

November 2005

VGP Section Newsletter #22

Dear Colleagues,

Here is the last VGP newsletter of 2005. This and previous newsletters are archived at <http://vgp.agu.org>. Feedback and suggestions for the February newsletter can be sent to Sarah Fagents at fagents@hawaii.edu.

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(1) MESSAGE FROM THE VGP PRESIDENT

At the risk of repeating some material that I hope will now be familiar to newsletter readers, my message describes the new VGP subsections, renewing membership at the Supporting level, the upcoming election, and VGP at the Fall Meeting.

***Subsections:** When you renew your AGU membership, you will discover that you can now affiliate simply with VGP or choose either of the new subsections, (1) Geochemistry or (2) Volcanology and Petrology. Having subsections has allowed us to have two Secretaries, starting with the 2006-2008 term, in order to better handle the workload of organizing meetings and to make VGP more appealing to a broader range of geochemists.

***Supporting Membership and Gifts:** If you are not already a Supporting Member or Fellow and have the financial resources, now is the time to consider renewing at the Supporting level with a donation of \$100 or more in excess of the basic \$20/year dues. The first \$50 of your donation goes to AGU unrestricted funds. The portion of your donation in excess of \$50 can be designated as a gift to a section, committee, special fund, program, or project. See <http://www.agu.org/inside/insidagums.html> (click on "supporting membership" for more information via a link to http://www.agu.org/inside/supportmember_top.html). You can access a list of funds via the sidebar at http://www.agu.org/givingtoagu/?title=Fund_Drive. Supporting membership also gives you access to the Donor Circle Lounge at the Fall Meeting and Spring Joint Assembly. Gifts to the VGP Section Fund are used for outstanding student paper awards, VGP events at meetings, and small grants in support of other VGP-related activities (such as the GIFT workshop for teachers at the 2005 Fall Meeting).

***Vote!** AGU soon will be holding an election of officers of the and Sections for the 2006–2008 term. Watch Eos and www.agu.org for information, and vote for the candidates of your choice. You will have the opportunity to vote for Union officers and for VGP President-elect, Secretary for Geochemistry, and Secretary for Volcanology and Petrology. Note that you can vote for officers of up to two sections in addition to VGP.

***Fall Meeting:** The December 5–9 Fall Meeting in promises to be packed with sessions of interest to VGP members. Of the 11000+ abstracts submitted, 938 were assigned to VGP sessions, giving our section the fourth largest tally. On behalf of VGP, I want to thank Secretary

James Brenan and Fall Meeting planning associate Jonathan Castro for organizing the VGP program under the challenging circumstance of tough competition for oral session allotments.

***Bowen Award and VGP Reception:** When planning your Fall Meeting schedule, be sure to include the Monday evening VGP Reception (time and place to be announced in the program). A 2005 Bowen Award will be presented to Paul Renne at the reception. (Bob Bodnar will receive the second 2005 Bowen Award at the Joint Assembly in , 23–26 May 2006.) As in the past, FREE BEER will be served at the reception. Be there!

-----*Charles R. Bacon VGP President*

(2) GIFT WORKSHOP AT AGU FALL MEETING

The VGP section in collaboration with AGU Outreach is organizing the Geophysical Information For Teachers (GIFT) workshop for the Fall AGU meeting. For the first time, we have established NSF support for this workshop in the amount of \$12,000 from the Geochemistry and Petrology Program. The NSF funds, in addition to \$800 the VGP section committed to this workshop, have allowed us to sponsor 13 teachers from across the to attend the workshop.

-----*Vincent Salters VGP Education/Outreach Chair*

(3) PECK

AGU/VGP Fellow Dallas Lynn Peck, former Director of the U.S. Geological Survey (USGS), passed away August 21. He was 76. Peck spent his entire 53-year career with the USGS, starting in 1951 as a field assistant and rising through the ranks to become the 11th USGS Director in 1981. In 1993, he returned to research on the granites of and the and to serve as advisor in the Office of the Chief Geologist. Peck was also known for his papers on Hawaiian volcanism. In 1995 he retired from the USGS, but continued his research as an emeritus scientist until his death. For more information on Peck and other USGS Directors see http://www.usgs.gov/aboutusgs/who_we_are/directors.asp.

(4) FALL MEETING 2005 UPDATE

As mentioned above, this year's Fall Meeting will be bigger than ever, with some 11,000+ abstracts submitted. VGP made a great showing, with 938 abstracts, and 28 special sessions. Thanks to all who contributed an abstract, and especially to those who put the time and effort into convening a special session. On behalf of the section, I'd like to thank Jon Castro (Smithsonian Institution) who helped with the daunting task of scheduling the oral and poster sessions. Below is a summary of VGP highlights.

VGP Highlights FM 2005

This year's contributions to the Volcanology/Petrology/Geochemistry section represent the great diversity of the section, and its expanding role into new research areas. Perhaps the best examples of the latter are sessions (**V43C, V51B, V44A, V51C**) which report on oceanographic expeditions to observe **hydrothermal activity on the ocean floor** in the SW Pacific (PISCES) and the on the Mid Atlantic Ridge. These are unique regions characterized by rich biological diversity, extreme conditions and unusual fluid chemistry. Significant questions remain as to how life can thrive in such environments, what the source of heat may be in serpentinite-hosted systems, and the importance of these unique habitats for the development of life on Earth and other solar system bodies.

The role of fluids in geological processes is an ongoing VGP theme, with a particular emphasis this year on various aspects of the **global fluid circulation cycle** (**V11B, V13C, V13G, V21E, V33C, V34A, V51F, V52A, V53F, V41A**), including the transport of volatile-bearing material into the deep Earth by subduction, deep storage, melt production, and the return via volcanic activity. Specific aspects of this cycle to be addressed include the nature of volatile-bearing transport agents at high P and T (i.e., do melts and fluids become single-phase?), the use of noble gases as tracers of deep fluid circulation and

terrestrial degassing, as well as the release of volatiles at low pressure during volcanic eruptions.

The study of volcanic hazards is one area in which VGP scientists have great societal impact. This year's Fall Meeting has a significant focus on characterizing the ***hazard and risk of volcanic activity*** (***V13F, V21B, V31E, V32A, V33A, V42B, V43B***). While some sessions will focus on the various schemes used to quantify the level of hazard and risk, others are concerned with the nature of the specific hazard, including lahars, and the post emplacement collapse of volcanic edifices.

Understanding the physical properties of the materials produced in volcanic eruptions may also lead to significant insight into the eruptive behavior of volcanoes. Within this theme will be sessions which focus on the behavior of ***bubbles*** in magmas (***V42A, V53A***), and the ***rheological properties*** of magmas as determined from field and experimental observations (***V41A, V53C***). Two sessions on ***magma-ice interaction on Earth as a paleoclimatological tool*** (***V12B, V13D***) are jointly sponsored by VGP and by Paleoceanography and Paleoclimatology.

Within the VGP community there have always been a few ***individuals who have had a life-long impact on earth science***, in terms of leading their respective fields, fostering collaborative activity and nurturing the next generation of earth scientists. Several sessions at this year's meeting pay tribute to colleagues who have served in this role, with a focus on new results within the research areas they contributed to for so many years.

- ***Frontiers in Isotope Geochemistry*** (***V21F, V22A, V23D, V41D, V41F***) will recognize and celebrate pioneering and lasting contributions to the field made by ***Dr. Stanley R. Hart***. The session is aimed at bringing together the latest developments in isotope geochemistry, with topics including early earth, evolution of the mantle, chemical geodynamics and advances in analytical techniques.
- ***Quantifying Volcanic Processes by Field-Focused Studies*** (***V43D, V44B, V53B***) will celebrate the lasting contribution made by ***George P.L. Walker*** to volcanology. His method of combining field observations and measurements with laboratory work and theoretical modeling has driven some of the most significant developments in volcanology over the last few decades. The session will focus on recent advances in revealing the internal structures and plumbing geometries of volcanoes, understanding the large variety of mafic and silicic explosive eruptive processes and emplacement of pyroclastic deposits and lava flows.
- ***Ultrahigh-Pressure Metamorphism: Multidisciplinary Approaches and Where to Go*** (***V51E, V53E, V54B, V43A***) will honor the achievements of ***Professor J. (Louie) G. Liou***, who has been a major contributor to the intellectual and scientific growth of the new field of modern petrology related to UHPM terranes incorporated within continental collision belts. The session will focus on various aspects of UHPM terranes, including both field and experimental approaches.
- ***Temperature, Chemistry, and Dynamics of the Mantle*** (***V32B, V33D, V43E, V31F, V41E, V41C***) is dedicated to ***Ian D. MacGregor*** in the year of his retirement, and in recognition of his seminal contribution to mantle petrology, including thermobarometry and geochemistry. The session will address all aspects of the variations of temperature and chemistry of the mantle and their implications for mantle dynamics and the currently contentious debate over the existence of mantle plumes.

-----James Brenan, VGP Secretary