 167(5) 74.

<http://www.phschool.com/science/science_news/articles/when_mountains_fizz.html>

Scientists are finding that bubbles in molten rock are the driving force behind explosive volcanic eruptions such as the one that decapitated Mount St. Helens on May 18, 1980.



Book Resources

Burleigh, Robert; Giraudon, David; Bourseiller, Philippe. 2003. **Volcanoes: Journey to the Crater's Edge**. Harry N. Abrams, 80 p. (4th to 9th grades)

O'Meara, Donna. 2005. **Into the Volcano**. Kids Can Press, 56 p. (ages 9-14).

Yount, Betsy; McGimsey, Robert Game. 1976. **Alaska's Volcanoes**. *Alaska Geographic Society*, 18(2). Alaska Northwest Pub. Co., 80 p. Historical perspective on Alaska's volcanoes.



Video and Electronic Resources

Mount St. Helens, Keeper of the Fire. Directed by David Rosen ; written and conceived by Otto Sieber. VHS, 30 min., Finley-Holiday Film Corp., 1980. "Otto Sieber and his film crew staggered down the ruined slopes of Mt. St. Helens. Blinded by ash and near death from exposure, he carried with him footage taken of the volcanic eruption and its devastating aftermath. Included is the only photographic sequence ever recorded of the instant a volcano blasted itself apart, with the force of 500 atomic bombs."-Noel Wien Catalog



Teacher Resources

Geological Society of America - Education Resources.

<<http://www.geosociety.org/educate/resources.htm>>

This site links to lesson plans and resources for topics in Earth Science such as volcanoes, energy, paleontology, space, weather and more. The lesson plans are sorted by topic or by age group (elementary, intermediate and secondary).

Volcanic Ash. <<http://library.thinkquest.org/17457/volcanoes/hazards.ash.php>>

Volcano World. <<http://volcano.oregonstate.edu/>>

Volcano World for Educators. <<http://volcano.oregonstate.edu/education/index.html>>.

Teacher resources through FNSBSD Library Media Center

Bill Nye the Science Guy: Volcanoes. DVD, 26 min., Disney, 2005.

The Fire Below Us: Remembering Mount St. Helens. VHS, 30 min., Great Plains Network 1995.

In the Path of a Killer Volcano. DVD, 56 min., WGBH Educational Foundation, 2006.
Philippines' Mount Pinatubo volcanic eruption.

Plate Tectonics! : A GEMS Kit. Carolina Biological Supply Co, 2008.
multimedia kit + Guide

Volcano! An Event Based Science Module. Science/Boreal Lab, 2001.
multimedia kit; Teacher's guide, 1 student manual, and 1 video.

Key words for browser searches:

volcanic bombs

lapilli

volcanic ash advisory center

pyroclastic flow

tephra

lahar

caldera

volcanoes

volcanic ash