

Dear Colleagues,

This issue of the Volcanology Geochemistry and Petrology Section newsletter contains news of new initiatives within VGP, as well as information on the AGU Fall Meeting. Please send any feedback to Sarah Fagents at fagents@hawaii.edu. And check out our new and improved website for further VGP news: <http://www.agu.org/sections/VGP>.

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(1) MESSAGE FROM THE PRESIDENT

Over the last few months good progress has been made on changes within VGP, namely the launch of the new web site, the formation of the new Education and Outreach Committee, the appointment of a student representative on the VGP Executive Committee, and discussions of collaboration between VGP and the GMPV Division of EGU, in particular at the Spring 2012 Meeting in Vienna.

- * New VGP Web Site (<http://www.agu.org/sections/VGP/>)

I would like to express appreciation for the outstanding work of Diana Roman who is managing and developing the VGP web site. Please take some time to look at the new site, which has been greatly enhanced in terms of design, ease of access to information, and the addition of some new features. Diana has been working hard behind the scene to

get the new web site up and running. Diana has also pioneered some new developments with news stories, which will be regularly updated, as well as links to blogs of interest to VGP members. Members who have ideas on good links, news stories and other items that could go on the web site to keep it fresh and active are invited to contact Diana.

* New VGP Education and Outreach Committee

At the 2010 Fall meeting the Education and Outreach Committee of VGP was split into two new committees, namely the Student Awards Committee and a new Education and Outreach Committee. The rationale for this change was that the range of work required to fulfil all the tasks was too great for one Committee and indeed the old committee had largely focussed on student awards so VGP was playing rather little role in other aspects of education and outreach. In addition, AGU as an organisation is now placing much more emphasis on Education and Outreach, which has a high priority within the new strategic plan. It seemed appropriate that the VGP Section should develop a more vigorous and fresh contribution. The new committee is chaired by Professor Chuck Connor at the University of Southern Florida, and has started out with a small committee membership, which is likely to increase. Item 6 below discusses the aspirations and plans for the new Committee's work. VGP is in fact one of the few sections of AGU currently with a dedicated Education and Outreach Committee, so VGP has an opportunity to be agenda setting within AGU.

* Student representative

The decision to have a student representative on the VGP Executive Committee was taken some time ago and it gives me pleasure to announce that Jessica Ball, a volcanology graduate student at the State University of New York at Buffalo, has been appointed as student representative for two years. Jessica has gained a reputation as a blogger for AGU (see <http://blogs.agu.org/magmacumlaude/>) and some of her blogs will be accessed through the VGP web site. She is also going to contribute news content for VGP web site. Jessica introduces herself below.

* Collaboration with GMPV Division of EGU

The GMPV (Geochemistry Mineralogy Petrology Volcanology) Division of EGU closely parallels the scientific interests of VGP. I have been in discussions with Nick Arndt (President of GMPV at EGU) about future collaboration. As a consequence, I am pleased to announce that and Spring EGU at Vienna will be a formal VGP meeting. We are expecting to organise about six special keynote sessions jointly between VGP and GMPV on topical issues. We encourage VGP members to participate in the meeting. I ask here for (1) volunteers for conveners of these sessions and (2) suggestions for topics. I will then liaise with Nick Arndt and our respective Executive Committees. GMPV is planning to have a thematic poster session. The session would begin with a lecture from the winner of the Bunsen lecture and a "Meet the Master" session in the poster hall. The idea is that anyone, but particularly students and young scientists, has the opportunity to speak on an informal basis with the medal winner. VGP will contribute to this poster day.

(2) ANNOUNCING THE 2011 AGU FELLOWS WITH VGP AFFILIATION

Congratulations to the new VGP-AGU Fellows elected in 2011!

Catherine Chauvel, ISTERre, Maison des Geosciences, France
Marc M. Hirschmann, University of Minnesota, Minneapolis
Suzanne Mahlburg Kay, Cornell University
Craig E. Manning, University of California, Los Angeles
William F. McDonough, University of Maryland, College Park
William E. Seyfried, University of Minnesota, Minneapolis
Takehiko Yagi, University of Tokyo, Kashiwa, Japan

(3) CALL FOR NOMINATIONS FOR AGU FELLOWS WITH VGP AFFILIATION

Think about nominating a colleague to become an AGU Fellow! You are warmly encouraged to submit a nomination package for a colleague who has made exceptional scientific contributions. A nomination package consists of a cover letter, a CV, and up to 5 supporting letters (see <http://www.agu.org/about/honors/fellows/nominations/>). Primary criteria for evaluation of scientific eminence are major breakthrough or discovery, and paradigm shift. This designation is conferred upon not more than 0.1% of all AGU members in any given year. New Fellows with VGP affiliation are chosen by a Union Committee based on recommendations of the VGP Fellows Committee. You can find the names of AGU Fellows and further information at <http://www.agu.org/about/honors/fellows/>

Deadline for 2012 nominations is July 15, 2011

(4) INTRODUCING VGP STUDENT REPRESENTATIVE, JESSICA BALL

My name is Jessica Ball, and I'm in my third year as a PhD candidate in the Department of Geology at the University at Buffalo. I will also be the new (and first!) student representative for AGU's VGP section. My research is concerned with the short- and long-term effects of water on lava dome stability, and combines a variety of field-based, remote sensing and modeling approaches to assessing dome stability and identifying collapse triggers. But I do more than just study lava dome collapses – I'm also active in social media, including the "Geoblogosphere". I currently write the blog *Magma Cum Laude* on AGU's Blogosphere (<http://blogs.agu.org>), and I'm also active on Twitter as @Tuff_Cookie (to continue the bad geology puns).

As a young researcher, I want to do my best to understand and communicate to the VGP what's important to our generation of scientists. I want to know what *your* concerns and questions are in order to help the VGP respond to your needs, and to help students become more involved with VGP activities. And with the rise of social media, there are so many ways to do this! I hope to integrate my blogging into AGU's new VGP Section

website, especially posts that talk about navigating student and research life, but I also want to use blogging, email and Twitter to make it easy for my fellow students to make sure they can speak through me to the VGP Section. Please don't hesitate to contact me with your input and feedback via email (jlball@buffalo.edu) or Twitter (@Tuff_Cookie), or leave a comment on my blog!

(5) WEB SURVEY ON PERCEPTIONS OF SCALE IN SCIENCE

Please take a few minutes to visit the brief survey at <https://www.surveymonkey.com/s/VGP>

This web-survey is a follow-up to a questionnaire distributed by Tom Gleeson at the AGU Fall Meeting last year. The purpose of this research is to collect quantitative data on the perception of scale in different scientific disciplines – that is, what exactly do scientists mean when they say "small-scale" or "field-scale"? Within a single discipline scale can be a very important consideration – when research involves multiple disciplines the notion of scale can be even more important, particularly if different perceptions of scale act as a barrier to interdisciplinary research. We are hoping to collect survey results from a variety of sections within AGU, to look at how scale is perceived within and between disciplines. The goal is to expose different understandings of scale, and to generate dialogue around this in the interest of facilitating interdisciplinary scientific research.

Tom Gleeson and Dawn Pazlowski
University of British Columbia

(6) WHAT'S GOING ON IN VGP EDUCATION AND OUTREACH?

The Education and Outreach Committee (E&O) has been active this spring in developing contacts throughout the educational community, including groups as diverse as the National Earth Science Teachers Association (be sure to check out their K-12 webpage Windows to the Universe developed primarily by Roberta Johnson: www.windows2universe.org/), VHub (see VHub.org for a growing set of educational resources for undergraduate and graduate education), and AGU's E&O committee. VGP is in the vanguard of AGU sections in developing an active E&O program – a tribute to the enthusiasm and creativity of VGP members in bringing exciting research to the public eye.

In conversation with AGU's E&O committee, we have raised the point that rewards for scientists engaging in E&O activities need to be enhanced and clarified. This is a major problem for young scientists especially, who often have the best ideas of how to improve educational resources and who are often most effective in outreach, but arguably have the least time to devote to these activities while pursuing their own research agendas. One of the most important things we can do in VGP E&O is promote best practices, especially for E&O projects described in NSF CAREER proposals and as broader impacts in proposals

submitted to NSF and similar funding agencies. So watch for future workshops and townhalls at AGU on best practices in bringing your research to the broader community.

On a practical note, VGP will be developing a webpage for E&O, specifically guiding VGP members and teachers to important resources like VHub, DELESE, SERC, Windows to the Universe, and Steve Carey's Vesuvius tour (see: <http://www.gso.uri.edu/vesuvius/Home/index.html>). We will also be developing a Facebook group for VGP members and educators to facilitate development of new resources and effective use of existing resources. Our plan is to have VGP section members join the VGP E&O committee simply by registering as part of this group, hopefully stimulating broad participation in VGP E&O activities.

One immediate goal of the VGP E&O Facebook group is to complement efforts being made in venues like VHub to focus on higher levels of learning as articulated by the educational community (<http://www.nap.edu/openbook.php?isbn=0309070368> and http://en.wikipedia.org/wiki/Bloom's_Taxonomy). VGP membership is particularly well positioned to discuss two tools promoted by the educational community, Big Ideas and Misconceptions, in the context of volcanology and geochemistry. Big Ideas is a tool advanced by the ESLI committee (AGU is one of the initiating groups) for focusing on what are the big ideas that earth science needs to communicate broadly (www.earthscineliteracy.org). VGP member Bill Rose has experimented with discussion of Big Ideas in classes of earth science teachers and found they are powerful tools because they establish a motivational and intellectual focus that teachers understand and can immediately buy into. Big Ideas have been formulated in other science areas besides earth science and big ideas can be developed for volcanology as well. These big ideas help to lead students and faculty alike to higher level learning. Misconceptions are another useful learning tool because broad based misconceptions are numerous in science and they represent obstacles to advanced understanding. There have been major studies of STEM education that focus on misconceptions (for example, MOSART: http://www.cfa.harvard.edu/smgphp/mosart/aboutmosart_2.html). We think it might be fun and very productive to promote community discussion of Big Ideas and Misconceptions. So stay tuned for launch of our Facebook group where these topics can be fruitfully discussed. Who knows? The discussion may help you write your next Broader Impacts statement!

In a similar vein, tremendous progress in E&O is being made in the area of quantitative literacy (QL). VGP is ripe to participate in QL and benefit from the experience of others. See for example the SERC site (<http://serc.carleton.edu/index.html>) and resources devoted to improving QL at the undergraduate level, for example by using methods developed in quantitative thinking by George Ploya (http://en.wikipedia.org/wiki/George_P%C3%B3lya) and implemented in the Spreadsheets across the curriculum resources available on SERC. There is even a set of modules developed for physical volcanology for use in advanced undergraduate and graduate courses (<http://serc.carleton.edu/sp/ssac/volcanology/index.html>). You can find articles on QL in the Journal of Geoscience Education (<http://nagt-jge.org/>) and in the relatively new open-access journal Numeracy (<http://services.bepress.com/numeracy/>).

These resources can help you teach quantitative concepts in your undergraduate and graduate courses. They also provide a platform for reaching the math education community, and for exposing students at the K-12 level to the mysteries of the solid earth and volcanism, viewed through the lens of quantitative thinking.

We want you to participate in VGP E&O. Please watch for the launch of web resources and in the meantime, please contact Chuck Connor (chuck.connor@gmail.com) about our E&O activities.

VGP E&O Committee members include Steve Carey (University of Rhode Island), Howard Day (University of California, Davis), Karen Harpp (University of Idaho), Bill Rose (Michigan Technological University), and Chuck Connor (University of South Florida).

(7) JUDGING STUDENT PRESENTATIONS AT AGU MEETINGS

As an outgrowth of the reorganization of the Education and Outreach Committee, the new Student Awards Committee has proposed new and streamlined procedures for the judging of student presentations at AGU meetings. The most important change is that, henceforth, session chairs will be asked to judge student presentations in their sessions. Session chairs will generally know their disciplines better than volunteer judges from the membership, but a volunteer from the Student Awards Committee will provide additional cross-disciplinary calibration of the judging. Some poster sessions with heavy student participation will require more judging than can reasonably be expected of the session chairs. If additional judging support is necessary, the session chairs will be asked to find volunteer judges in appropriate disciplines. Of course, the Committee will continue to support the session chairs as necessary to provide appropriate judging of our student presentations.

Howard Day
Chair, VGP Student Awards Committee

(8) MEDIA COVERAGE AT THE AGU FALL MEETING

If you have a research project involving several scientists that should be of interest to the press, please let me know. I will see if we can schedule a press conference during the fall meeting.

Attila Kilinc
VGP Press Officer
attila.kilinc@uc.edu

(9) VGP SESSIONS AT THE AGU FALL MEETING, SAN FRANCISCO, 5-9 DECEMBER 2011

The deadline for submission of abstracts for the AGU Fall meeting is earlier than usual, 4 August 2011. Look through the numerous (50!) VGP-sponsored sessions to find the ones that most interest you. Try to find a session that aligns with your contribution. If there isn't one, submit to the general session (V01). VGP cosponsors sessions with many other sections and focus groups (listed below). Your interests may match well with such a session. Full details will be available at the AGU website when abstract submission opens on 8 June (<http://sites.agu.org/fallmeeting/scientific-program/>)

Union Sessions emphasizing VGP:

U32 – Physical and Chemical State of Subducting Slabs and the Slab-Mantle Interface: Forearc, Subarc, and Beyond

VGP Sessions:

V01 – Volcanology, Geochemistry, and Petrology General Contributions

V02 – 100 Years of Observing Hawaiian Volcanoes V03 – 25 Years of Thermochronology

V04 – A 100 Year Quest to Graduate the Geological Column with an Accurate Time Scale

V05 – Constraining the Dynamics of Volcanic Jets and Plumes

V06 – Differentiation Processes in Magma Chambers

V07 – Cyclic Activity and Flow Instability in Volcanoes, Geysers, and Mud Volcanoes

V08 – Formation and Evolution of Magmatic Enclaves in Arc-related Rocks

V09 – Fun With Isotopes: A Lighthearted Look at a Powerful Tool

V10 – Geophysical Observations of Stress-Strain Changes at Active Volcanoes

V11 – Inferring Processes From Volcanic Deposits in the Solar System

V12 – Innovations in Isotope Mass Spectrometry and Isotope Metrology

V13 – Magma Transport Through Dykes and Sills: Insights into Volcanic Unrest and Eruption Processes

V14 – Magmatic Plumbing Systems

V15 – Magmatic Processes From Crystal to Arc Scales

V16 – Magmatic Processes in the Lower Oceanic Crust

V17 – Mantle melts: Innovative Approaches and Constraints to Modeling the Melting Regime

V18 – Merging Signals From the Volcanic and Plutonic Realms

V19 – Microanalysis in Geoscience: Advances and Challenges

V20 – Mineralogical Signals As Keys To Understanding Petrological Processes

V21 – Modeling of Volcanic Hazards

V22 – Multidisciplinary Studies of Elements Critical to 21st Century Economies

V23 – Noble Gas Geochemistry: Mantle and Melts

V24 – Observation, Analysis, and Processes that Convert Magma to Ash in hazardous explosive eruptions

V25 – Organic Compound Transformations at High Pressures and Temperatures

V26 – Origin and Evolution of Earth's Crust

V27 – Origin, Structure, and History of Oceanic Plateaus

V28 – Peridotites and Serpentinites from Ridges to Subduction Zones: the Role of Fluids at Low and High Temperatures

V29 – Perspectives on Batholith Formation in 4D
V30 – Practical Applications of Visible and Infrared Spectroscopy to Terrestrial Geologic Studies
V31 – Rates of Pre- and Syn-eruptive Processes in Submarine Volcanic Systems
V32 – Rise and Fate of Oceanic Mantle: Melting, Aging, Recycling and Refertilization
V33 – Role of Fluids in Subduction Processes
V34 – Role of Geologic Mapping in Petrology, Geochemistry, and Volcanology
V35 – Seamount Trails: Implications for Global Plate and Hotspot Motion, Mantle Flow, and the Geochemical Evolution of Mantle Plumes
V36 – Surtseyan Eruption and Emplacement Mechanisms
V37 – Surveillance of Volcanic Unrest - New Developments in Multi-Disciplinary Monitoring Methods
V38 – Tephra in Ice Cores: Characterization, Transport and Sources
V39 – The Origin of Orogenic Andesites
V40 – The Role of Fluids, Melts, and Solid-state Diffusion During P-T-X Re-equilibration Between Minerals in Metamorphic and Igneous Rocks
V41 – Towards an Integrated View of Volcanic and Hydrothermal Processes on the Juan de Fuca Ridge
V42 – Tracking Syn-Eruptive Variations in Volcanic Conduit Properties
V43 – Ultrahigh-pressure Metamorphism: New Paradigms
V44 – Using Petrological Signatures to Forecast Eruptions from Andesite Volcanoes
V45 – Volcanic Eruptions and Climate Change: Past to Present
V46 – What Can Pyroclasts Tell Us?
V47 – Where Do We Go From Here: Frontiers and Challenges in Igneous Petrology
V48 – Radionuclides in the Environment
V49 – Worlds in Collision: From Magma Rheology to Rock Mechanics
V50 – CO₂ at Geologic Interfaces: Mineral Surface Processes to Caprock-reservoir Contacts

Sections and Focus Groups with VGP-co-sponsored sessions:

Atmospheric
Biogeosciences
Earth and Planetary Surface Processes
Earth and Space Science
Informatics
Education
Geodesy
Geomagnetism and Paleomagnetism
Global Environmental Change
Hydrology
Mineral and Rock Physics
Natural Hazards
Non-Linear Geophysics
Ocean Sciences
Paleoceanography and Paleoclimatology
Planetary Sciences

Public Affairs
Seismology
Study of Earth's Deep Interior
Tectonophysics

Anita Grunder and Matt Kohn
VGP Secretaries and Fall Meeting Chairs