



The Clay Minerals Society

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THE PRESIDENT'S CORNER

46th Annual Meeting Report

The 46th annual meeting of The Clay Minerals Society was held in Billings, Montana, USA, on 5–11 June, 2009. Andy Thomas completed his term of office as President by handing the gavel over to me. As Andy had been President since April 2008, he had a longer “year” in office than normal, and the Society is very grateful for his hard work and conscientious attention to the needs of the Society. Being the first non-US-based person to become President of the Society is not only a great honor but is most unexpected, and it is a humbling experience to follow in the footsteps of some of the great pioneers in clay mineralogy. I see my election to the presidency very much as an indication that the Society has become more and more international over the years, resulting in more than half of the members now residing outside North America.

Unfortunately, the attendance at this year's meeting was adversely affected by the current economic climate, plus the fact that the International Clay Conference in Italy was the following week. However, the 130 delegates enjoyed a most stimulating and rewarding conference, held in the Crowne Plaza Hotel in Billings and expertly organized by Richard Brown of Wyo-Ben, Inc. and his team of helpers. The meeting was entitled “Clays of the Big Sky” to reflect its Montana setting. The paper-giving sessions were preceded by a field trip, run twice on consecutive days, to the bentonites of the Big Horn Basin.



Outgoing President Andy Thomas (left) passing the gavel to incoming President Derek Bain



President Andy Thomas presenting Richard Brown (left) with a certificate in appreciation of his organization of the 2009 annual meeting in Billings

The plenary sessions were devoted to lectures given by this year's award winners, and a report on these will be included in the next issue of *Elements*. The technical sessions were focused on wide-ranging topics, such as: reactions of iron in clays and clay minerals; microscopic and spectroscopic studies of clay mineral reactions; practical applications of quantitative analysis; industrial clay mineralogy: mining, processing, utilization; isotopes and clays; from discovery to dollars: the challenge of innovation and commercialization; clays and energy; clay interactions with environmental contaminants in soils and sediments; a drugstore in the dirt: medicinal clays and clay minerals. A session entitled “Bentonites – The Most Versatile Clay?” was based on the April issue of *Elements* on this topic, and several of the authors in that issue, along with others, made presentations on the varied aspects and uses of bentonites.

An innovation this year was the session “Feats of Clay”, which had a more informal format and was intended to provoke discussion. To set the ball rolling, Bill Moll gave a talk entitled “Mineral Safety: Where Are the Mineralogists?” in which he expressed his concern at the lack of mineralogists involved in toxicological studies of the biological effects of minerals. Paul Nadeau followed with a talk on the role of clays in environmental performance, particularly in relation to energy production. Finally, David Laird gave a talk entitled “Black Carbon, the Pyrogenic Clay Mineral?” in which he highlighted the presence of discrete black particles in soils and pointed out that the properties and occurrences of black carbon are consistent with the broader definition of a clay mineral. All three talks were entertaining and occasionally controversial, resulting in some lively discussion – no doubt helped by the availability of free beer! – moderated by Cliff Johnston. This was a successful innovation, and I hope that it will become a regular feature of the annual meetings.



Randy Cygan (left), Norbert Clauer (centre) and Nico Perdrial discussing posters

The annual CMS meetings usually have a one-day workshop on some clay-related topic and at least one field trip to some area of interest nearby. This year's meeting saw a second innovation with a workshop tied to a field trip. The event was a two-day workshop/field trip titled “Clays of Yellowstone National Park”. It took the form of visits to some sites in the park followed by presentations at the end of the first day, and the reverse arrangement on the second day. This idea was the brainchild of Richard Brown, who persuaded Paul Schroeder to take on the organization and find appropriate speakers. Thirty-four students, faculty, and industrial mineral professionals traveled from afar – Japan, Germany, Greece, Canada, and locales across the United States – to participate. Field excursions were made to the new Education Center in Canyon Village, Mud Volcano, Old Faithful, Fountain Paint Pots, Norris Geyser Basin, and Mammoth Hot Springs. The workshop was presented by specialists from the U.S. National Park Service, the U.S. Geological Survey, the University of Georgia, Montana State University,

and the University of Alberta, Canada. A wide array of clay-related topics was discussed, including (1) new remote sensing mineral maps interpreted from airborne spectral reflectance data; (2) the mechanisms, rate, and role of silicification for preserving biosignatures in the rock record; (3) soil development under the complex influences of multiple parent bedrock types (Archean to Pleistocene) and hydrothermal, glacial, and modern weathering processes; (4) the interrelationships of hot spring microbial communities, water chemistry, and alteration mineral assemblages (e.g. silicate, sulfate, carbonate, and oxyhydroxides); and (5) inquiry-based pedagogy for teachers and students to learn more about Yellowstone. The Society is publishing these subjects in volume 17 of its Workshop Lecture Series. The book, which is edited by Paul A. Schroeder, is due to appear this fall. Visit the CMS website www.clays.org to learn more. All those who participated agreed that this event was an outstanding success. We saw some of the marvels of Yellowstone Park and, when staying at Snow Lodge at Old Faithful, we also heard highly informative talks related to the places visited. The talks were given by Paul Schroeder (University of Georgia); Eric Livo, Kirk Nordstrom and Bill Innskeep (U.S. Geological Survey) and Dave Mogk (Montana State University), all of whom also provided much information in the field. A phrase which was used about Yellowstone Park is that it is "shaking and baking", and we received lots of information to support this statement.



From left to right, Warren Huff, Paul Schroeder, Dave Mogk, Andy Thomas, Derek Bain and Richard Brown in Yellowstone Park

This was a very enjoyable, stimulating, informative and educational experience, and I hope that future organizers of annual CMS meetings will follow this new format of combining a workshop and a field excursion. Many thanks to Paul Schroeder for adopting Richard Brown's innovative suggestion, for organizing a most memorable event and for producing a draft version of the Workshop Lecture Series in time for the meeting. The bar has been set high, and we look forward to successors to this new idea.

The conference dinner at CMS annual meetings is always an enjoyable occasion. It was enriched this year by a most entertaining lecture, "Causing a Dinosaur Extinction", by Jack Horner, Curator of Palaeontology at the Museum of the Rockies and well known for his association with the film "Jurassic Park".

The annual business meeting of the Society takes place during the annual meeting, and the highly international nature of the Society was also reflected in the election of four new councillors who serve a three-year term, George Christidis, Christian Detellier, Reiner Dohrmann and Helge Stanjek, three of whom are based in Europe. European representation has also been strengthened by the appointment of Emilio Galán for a one-year term to fill a vacancy which had arisen on Council. Paul Schroeder and David Laird were confirmed as Vice President and Vice President Elect, respectively, while Warren Huff and Reed Glasmann continue as Secretary and Treasurer, respectively.



Participants in the workshop and field trip to Yellowstone Park

The Billings meeting continued the well-established tradition of CMS annual meetings, with high-quality scientific presentations, an excellent workshop and field trips, and highly enjoyable social functions. I have always found that one of the main features of CMS meetings is the very friendly, almost family atmosphere which prevails, with delegates meeting old friends and making new ones, and the 2009 meeting was no exception. For making this meeting the outstanding success it was, the Society is greatly indebted to Richard Brown, who masterminded the whole exercise with his usual calm, efficient and friendly approach and attention to details and everyone's needs. Well done, Richard; we are very grateful to you.

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JUNE 2009 ISSUE OF CLAYS AND CLAY MINERALS

YUNCHUL CHO, SRIDHAR KOMARNENI AND SANG-IL CHOI • **Selectivity of cobalt and nickel by K-depleted micas**

CHUNFANG DU AND HUAMING YANG • **Simple synthesis and characterization of nanoporous materials from talc**

MARCO MANTOVANI, ALBERTO ESCUDERO, AND ANA ISABEL BECERRO • **Application of ^{29}Si and ^{27}Al MAS NMR spectroscopy to the study of the reaction mechanism of kaolinite to illite/muscovite**

SELAHATTIN KADIR AND FIRDEVŞ KART • **Occurrence and origin of the Sogut kaolinite deposits in the Palaeozoic Saricakaya granite-granodiorite complexes and overlying Neogene sediments (Bilecik, northwestern Turkey)**

BIRTE HANSEN, HILDE CURTIUS, AND REINHARD ODOJ • **Synthesis of a Mg-Cd-Al layered double hydroxide and sorption of selenium**

WEI ZHAO, HAOJIE CUI, FAN LIU, WENFENG TAN, AND XIONGHAN FENG • **Relationship between Pb^{2+} adsorption and average Mn oxidation state in synthetic birnessites**

R. DOHRMANN AND S. KAUFHOLD • **Three fast new CEC methods for the determination of operationally correct exchangeable calcium cations in calcareous clays**

HAOJIE CUI, LEI YOU, XIONGHAN FENG, WENFENG TAN, GUOHONG QIU, AND FAN LIU • **Factors governing the formation of lithiophorite at atmospheric pressure**

V. SUCHA, A. CZIMEROVA, AND J. BUJDAK • **Surface properties of illite-smectite minerals detected by interactions with Rhodamine 6G dye**

ATSUYUKI INOUE, ALAIN MEUNIER, PATRICIA PATRIER-MAS, CECILE RIGAUDT, DANIEL BEAUFORT, AND PHILIPPE VIEILLARD • **Application of chemical geothermometry to low-temperature trioctahedral chlorites**

EDUARDO GONZALEZ, DOUGLAS RODRIGUEZ, LENIN HUERTA, AND ALEXANDER MORONTA • **Isomerization of 1-butene catalyzed by surfactant modified Al_2O_3 -pillared clays**

JANA MADEJOVA, HELENA PALKOVA, MARTIN PENTRAK, AND PETER KOMADEL • **Near-infrared spectroscopic analysis of acid-treated organo-clays**