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International Association of Geochemistry

MEETINGS AND MORE MEETINGS!

The past year has seen IAGC take a prominent role in the organization or funding of several meetings, including the Goldschmidt Conference in Moscow, Idaho, USA; GES-7 ("Geochemistry of the Earth's Surface") in Aix-en-Provence, France; AIG-6 ("Applied Isotope Geochemistry") in Prague; and the GSA (Geological Society of America) meeting, Salt Lake City, Utah, USA.

The year 2006 promises to be more of the same, with ISEG-7 ("International Symposium on Environmental Geochemistry") in Beijing (25–30 September), the Goldschmidt Conference in Melbourne, Australia (27 August–1 September) and GSA in Philadelphia. (22–25 October). The IAGC hopes to be at all these meetings, so look out for our booth and enter the free draws!

To contact IAGC, write to us at iagc@granite.mb.ca or visit our website www.iagc.ca. Alternatively, we still accept snail-mail at P.O. Box 501, Pinawa, Manitoba R0E 1L0, Canada.

Mel Gascoyne
Business Office Manager and Newsletter Editor

COUNCIL DISCUSSIONS AT GSA

The gathering of six council members and one working group chairman at the Geological Society of America meeting in Salt Lake City allowed an informal meeting of IAGC officers on 17 October, 2005. Some highlights of the meeting were:

- A report on the operation of the IAGC business office for the last 6 months was tabled.
- *Applied Geochemistry* is healthy, receiving about 21 papers per month and with a higher page count (~2500 for 2005).
- Two IAGC-sponsored sessions (on oil and gas exploration, and trace elements in the environment) were held at the GSA.
- An IAGC booth was set up and staffed by the business office manager at the GSA; 35 new members were signed up.
- Future support for Goldschmidt 2006 was discussed.
- IAGC awards will be given at Goldschmidt 2006.

More details can be found in the next IAGC Newsletter (December 2005).

Russ Harmon
Vice President, IAGC

WORKING GROUP ACTIVITIES

Geochemical Training in Developing Countries Working Group

On October 18, 2005, the United States and India signed a major science cooperation agreement. Under the terms of this agreement, a cooperative project is being planned whose objective will be to develop harmonious, ecologically sustainable, economically viable and people-participatory strategies for the management of environments in the coastal zones of India. This will involve not only designing

preparedness systems for environmental problems expected to arise, but also to roll back the existing environmental degradation. The cooperation is expected to involve R&D and training in the fields of data assimilation and technology transfer. The working group will use remote sensing to monitor riparian communities, stream flow, hyperspectral imaging of soils, biogeochemical processes, ecosystem modeling and soil moisture.

U. Aswathanarayana
WG Chairman

IAGC SUPPORT FOR MEETINGS

IAGC provides funding support for meetings organized by its working groups and for other requests on a case-by-case basis. Recently, Council decided that specific requirements must be met by those applying to IAGC for funding support:

- The business office will provide meeting organizers with advertising material, and the organizers will ensure that each participant receives an IAGC information leaflet and membership application form.
- The Executive Editor of the Association's journal, *Applied Geochemistry*, has 'first right of refusal' regarding the publication of the conference

proceedings. The organizer of each meeting shall, upon receipt of the notice of meeting support from IAGC, contact the Executive Editor of *Applied Geochemistry* regarding publication of the meeting proceedings or a subset of conference papers before considering any other publication alternative. Failure to do so will result in withdrawal of IAGC financial support for the meeting.

Applications for support should be sent to the appropriate working group chairman (see website for topics and addresses).

Attila Demény
IAGC Secretary

CALL FOR NOMINATIONS FOR AWARDS

The IAGC is pleased to invite nominations for the following awards, to be given in 2006:

- The VERNADSKY MEDAL, for a distinguished record of scientific accomplishment in geochemistry
- The EBELMEN AWARD, to a geochemist of particular merit and outstanding promise who is less than 35 years old at the time of nomination
- CERTIFICATES OF RECOGNITION, for outstanding scientific accomplishments in geochemistry, for excellence in geochemistry-related teaching or public service, or for meritorious service to the IAGC or the international scientific community

Nominations can be made only by IAGC members in good standing. They should be submitted before 31 January 2006 to the IAGC Business Office (Box 501, Pinawa, Manitoba R0E 1L0, Canada). For the Vernadsky Medal and the Ebelmen Award, a letter of nomination must be accompanied by a curriculum vitae and list of the nominee's publications. Four (Vernadsky) or three (Ebelmen) letters of support should be provided. Two of these letters must be from IAGC members in good standing, and not more than two may be from persons residing in the same country as the nominee.

Jan Kramers
Chairman, IAGC Awards Committee

FEATURE ARTICLE: GEOCHEMISTRY AND END-TRIASSIC EXTINCTION

The IAGC Secretary, Attila Demény, recently joined an IGCP Field Workshop to find geochemical evidence for the causes of the end-Triassic extinction in boundary sections of Hungary and Austria. He describes some of the workshop activities below.



In the last 25 years, since the hypothesis that a bolide impact led to the demise of dinosaurs was first put forward, the study of large biotic extinctions has become an increasingly interdisciplinary endeavour. A case in point is the flurry of research on the end-Triassic, which marks one of the Big Five extinctions. IGCP 458, a five-year project devoted to the Triassic–Jurassic boundary events, held its 5th Field Workshop in September 2005 in Tata (Hungary) and Hallein (Austria).

A full day of presentations and four days of field excursions, split between Hungary and Austria, were attended by 44 scientists from 13 countries. Oral papers and posters reflected the diversity of approaches used to unravel causes and effects of the environmental and biotic crises some 200 million years ago. Geochemical methods play an increasingly important role in this detective work, as extinction studies are no longer an arena for paleontologists alone.

Among the geochemically oriented papers, Anthony Cohen reported on how short-term changes in Sr and Os isotopic ratios in seawater, preserved in the sedimentary rock record, are used to monitor sudden changes in weathering rates. These changes are attributed to the climatic effect of coeval volcanism of the Central Atlantic Magmatic Province. Florian Böhm et al. also discussed the expected effect of CAMP volcanism, in the context of the demise of reefs and carbonate producers. Increased

delivery of Ca from weathering combined with prevailing low sea level could lead to alteration of the oceanic Ca budget and Ca isotopic composition.

One of the most intensively researched topics is stable isotope evolution across the Triassic–Jurassic boundary. Perturbations of the global carbon cycle and temperature maxima have been documented before on the basis of $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ anomalies. New results appear to confirm and refine the isotopic patterns. The studied sections span the globe from Hungary (Attila Demény), through Italy and England (Cristoph Korte et al.) to Canada, USA and New Zealand (Ken Williford). The negative carbon isotope anomaly at the boundary was again demonstrated at high resolution from Hungary and using low-Mg shell carbonate from England, whereas new data from Canada suggest that it was followed by a large positive anomaly in the earliest Jurassic. Biomarker studies from a New Zealand section may provide new constraints for the extinction scenarios.

Interpretation of the isotopic signal is much debated. Methane release from gas hydrate dissociation, driven by volcanically induced climate warming, is one of the more popular models that needs further testing. Unlike the Cretaceous–Paleogene boundary, there is far less evidence for a possible impact at the

Triassic–Jurassic boundary, although the search continues. Larry Tanner reported a modest iridium enrichment at the T–J boundary in eastern Canada, although he proposed that both mantle-derived and extraterrestrial sources could be responsible for the PGE anomaly, and the multiple peaks may also bear evidence for diagenetic remobilization in mudrocks.

Group of participants on the Steinplatte summit, an uppermost Triassic reef complex.

crash of reef ecosystems, a prominent feature of the end-Triassic extinction.

A workshop of this size and format effectively promotes informal discussion among the participants. Credit for the smooth organization and



Close-up of a ~205 Ma-old coral reef. Corals were severely affected by the end-Triassic extinction.

Discussions that started in the conference room were continued at the outcrops. The field trips visited the Triassic–Jurassic boundary sections at Csővár (Hungary) and Kendlbachgraben and Tiefengraben (Austria), sites where new stable isotope data have been obtained recently. Literally, the high point was climbing to the top of Steinplatte (1869 m), arguably the world's most spectacular Late Triassic reef, in the Alps. It proved to be a prime location to discuss the

insightful leadership on the field trip goes to József Pálffy, Péter Ozsvárt and János Haas in Hungary and Leo Krystyn in Austria. The abstracts and field guide volume containing nearly 100 pages is a valuable source of information and can be downloaded from the project website at www.paleo.cortland.edu/IGCP458. József Pálffy, co-organizer of IGCP Project 458 is also thanked for contributing to this report.

Attila Demény
IAGC Secretary

UPCOMING MEETING OF INTEREST

A special session entitled “Isotopic and Chemical Approaches for Understanding the Sources, Transport, and Biogeochemical Cycling of Solutes in Aquatic Systems” will be held at the GAC-MAC 2006 annual meeting in Montreal, May 14–17, 2006. The session will address recent advances in the application of isotope ratios as biogeochemical and/or hydrological tracers in both freshwater and marine environments. More details can be found at <http://www.gacmac2006.ca>

Moritz Lehmann
and **Ian Clark**