ASH FALL

Newsletter of the Volcanology and Igneous Petrology Division
Geological Association of Canada

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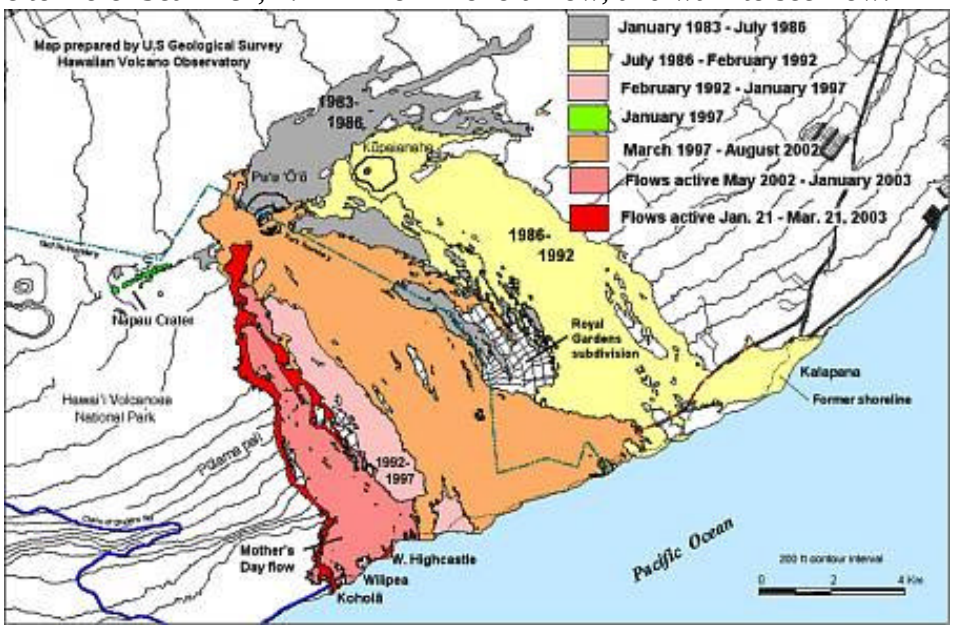
Hi all! I hope that the last few months have been successful ones for everyone. In particular, for those of us at university settings, classes are out and exams are underway, and we have proudly watched our undergraduate Honours students complete their thesis projects. For those in the mining industry, it has been fun to watch gold prices finally show some signs of life!

For volcanophiles, Etna and Kilauea continue to entertain us almost daily! I was in Hawaii back in February, and the word was that lava was once again overrunning the Chain of Craters Road and was easily accessible to the public. Unfortunately, my holiday plans did not include the Big Island (this time!), but I had an awesome holiday anyhow!

These photos are of the more recent eruptive products from Kilauea, as documented on the Hawaiian Volcano Observatory website, on April 1, 2003. Left: No Parking is a given now that lava is entering turnaround area at very end of Chain of Craters Road. Right: Detail of lava covering asphalt near west edge of Kohola flow.

On the map below, the most recent--and ongoing—activity at Kilauea has produced two slender, dark red flows, one along western edge of flow field and one slightly farther east. Kohola flow, along western margin, entered sea late on Valentine's Day to form Kohola

ocean entry. Lava is slowly widening Kohola flow eastward on March 21. Visitors now can drive to Holei Sea Arch, 1.1 km from Kohola flow, and walk to see flow.



The preceeding photos and flow map of Kilauea are from the Hawaiian Volcano Observatory website, http://hvo.wr.usgs.gov/kilauea/update/main.html.

After three months of activity, the flank eruption at Etna that began on 27 October 2002 finished on 28 January 2003. Lava flows and Strombolian explosions in January were confined to the S-flank vent located at 2,750 m elevation. Lava flows formed a fan and covered the previous lava flow field. A decrease in effusion during January was suggested by the shorter lava flow lengths of less than 2 km, which formed a complex flow field with small lava tubes. Strombolian activity from the 2,750-m cinder cone significantly declined on 27 January and disappeared on 29 January. Lava flows slowed on 27 January, and were no longer fed by the 29th, and thus cooled down. At this time SO2 output decreased significantly, reaching the lowest value of 2,000 tons/day on 29 January 2003. Volcanic tremor amplitude showed a marked decrease on 27 January, and on 28 January at 2240 it returned to background levels, signaling the end of the eruption.

Left: A night photograph of Etna's N2000 vents showing the brilliant glow of lava fountains and associated spatter. Taken on 30 October 2002 from Mt. Ponte di Ferro looking E. Right: Outbursts began to wane at Etna's N2000 vents on the evening of 31

October 2002, but substantial explosions continued at the upper two N2000 vents. Courtesy of J.C. Tanguy, from the Smithsonian Bulletin of Global Volcanism.

Vancouver 2003

The next geological "event" in Canada is the 48th annual meeting of the Geological Association of Canada and the Mineralogical Association of Canada in Vancouver, May 25-28, 2003. The early registration deadline has now passed, and the deadline for hotel reservations is approaching. If you plan to attend, there are several special sessions and field trips that you may want to participate in:

[Activity Category: FT = field trip ("A"=pre-meeting, "B"=post-meeting, "C"=during meeting); SC = short course; SS = special session; SYMP = symposia; WS = workshop]

Of Specific Interest to the Mineralogy, Volcanology and Petrology Division:

SYMP05 From mantle to magma: Lithospheric and volcanic processes in western North America
Ben Edwards, Dante Canil and Kelly Russell
Sponsored by GAC (Volcanology and Igneous Petrology Division) and MAC

SYMP06 Mantle plumes and large igneous provinces
Dominique Weis, John Ludden and Nick Arndt
Sponsored by GAC and MAC

SS11 Gem materials
Lee Groat
Sponsored by MAC

SS19 Truth and beauty in metamorphism: A tribute to Dugald Carmichael
David Pattison, Marc St-Onge and Normand Bégin
Sponsored by MAC

SS20 The application of fluid and melt inclusions to understanding geological processes
Iain Samson and Alan J. Anderson
Sponsored by MAC

SS21 New analytical developments in isotope geochemistry
Dominique Weis and Jim Mortensen
Sponsored by SEG, MAC, and GAC

SS02 Dangerous ground: Assessing the risk of natural and man-made hazards.
Bruce Broster, Henrietta Mann, Jeanne Percival, Bert Struik and Robert Turner
Sponsored by GAC (Environmental Earth Sciences Division and Volcanology and Igneous Petrology Division)

SC1 MAC SHORT COURSE: The analysis and interpretation of fluid inclusions
Iain Samson, Alan J. Anderson and Dan Marshall
Sponsored by MAC

FT-B3 Quaternary glaciovolcanism along the Whistler corridor
Catherine Hickson and Kelly Russell

FT-B4 The 2350 BP Plinian eruption cycle of Mount Meager
Kelly Russell and Catherine Hickson

Other Sessions and Events of Probable Interest (not necessarily complete):

SS27 New marine research opportunities, programs and technologies in the Northeast Pacific
Christopher Barnes, Verena J. Tunnicliffe and Kathy M. Gillis
Sponsored by Project NEPTUNE Canada, Project VENUS, IOPD Canada, and GAC

SS09 Massive sulphide deposits on the edge: Formation of VMS and SEDEX deposits within evolving continental margins
Steve Piercey and Jim Mortensen
Sponsored by GAC (Mineral Deposits Division) and SEG

SYMP01 Earth matters: Critical geoscience issues across Canada
Robert Turner, John Clague and Jane Wynne
Sponsored by GAC and CGEN

SYMP03 Metals in the environment
Bill Price and John Jambor
Sponsored by MAC

SS02 Dangerous ground: Assessing the risk of natural and man-made hazards.
Bruce Broster, Henrietta Mann, Jeanne Percival, Bert Struik and Robert Turner
Sponsored by GAC (Environmental Earth Sciences Division and Volcanology and Igneous Petrology Division)

SS03 Geohazards in the marine environment
Vaughn Barrie and Philip Hill
Sponsored by GAC (Marine Geosciences Division)

SS14 New perspectives on the evolution of the platinum group elements in magmas and ore deposits
James Scoates and David Peck
Sponsored by SEG and GAC (Mineral Deposits Division)

SS20 The application of fluid and melt inclusions inclusions to understanding geological processes

Iain Samson and Alan J. Anderson
Sponsored by MAC

SC1 MAC SHORT COURSE: The analysis and interpretation of fluid inclusions
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Sponsored by MAC

So there you have it! I hope that everyone enjoys the meeting. ***Don't forget to attend the VIP Division luncheon while at GAC-MAC*** – date, time and location will be included in the final program. See you there!

Message from the Chair

The GAC/MAC 2003 meeting in Vancouver is looming imminently and should be fascinating. Our Division is sponsoring or cosponsoring three sessions: (1) "From mantle to magma: lithospheric and volcanic processes in western North America"; (2) "Mantle plumes and large igneous provinces"; (3) "Dangerous ground: assessing the risk of natural and man-made hazards". There are also two fieldtrips of interest, one to the Whistler Corridor and the other to Mount Meager. Please attend our annual business meeting at lunchtime on Wednesday, 28 May; we will award our Career Achievement and Léopold Gélinas medals at that time.

Georgia Pe-Piper and I are working hard to produce a series of papers on volcanology and igneous petrology for Geoscience Canada. These will be collected into a single volume akin to the famous "Facies Models" book. As such, these papers should make a lasting contribution. Stay tuned for developments.

I am working on producing an educational CD-ROM for the Division of field photographs of volcanic structures and textures from volcanoes in Canada and beyond. If you are interested in contributing photos or slides, please contact me.

Kelly Russell at UBC will be hosting a workshop 1-5 September 2003 on silicate melts, glasses, and magmas, taught by Professor Don Dingwell. The course is modelled after the short course that is taught annually by Professor Dingwell at Ludwig Maximilians University, Munich. It is intended for graduate students and faculty with interests in the physical and chemical properties of melts and glasses in natural systems and experimental volcanology. Information on the course: http://perseus.eos.ubc.ca/mac_melts/melts_index.html

Finally, there is interest amongst some people to organize a Canadian inter-university volcanology fieldcamp at the graduate and/or undergraduate level. I would be happy to discuss this idea at GAC-MAC over a beer (I'll buy) or by email.
John Stix, Chair

Field Trip Report (John Stix)

8th Field Workshop on Volcanic Gases, Nicaragua and Costa Rica, 26 March - 1 April 2003

The IAVCEI Commission on the Chemistry of Volcanic Gases (CCVG) held their 8th Field Workshop in Nicaragua and Costa Rica. Approximately 75 people attended. The first day in Managua, Nicaragua, was devoted to keynote talks on fumarolic gas discharges, diffuse degassing, remote sensing of gas from the ground and space, and volatiles in melt inclusions, among other topics. The next three days were spent making gas measurements on Momotombo, Cerro Negro, and Masaya volcanoes. There were four research groups: fumarolic sampling, soil degassing, plume sampling, and remote sensing. We then travelled by bus to Costa Rica, spent a marvelous day sampling HCl-rich gas on Poás volcano, and spent a final day gathered in informal groups and giving informal presentations. The workshop was considered a real success, because it brought people together from very different perspectives and backgrounds. It is clear to this observer that the study of volcanic gas is undergoing a revolution, in particular remote sensing approaches. The next five years should be fruitful indeed.

Upper Photo: Dr. Bill Morrow, who is President of Resonance Ltd. of Barrie, Ontario, working at Masaya volcano, Nicaragua, during the 8th Field Workshop on Volcanic Gases. Bill is making measurements of sulfur dioxide with a COSPEC (blue instrument) and of carbon dioxide with a GASPEC (white instrument).

Your faithful Editor and wife enjoying their last night on Maui.
Note the volcano Aloha shirt…….

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