IAVCEI *News* 2001 No: 2

INTERNATIONAL ASSOCIATION OF VOLCANOLOGY AND CHEMISTRY OF THE EARTH'S INTERIOR

Message from the President

TV Science: does the truth matter?

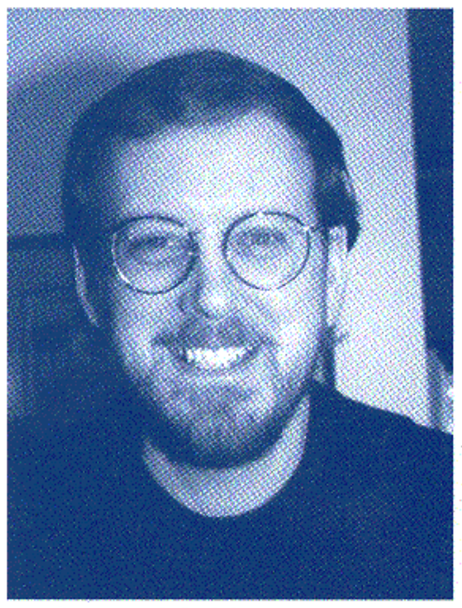
The presentation of volcanology on TV has a profound affect on the perceptions of the public as to how science works and on its impact on society. To a large extent the image of science and scientists are in the hands of the media. Scientists can be presented as villains or saints and science can be portrayed as something sinister or awe-inspiring, creative and exhilarating. The makers of TV programs are often motivated by success in ratings and entertaining a mass audience. A particularly difficult issue is the question of truth. What makes a popular or dramatic TV program does not always give a balanced view or truthful picture of the issues or how science works. At its worst TV science can be blatantly sensationalist, untruthful and biased. Given the problematic image of science in the public mind, the standard and ethics of TV Science should be a serious concern for the scientific community. Good TV can be an outstanding contribution to science, but bad TV undermines our efforts.

My recent experience helps to illustrate some of the difficulties in collaborating with TV companies and raises some of the ethical issues both for the scientist and TV journalists. I collaborated with the Pioneer TV Company in a recently broadcast two-part documentary called Volcano. The documentary team were making a program for Channel 4 (UK) and the Discovery Channel(USA) and assured the scientists contributing to the program that this would be a serious albeit mass audience program, aspiring to the standards of programs such as Horizon in the UK and Nova in the USA. Of course, as is always the case, the film crew shoot vastly more material than they actually use in the program. In addition scientists often are not consulted about the narration, and the scientific veracity of the final product. Thus the scientist has very little control on what is finally screened.

Sadly, Volcano proved to be a considerable disappointment. The program focussed on the antics of people on the margins of the scientific community, who choose to endanger their lives by going to extremely dangerous areas next to active volcanic vents. Dramatic TV, but not a truthful depiction of what the vast majority of professional volcanologists do. The death of colleagues on several volcanoes over the last decade has made volcanologists very aware of safety issues with considerable efforts to discourage macho and irresponsible behaviour. The culture and practices of modern volcanology are arguably the antithesis of the daredevil image given by the program. One also wonders if the TV journalists who made such programs will feel any responsibility if any impressionable people are inspired by the program to risk their lives in unacceptably dangerous places. The incorporation of marginal figures is also quite common in TV Science, reflecting the fact that program makers do not necessarily find it easy to discriminate good science from bad. A cranky or off-the-wall personality can make good TV of course, even if the science is weak or flawed.

Steve Sparks,President

The Volcano program also told a major untruth for dramatic effect. Part of the film concerned the Soufriere Hills volcano on Montserrat. The section was largely uncontroversial, if a bit over-dramatised, but one section merits examination on ethical grounds. During the filming on Montserrat the TV crew were informed about the current situation on the island, namely that the volcano was still active, but that the scientific assessments found that the north of the island was regarded as safe for the island society. Specifically scientific assessments have concluded that the chance of a catastrophic eruption affecting the populated parts of the island is very low. I also recollect discussing with the TV crew previous problems with the media sensationalising the situation of Montserrat. I explained the fact that many Montserratians had friends and relatives abroad who would be very upset and concerned at depiction of the island in the media as an exceptionally dangerous place on the verge of destruction. Further such an untruthful depiction of Montserrat is harmful to their economy, in particular for developing a tourist industry. The film producers chose to end the Montserrat section with the doom-laden words "Montserrat is a time-bomb waiting to explode". One can understand journalists getting things wrong if the copy has to be ready for the next day. However TV journalists have months to prepare programs, in this case were told about the adverse effects that sensationalist depiction would have, and could have sent a tape to one of the scientists to check for accuracy. One can only conclude that this sensationalist nonsense was a deliberate exaggeration told for dramatic effect, but with no regard for the people who might be affected. Again one wonders if the TV program makers here feel any responsibility to the many people on Montserrat who are trying to rebuild the island's



Steve McNutt, Secretary General

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IAVCEI HOMEPAGE: http://www.iavcei.org/

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tourist industry and are undermined by sensationalist documentaries of this kind.

Even the best TV Science is not without problems. Take for example Horizon (BBC, UK), which is widely acknowledged as very professional and consistently produces programs of very high quality. There is a certain house-style in Horizon that likes to depict science as a sequence of breakthrough discoveries by individuals. While of course there are examples of such eureka moments, it is certainly not how much of science works. Far more commonly scientific discoveries emerge as a consequence of the efforts of large numbers of people, in some cases working in teams. Horizon likes to focus on a small number of personalities, who explain the science and are often encouraged to focus on how they made a discovery. Horizon producers will no doubt defend this approach as necessary to interest the audience and that a program that gave full justice to all those who had contributed to a discovery or new idea would make very dull TV. They have a point, but the image of how science works is nevertheless distorted. The approach also violates a deeply held ethic in science of acknowledgement of past work and colleague's contributions. Take for example a recent Horizon program on large tidal waves from collapsing volcanic islands. This was typically a very well made and interesting program. Some of the central ideas in the program were first enunciated by a Spanish geologist from his work in the Canary Islands. There was no mention of his contribution, and most viewers would, I suspect, have come away with the perception that the scientists taking part in the program were the sole originators of the ideas. One suspects that this happens often. One consequence is that scientists who take part can be regarded poorly by their colleagues, because of the apparent violation of scholarship protocols.

What can be done? Certainly more dialog between scientists and TV program makers will help. However, at the moment scientists have little control on program content and are very much in the hands of program makers. One option would be to insist on a contract for contributing to such programs with a stipulation that the scientist has the right to view the program prior to release and the right to withdraw their contribution. One doubts if this idea would work in that the TV program makers would find this unacceptable, and simply pass on to another more amenable scientist. However, an organisation, like IAVCEI, might consider circulating guidelines for contributing to programs in the scientific community. If large numbers of scientists were to insist on more control then the TV program makers would have to pay attention. Another way forward would be to encourage scientists to join production teams or even to have productions jointly between scientific organisation and TV companies. In an era when explaining science to the public has high priority, TV is a key medium. Volcanologists should become involved, but perhaps the time has come to be more proactive and insistent on playing a role in how our science is presented.

R.S.J. Sparks (President)

IAVCEI Report to IUGG for the Year 2000

by Steve McNutt
Secretary-General for IAVCEI

IAVCEI ended the year strong and healthy, with 609 paid individual members, the most we have had yet. 178 members from 1999 did not renew; these were carried on the mailing list and were given an opportunity to renew for 2001. Applications have been mailed, and it is also possible to obtain information on the web site www.iavcei.org The web page has recently been redesigned and updated. The volcano listserver administered by Arizona State University is now the official IAVCEI listserver. It has 2200 people listed, which far exceeds the IAVCEI membership. Thus we hope to further boost the membership in IAVCEI.

The highlight of the last year was the highly successful IAVCEI General Assembly. Approximately 500 volcanologists attended the meeting from July 18-22, 2000 in Bali, Indonesia. The five-day meeting brought together volcanologists from around the globe to discuss all aspects of volcanology as well as to visit some of the world's most famous and destructive volcanoes. The meeting was well organized by the Volcanological Society of Indonesia (VSI), assisted by the Directorate General Geology & Mineral Resources (DGGMR), the Idonesian Geologists's Association (IGA), the Institute of Technology of Bandung (ITB), and the Department of Mining and Energy (DME).

The General Assembly consisted of 490 abstracts presented in twelve theme sessions:

- Structure of Island Arcs
- Volcano Seismology
- Volcano Geophysics
- Magmatic Processes
- Magmatic related mineralization
- Volcanogenic Sediments
- Hazard Mitigation
- Volcanic gases
- Crater Lakes
- Physical Volcanology
- Utilization of Energy and other volcanic resources
- Surtseyan Volcanism

Midway through the five-day meeting, the participants traveled to Batur caldera and one of VSI's volcano observatories. There were also two workshops and six field trips held in association with the meeting.

The next General Assembly is tentatively scheduled for November-December 2004 in Chile. Over the next few years, IAVCEI will focus its efforts on several smaller meetings, including Cities on Volcanoes 2 (Feb. 2001, New Zealand), a Penrose conference (June 2001, California), and the IAVCEI 1902 Centennial Workshop (May 2002, Martinique). We expect a strong showing for volcanology at the July 2003 IUGG meeting in Sapporo, Japan, as well as excellent field trips.

The full IAVCEI Executive Committee met in Bali and conducted two meetings covering all aspects of IAVCEI business.

Officers of IAVCEI are:

President	Steve Sparks (UK)
Vice-President	Joerg Keller (Germany)
Vice-President	Tadahide Ui (Japan)
Secretary-General	Steve McNutt (USA)
Executive Committee	Toshitsugu Fujii (Japan)
	Bruce Houghton (NZ)
	Jocelyn McPhie (Australia)
	Hugo Moreno (Chile)
	Raden Sukhar (Indonesia)

IAVCEI sold several educational products in 2000. Two videos on 1) understanding volcanic hazards and 2) reducing volcanic risk were produced professionally under contract with IAVCEI. Over 90 videos were sold in 2000. Also, a volcano calendar was produced by IAVCEI members and was printed and marketed by a professional calendar company. Over 7,300 calendars were sold and an additional 800 were distributed by IAVCEI to various scientific, educational, and governmental organizations. IAVCEI received a small royalty payment for the calendars.

2000 was a busy and productive year for IAVCEI.

IAVCEI 1999-2003 Executive Committee

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Volcanology in Oceana

[This is the first of a new series of reports on volcanology in various regions. It is intended to highlight the diverse and international nature of IAVCEI. -Ed.]

Volcanology is thriving in Oceana! Not only do we have a wealth of spectacular active volcanoes on land and underwater, but also some of the most challenging and varied ancient volcanic successions, both of which are keeping the local volcanological community busy. The former present, on one hand, serious hazards to several large population centres and on the other, important sources of geothermal energy and valuable opportunities to directly study eruption processes. The latter host all the major resources of gold, silver, lead, zinc, copper, nickel and uranium in the region, and are the key to understanding the tectonic evolution of this part of the planet. In this report, I give a brief but not necessarily comprehensive outline of the current state of volcanology in Oceania.

An important recent development in volcanology in the Oceana region was the creation at the end of 1998 of a specialist group within the Geological Society of Australia. The group goes under the name "LAVA" which stands for the Learned Australasian Volcanologists Society, and aims to foster research and training in volcanology. The current membership (~75) includes academic, industry and survey geologists and post-graduate students mainly from Australia and New Zealand but also from Papua New Guinea and Indonesia. LAVA members convened a very popular symposium at the 15th Australian Geological Convention in Sydney, 2000. The symposium featured papers on both modern and ancient volcanic successions in Australia, New Zealand, Greece and the southern Indian Ocean. Plans for volcanology symposia and a field trip in the Gawler Range Volcanics are well advanced for the forthcoming 16th AGC in Adelaide, South Australia (2002). The group also produces a regular Newsletter (LAVA News) which includes announcements of local and international meetings in volcanology, reports on field trips and conferences, research summaries and discussion sections. The current leaders are Dr. Sharon Allen (sharon.allen@utas.edu.au) and Dr. Liz Jagodzinski (Jagodzinski.Liz@saugov.sa.gov.au). The website at http://www.es.mq.edu.au/geology/volcan/ gives full contact details, information on how to join, access to LAVA News and links to other volcano-friendly websites. New members are very welcome!

The Oceana region has hosted several important volcanological meetings in the past twelve months, most notably the IAVCEI General Assembly at Bali, Indonesia (July 2000), and the Cities on Volcanoes meeting in Auckland, New Zealand (February, 2001). A third meeting that attracted a great deal of international support (121 participants from 17 countries) was held in November, 2000, in Tasmania (Australia), sponsored by the Centre for Ore Deposit Research at the University of Tasmania and the Society of Economic Geologists. The meeting was entitled "Volcanic environments and massive sulfide deposits" and involved a three-day conference in Hobart as well as pre- and post-conference field trips. Technical sessions featured

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recent significant advances in understanding submarine volcanic processes, the volcanic settings of both modern and ancient seafloor massive sulfide deposits, the volcanology of komatiite successions, volcanic influences on ore formation and textural modification of glassy volcanic facies. A highlight of the conference was the live satellite telephone link-up with scientists on board the Ocean Drilling Program research vessel, Joides Resolution, then drilling massive sulfide sites and dacite lavas on the floor of the Manus Basin in Papua New Guinea (ODP Leg 193). Field trips focussed on the Cambrian Mount Read Volcanics in western Tasmania, one of the best understood submarine volcanic successions and massive sulfide districts in the world. Orders for the Abstracts volume and field guide can be placed by email (publications@codes.utas.edu.au) or through the CODES website (www.geol.utas.edu.au/codes).

Teaching in volcanology in Oceana is comparatively advanced, a consequence of both the favourable setting among active volcanoes and the concentration of valuable resources (especially gold) in volcanic successions. In New Zealand, volcanology is part of undergraduate degree courses at all universities and also offered at post-graduate level. In Australia, the University of Tasmania, Monash University and Macquarie University include physical volcanology in undergraduate earth science courses. Masters and PhD degrees in volcanology are offered at the University of Tasmania and Monash University, reflecting the strong records of volcanological research at these two institutions. These two universities also offer annual non-degree short courses in volcanology. It is clear however, that there is enormous potential to extend the training net to include other countries in the region, especially those subject to persistent and serious volcanic hazards.

Jocelyn McPhie
CODES
University of Tasmania
16th March 2001

Physics and Chemistry of Earth Materials

We would like to attract your attention to a session S5 "Physics and Chemistry of Earth Materials" of the IASPEI Scientific Assembly, which is scheduled on 24 August, 2001 in Hanoi.

The second circular can be found on http://www.iagaandiaspei.org.vn.

Scope: Knowledge of physical and chemical properties of Earth materials is essential for understanding the information obtained from seismological, geochemical, geodynamic, geomagnetic, and other observations. Recent development of high pressure techniques has made it possible to study the properties of materials directly under the conditions corresponding to the Earth's lower mantle and the core. Nonhydrostatic compression experiments provide us new information on the elastic and plastic properties of Earth materials. Theoretical studies predict behavior of materials under extreme conditions difficult to achieve by laboratory experiments. When these new advances in materials science are combined with observations on the Earth, we can expect much better understanding of the Earth's deep interior. Papers on the physics and chemistry of Earth materials via laboratory experiments and theory are invited. The following list of topics illustrates the fields covered by this theme:

1. Physical and chemical properties of materials under the conditions characteristic of the Earth's deep interior.
2. Rheology of mantle minerals and dynamics within the Earth.
3. Elastic and transport properties of rocks and magmas.
4. Theoretical studies of materials under extreme conditions.

Program Group: Takehiko Yagi [Institute for Solid State Physics, University of Tokyo, Kashiwa, Chiba 277-8581, Japan; Tel: +81-471-36-3230; Fax: +81-471-36-3230; Email: yagi@issp.u-tokyo.ac.jp], D. Dingwell (Germany), I. Jackson (Australia), S. Karato (USA), E. Ohtani (Japan)

Thermal Sessions at IAGA-IASPEI Joint Assembly, 19-31 August, Hanoi, Vietnam

The International Heat Flow Commission, is organizing a general thermal session and a special workshop during the assembly. The topics of the sessions are described in detail below, and both are scheduled for Tuesday, Aug. 28. In addition a business meeting of the Heat Flow Commission will be organized during the assembly. All interested people are welcome to participate.

Dr. Ilmo Kukkonen, IHFC Chairman 1999-2003
Geol. Survey of Finland, P.O Box 96, Fin-02151 Espoo, Finland
t. +358-205 502 270, f. +358-205 5012

(1) Temperatures within the Earth - Measured, modeled and indicated.

The session aims at a broad presentation and discussion on the state-of-the-art of internal temperatures and thermal regime of the Earth as a planet. The release of heat and thermally controlled phenomena in the interiors of our planet are the major driving forces of most geophysical and geological processes, such as plate tectonics, mantle convection or generation of the magnetic field of the Earth.

We call for presentations from all geophysical disciplines with results on the thermal regime within the Earth including experimental and theoretical studies. Presentations are welcome on topics such as geothermics of the continental and oceanic lithosphere, thermal regime of volcanic systems, thermal properties and temperature dependencies of earth materials, lithosphere thickness studies, mantle convection studies, thermal control of global seismic boundaries, thermal processes in the core, and thermal history of the Earth. Potential contributions can be provided by people working in geothermics, active and passive seismology, magnetics and electromagnetics, and gravity, as well as high-PT laboratory experiments.

Convenors: Ilmo T. Kukkonen [Geological Survey of Finland, P.O. Box 96, FIN-02151 Espoo, Finland; Tel: +358-205 502 270, Fax :+358-205 5012, Email: ilmo.kukkonen@gsf.fi], I. Artemieva (Sweden), S. Goes (Switzerland), W. Mooney (USA)

(2) Borehole temperatures as imprint of geological history, hydrogeology and changing climate. (Co-Sponsored by IGCP)

The last decade has been characterized by remarkable progress in different practical attempts to use precise temperature logs from boreholes to solve a number of problems in geothermics, geophysics, hydrology and geology. Especially the reconstruction of the ground surface temperature history (GSTH) by numerical inversion techniques became a useful alternative paleoclimate method. The purpose of the symposium is to discuss general methodology of temperature logging and long-term temperature monitoring in boreholes, including logging techniques, new high-tech material/instrumentation and to present results obtained in both applied geothermal prospecting as well as in basic heat flow studies. As the symposium is co-sponsored by the IGCP program, special attention will be paid to present improvement of the existing GSTH inversion schemes, to cross-correlate obtained results with the surface air meteorological series and proxies, and to evaluate the soil/air temperature coupling and its dependence on environmental factors. Of special interest are reports on new data from the so far uncovered areas and any attempts to separate the potential man-made components of the global warming from the natural climate variability.

Convenors: Vladimir Cermak [Geophysical Institute, Czech Academy of Sciences, Bocni II, c.p. 1401, 141-31 Praha 4 - Sporilov, Czech Republic; Tel: +420-2-67103385; Fax: 420-2-72761549; Email: cermak@ig.cas.cz], H.N. Pollack (USA)

Program Group: Ilmo T. Kukkonen [Geological Survey of Finland, P.O. Box 96, FIN-02151 Espoo, Finland; Tel: +358-205 502 270, Fax :+358-205 5012, Email: ilmo.kukkonen@gsf.fi], I. Artemieva (Sweden), V. Cermak (Czech Republic), S. Goes (Switzerland), W. Mooney (USA), H.N. Pollack (USA)

New Book Series Planned

The IAVCEI Executive Committee has decided to pursue a new initiative. The decision was made to launch an IAVCEI Book Series entitled "IAVCEI Book Series in Applications of Volcanology". The concept is based on the need to publish material which would not ordinarily go into journals such as Bulletin of Volcanology, particularly in relation to aspects of hazards, risk assessments, and other matters. A good example would be a book on Medical Effects on Volcanic Eruptions and case histories of the scientific aspects for managing volcanic crises. Bruce Houghton has agreed to be the series editor. The plan is for Bruce to put together 4 or 5 titles of book proposals over the next few months and then to approach a number of publishers with a proposal for the Series.Members with ideas for authors and titles for this series should contact Bruce Houghton at: bhought@soest.hawaii.edu

Wager Medal to be Awarded in 2002

Nominations are invited for the Wager Medal from the IAVCEI membership. This Wager Medal honours the memory of Professor L.R. Wager of the University of Oxford, who died in 1965. The award is to a young scientist (under 40 years of age) on 31 December of the year preceding the IAVCEI meeting at which the award is made. The 2002 medal will be presented at the meeting on Martinique in May 2002 to mark the centenary of the Mont Pelee eruption of 1902. The award is for outstanding contributions to the study of volcanic rocks, particularly in the eight-year period before time of the award.

Previous Medal Recipients have been Jon Davidson and Giovanni Macedonio (1997), Colin Wilson and Claude Jaupart (1993) and Charlie Bacon (1987).

A Nomination Package should include: (1) A formal nomination letter, not to exceed three pages, (2) a curriculum vita, and (3) at least three supporting letters.

The Awards Committee is composed of Jon Davidson, Giovanni Macedonio, Hans Schmincke, Steve Sparks (President and Chair), and Colin Wilson.

Nomination packages are due October 1, 2001 to IAVCEI Awards Sub-Committee, c/o Steve Sparks, Dept. Earth Sciences, Bristol University, Bristol BS8 1RJ, UK. If possible, a copy should also be sent by e-mail to steve.sparks@bristol.ac.uk

Future Meetings

Some Future IAVCEI/Volcanology Meetings:

1. IAVCEI 1902 Centennial Workshop, Mount Pelee, Martinique May 8, 2002; contact: cheminee@ipgp.jussieu.frobs
2. 3rd Biennial Workshop on Subduction Processes in the Kurile-Kamchatka-Aleutian Arcs, Fairbanks, Alaska June 9-15, 2002, contact: eich@gi.alaska.edu
3. Chapman Conference on Volcanism and the Earth's Atmosphere, Santorini, Greece - June 20-24, 2002. contact: robock@envsci.rutgers.edu
4. IUGG General Assembly in Sapporo, Japan June 30-July 11, 2003; contact: iugg2003@ics-inc.co.jp
5. State-of-the-Arc, Cascades, 2003 (tentative)
6. Cities on Volcanoes 3, Hawaii, 2003 (tentative)
7. International Geological Congress, Florence, Italy August 16-26, 2004 contact: www.iugs.org
8. IAVCEI 2004 General Assembly, Chile November/December 2004 (planning under way)
9. IAVCEI 2005 China, Continental Basalt Volcanism (tentative)

Further information may be found on the IAVCEI web site at www.iavcei.org

Galeras Book Reviews

[reprinted with permission and minor modification from Geotimes. -Ed.]

No Apparent Danger, Victoria Bruce, HarperCollins, New York (2001)

Surviving Galeras, Stanley Williams and Fen Montaigne, Houghton Mifflin, New York (2001)

Two books from different publishers on a small, but harrowing, volcanic eruption in South America have been published virtually simultaneously -- indicative, one assumes, of some behind-the-scenes jostling to take advantage of the 'first in, best dressed' rule in publishing. Both books tell the tale of the crater eruption at Galeras volcano, near Pasto city, southern Colombia, on 14 January 1993 when six volcanologists (from Colombia, Britain, and Russia) and three Colombian tourists were killed by a violent explosion. The eruption was geologically inconsequential in terms of its size, and the number killed was small compared to fatality counts from many other volcanic eruptions. Thus the emphasis in both books is given not to the eruption itself but rather to the significant human drama surrounding the tragedy. Both books also are of similar size and style, both are well written, and the authors of both are American, but there the similarities end. In fact, each of the releases tells a *different* story of the events surrounding Galeras. This is the over-riding fascination of this controversial double release.

Surviving Galeras is by volcanic-gas geochemist and academic Stanley Williams and ghost-writer Fen Montaigne. Williams led a group of participants of an international volcano conference being held in Pasto, into the crater of Galeras. He survived the eruption, but only by the skin of his teeth, incurring horrendous physical injuries, and enduring numerous multiple operations, including brain surgery to remove shattered skull fragments. His rescue from the crater was facilitated by a heroic group led by Marta Calvache of the Pasto Volcano Observatory and Patty Mothes, a US volcanologist based in Quito, Ecuador.

Surviving Galeras is very much a personal, at times egocentric, account by Williams of the eruptions and the events preceding and following it. Williams' narrative is both an explanation of events and a defense of his actions on Galeras. It seems in large part, for Williams, a cathartic exercise aimed at ridding himself of the emotional devils that have haunted him since that awful day on the volcano. The final chapter is poignant for we read of the price Williams has had to pay: the demise of a high-profile research career in volcanology; a fractured marriage; the derailing effects of 'a volatile mix of powerful seizure medications and antidepressants'; and failure of the 'brakes on my bad behaviour' (he confesses to being an impatient and aggressive person). Williams also records the visits he made to some of the families who lost loved ones on Galeras. These visits evidently were important to him for pyschotherapeutic purposes, but the reader may well feel intrusive when reading the details of personal grieving and pain endured by the bereaved.

The author of No Apparent Danger is science-writer and geology graduate Victoria Bruce. She is a not a volcanologist and was not directly involved with the Galeras event in 1993, so Bruce - unlike Williams - takes the viewpoint of an 'outsider'. She was interested initially in simply writing up the Galeras story as she knew it from newspaper articles and media interviews, but subsequently became more curious, if not driven, about a 'story behind the story'. Bruce interviewed many people in the USA and South America about what happened on Galeras and, following the established traditions of investigative journalism, is uncompromising in the presentation of her widely researched results.

The first third of Bruce's book deals with another high-profile volcanic eruption in Colombia - that of Nevado del Ruiz in 1985 - when a small summit eruption melted snow and ice, generating devastating mudflows that led to the deaths of 23,000 people downstream. The story she tells is of local officials not taking heed of warnings about the threat of mudflows - the large death toll otherwise might have been avoided. Bruce uses the Ruiz eruption to introduce volcanologists who appear in the main Galeras part of her book, including Williams who, she records, had predicted a catastrophic eruption at Ruiz that did not eventuate leading to unnecessary consternation amongst the already stressed and traumatised people on the volcano. This is the start of an unrelenting and unflattering pursuit of Williams' actions and behaviour in the main Galeras section of No Apparent Danger.

Several important issues are raised by Bruce - for example, the appropriateness of safety precautions used by the crater party, including protective gear (Williams is reported to have mocked one of the party for wearing safety clothing) and the effectiveness of radio contact between the crater and Pasto observatory. There is also the issue of whether sufficient attention was paid before the crater visit to characteristic seismic signals (long-period codas in the shape of screws, tornillos) that were recorded at the Pasto observatory (should the earthquake records have been interpreted as seismic precursors to the eruption?). Then there is the claim by Williams in the extensive media coverage following the tragedy (did Williams seek out that publicity?) that he alone had survived the eruption when clearly others did too (Williams expresses regret for this assertion in his own book). And so the stream of revelations goes on ...

There have been positive outcomes from the Ruiz and Galeras tragedies and other volcanic crises of the 1990s. IAVCEI, following Ruiz, produced two public-awareness videos on volcanic hazards and risk. One of these was shown to communities on Pinatubo volcano, Philippines, and is thought to have hastened the safe evacuation of thousands of people from the volcano prior to its major eruption in 1991. Furthermore, IAVCEI - after Galeras 1993 - established a set of safety guidelines for work on volcanoes (see the IAVCEI website for details). IAVCEI also published in 1999 a set of professional protocols for use by scientists during volcanic crises (see Bulletin of Volcanology, v. 60, p. 323-334).

Few volcanologists enter the craters of volcanoes without a sense of excitement and wonderment. But only a small minority of them adopt a fatalistic, devil-may-care, if not 'death-wish' approach to their work. The vast majority of volcanologists exercise care and good judgement, apply stringent safety standards, and are disciplined in ego self-management. Hopefully the IAVCEI safety guidelines and protocols eventually will be adopted by that small minority of volcanologists who ignore what basically are commonsense practices and who give

the profession a bad name. The need to avoid tragedies such as at Galeras in 1993 is the message from this fascinating couplet of books.

R. Wally Johnson - Australian Geological Survey Organization [former Secretary-General of IAVCEI]

Martinique Travel Funds

Some limited travel funds are available for the May 2002 IAVCEI meeting in Martinique. The intention is to assist young scientists and scientists from developing countries. Some funding will come from the conference organizing committee and some from IAVCEI. Please contact gouin@ipgp.jussieu.fr for further information.

Richard E. Stoiber

On February 9, 2001, Richard Edwin Stoiber died at home in Norwich, Vermont. Born in Ohio and raised in New Jersey, Dick studied geology at Dartmouth College (BS, 1932) and mineralogy at MIT (PhD, 1937) and then joined the Dartmouth faculty. His early research was in ore deposits, where he worked to define solution movements and mineral growth in Mississippi Valley type deposits. He then focused for a decade on the Michigan Copper deposits of the Keweenaw Peninsula. Dick became a volcanologist at age 52, after a trip to Central American volcanoes stimulated him to begin studying high temperature fumaroles as analogues of ore deposits. He quickly realised that volcanoes were laboratories where his skills at teaching and research could blossom, and made Central America a second classroom for decades. His work on gas condensates and fumarole minerals was followed by investigations of volcanic front segmentation and then by using the correlation spectrometer to measure degassing rates at volcanoes.

Perhaps of greatest importance, Dick shared the volcanoes with students. He built Dartmouth into a leader of volcanology graduate work by using Central American field sites. His students were responsible for many mapped quadrangles in Guatemala, and his students did field and lab work which was the foundation for many volcanic hazard studies in Central America. Many of Dick's students have become prominent volcanologists, and a great many more are doctors, lawyers and bankers who know much about volcanoes. He involved all of Dartmouth's undergraduates in geology by bringing them to work at volcanoes as part of his research team, establishing a now famous field education effort called the "Stretch", which was the highlight in the education of hundreds of students. The Dartmouth stretch visited Central America for 20 years, until war there made it dangerous. It continues today and has been copied broadly.

Stoiber was an inspirational teacher who pushed his students to do new things, and to do them thoroughly. He always worked with colleagues in volcanic countries to help build infrastructure and to leave behind useful information that was accessible locally. Dick showed everyone daily how to focus on what was really important. He did not ever use artificial formality or pretension. He came to the point swiftly and more precisely than anyone. He could size up a new acquaintance in microseconds. He overcame obstacles by cleverness or sheer persistence and clung to ideas doggedly. He always had more fun than anyone and shared everything. He made friends everywhere.

Dick's wife of 50 years, Eddie, preceded him in death by a year. He is missed all around the world, especially in volcanological circles and by his daughter, Christine Fahlund of Baltimore and son, Philip Stoiber of Seattle. A Stoiber Field Fund to support geological student field work is Dick's memorial at the Earth Sciences Department at Dartmouth.

Memories and recollections of Dick Stoiber may be sent to the "Richard E. Stoiber Archival Collection" at Dartmouth's Baker Library.

Bill Rose - Michigan Technological University 14-04-01

AGU Chapman Conference (Co-Sponsored by IAVCEI)

" Explosive subaqueous volcanism "
Dunedin, New Zealand, 21-25 January 2002
James D.L. White & Bruce F. Houghton, Conveners

The purpose of this Chapman conference is to bring together volcanologists, geophysicists and marine geoscientists with interests in the formation of clastic volcanic successions in modern subaqueous settings and in ancient successions, and in the processes and significance of explosive subaqueous eruptions. The role of explosivity in subaqueous eruptions, particularly in the sea and at large scales, is a topic of both high interest and acknowledged disagreement. This formation of subaqueous volcaniclastic deposits is an important topic that has received little mainstream volcanological attention. It is scarcely addressed in volcanological texts yet, because of the preservation bias in favor of sub-wavebase marine deposits in the geological record, it is likely that deposits of subaqueous explosive eruptions exceed in volume and economic significance those of subaerial ones. Theaim of the conference is to foster new lines of research and better communication among these groups of scientists, and to provide an opportunity for recent research results to be presented in a forum in which there is scope to develop new perspectives and directions for future collaborative research by interested scientists from a range of backgrounds. Session themes include: Magmatic processes in subaqueous environments, Models of magma:water interactions, Observations of subaqueous explosions, Modern basaltic subaqueous deposits, Modern felsic subaqueous deposits, & Ancient subaqueous deposits I

Limited funds are available to subsidize participation by scientists from developing countries and fulltime students. Applicants should contact Dr James White, Geology Department, University of Otago, PO Box 56 Dunedin, New Zealand, phone +64 3 479-7519; Fax: +64 3 479-7527, email james.white@otago.ac.nz enclosing a CV and a statement of why they wish to partipate in the meeting.

To update information concerning the meeting, please visit the AGU web page: http://www.agu.org/meetings/cc02acall.html

The 2002 IAVCEI Volcano Calendar - order from: www.browntrout.com

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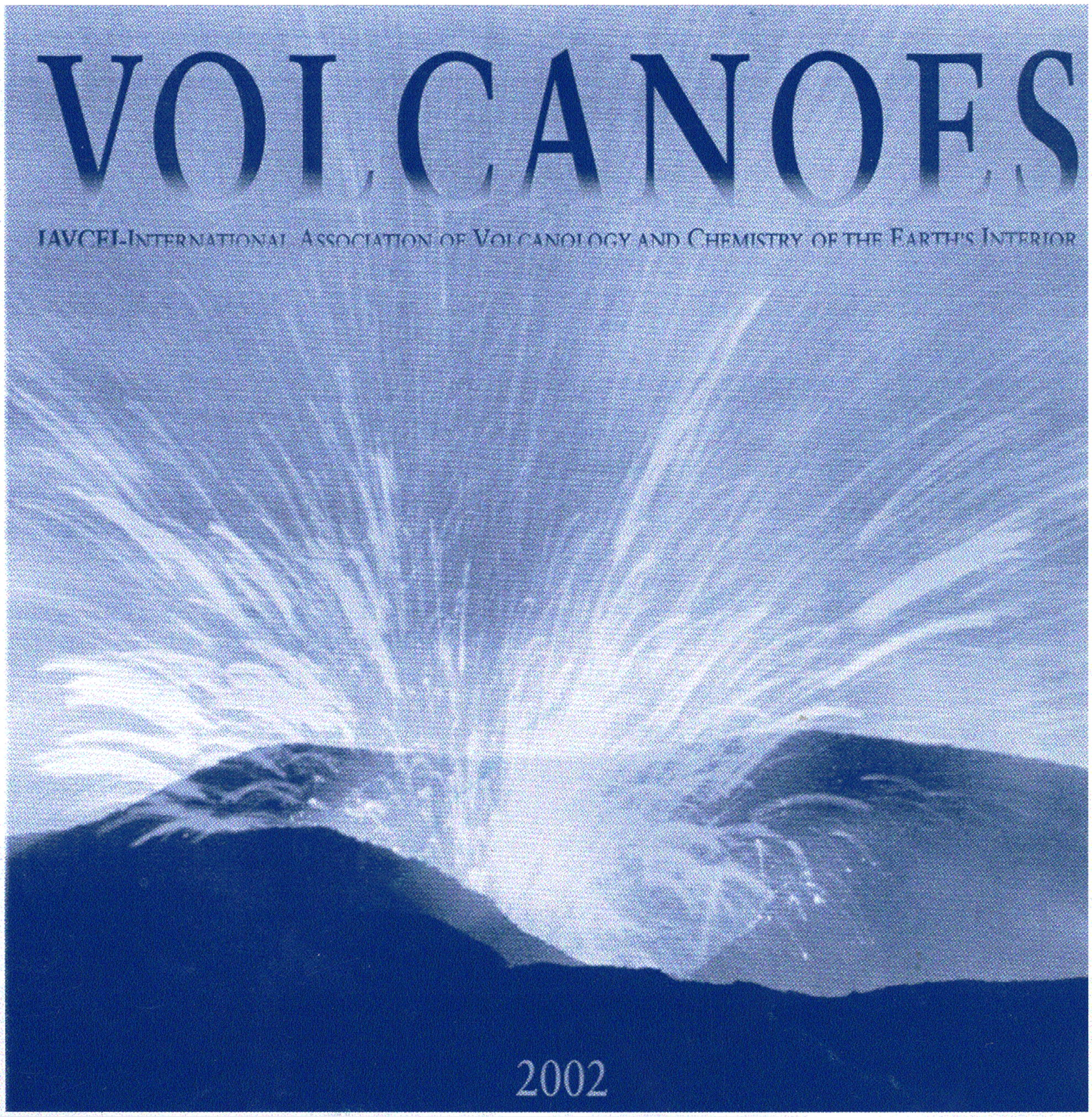
MOUNT ETNA, ITALY Daniela Szczepanski, Germany
ROUNDTOP VOLCANO, ALASKA Pete Stelling, Alaska Volcano Observatory, University of Alaska Fairbanks
OLDOINYO LENGAI, TANZANIA Joerg Keller, Universitat Freiberg, Germany
KILIMANJARO, TANZANIA Kathy Cashman, University of Oregon
ISLA SAN LUIS, BAJA CALIFORNIA, MEXICO Brian Hausback, California State University, Sacramento, CA
MAMMOTH MOUNTAIN, CALIFORNIA Steve McNutt, Alaska Volcano Observatory, Fairbanks, AK
LA REFORMA CALDERA, BAJA CALIFORNIA SUR, MEXICO Keith Sutter, Sutter Photography, Auburn, CA
MOUNT HAGUE, ALASKA PENINSULA James T. Gutmann, Wesleyan University, Middletown, CT
ARENAL, COSTA RICA Stephen and Donna O'Meara, Volcano Watch International, HI



2002 IAVCEI Calendar

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