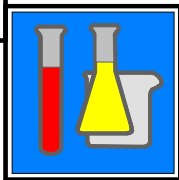




**THE SOCIETY FOR ORGANIC PETROLOGY**



# NEWSLETTER

Vol. 20, No. 2

June, 2003

ISSN-0743-3816



photo by Hal Gluskoter



White House photo by Tina Hager



National Park Service photo



photo by Peter Warwick

**20<sup>th</sup> Annual Meeting, September 21 - 24:**

***TSOP 2003 Washington, D.C.***



**TSOP**  
The Society for Organic Petrology



## TWENTY-FIRST ANNUAL MEETING

### *Organic Matter Down Under*

**Sydney, Australia**

**27 September – 1 October, 2004**

The 21st Annual Meeting of TSOP will be held at the Crowne Plaza Hotel, Coogee Beach, a beach-side conference venue conveniently located with respect to Sydney Airport, the city centre and the University of New South Wales.

#### **Some Conference Themes:**

- 7 Non-marine source rocks
- 7 New techniques in organic petrology and geochemistry
- 7 Coal in sustainable development

#### **Provisional Program:**

- |                           |  |
|---------------------------|--|
| 7 Monday, September 27    | – Short course, registration, icebreaker reception |
| 7 Tuesday, September 28   | – Technical sessions, TSOP business lunch          |
| 7 Wednesday, September 29 | – Technical sessions, conference dinner            |
| 7 Thursday, September 30  | – Technical sessions, field trip departure         |
| 7 Friday, October 1       | – Field trip: coal geology of the Hunter Valley    |

Additional details will be provided as the planning process develops. A formal call for papers will be made during 2003, covering the conference themes together with other advances in coal geology, organic petrology and geochemistry. Sydney, host to the 2000 Olympics, has many attractions for those who can stay a little longer, and a partners' program is being planned to complement the technical activities.

***Mark the dates on your calendar now!***

#### **Organising Committee:**

Neil Sherwood  
Claus Diessel  
Herbert Volk

Colin Ward  
Adrian Hutton  
Harold Read

Lila Gurba  
Joan Esterle  
Tim Moore

#### **For more information contact:**

- |  |                        |
|--|------------------------|
| 7 Neil Sherwood, CSIRO Petroleum:            | Neil.Sherwood@csiro.au |
| 7 Colin Ward, University of New South Wales: | C.Ward@unsw.edu.au     |

## The Society for Organic Petrology Newsletter

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Writers, Photographers and Associate Editors Needed!

The TSOP Newsletter welcomes contributions from members and non-members alike. Submission methods: Text is preferred in WordPerfect, MS Word, RTF or plain text format. Photos as slides or prints (will be returned after use) or as digital files (300 dpi preferred) without strong compression on CD-ROM or as e-mail attachments (if larger than 5 MB, please e-mail me first). Zip disks are discouraged.

Contact the **Editor:**

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### Address Changes

Please report any changes in address or contact information to:

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Reston, VA 20192 USA  
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### Society Membership

The TSOP Newsletter (ISSN-0743-3816) is published quarterly by The Society for Organic Petrology and is distributed to all Society members as a benefit of membership. Membership in the Society is open to all individuals involved in the fields of organic petrology and organic geochemistry. For more information on membership and Society activities, please see:

<http://www.tsop.org>

For purposes of registration of the TSOP Newsletter, a permanent address is: The Society for Organic Petrology, c/o American Geological Institute, 4220 King St., Alexandria, VA 22302-1520 USA

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### Cover: Left, top to bottom:

Washington's famous cherry blossoms frame the view across the Tidal Basin to the Jefferson Memorial. Photo by Hal Gluskoter.

Golden chrysanthemums encircle the fountain on the North Lawn of the White House. White House photo by Tina Hager.

Landmarks glow in the sunset: the Lincoln Memorial, Washington Monument and U.S. Capitol. National Park Service photo.

### Right:

Hyatt Arlington, site of TSOP 2003 Annual Meeting. Photo by Peter Warwick.

## AAPG Poster Session: Oceanic Anoxic Events and Source Rock Formation

An AAPG poster session is being publicized by co-conveners Joe Curiale (UNOCAL), Miriam Katz (Rutgers University), and Mark Leckie (University of Massachusetts). Session P-68, to be held at the AAPG Annual Meeting April 18 - 21, 2004, in Dallas, Texas, will address Oceanic Anoxic Events and Source Rock Formation as part of Theme 8 (Petroleum Systems, Geochemistry and Basin Modeling). The abstract submission deadline (for **online submission only**) is Thursday, September 11, 2003. See instructions at <http://aapg.confex.com/aapg/da2004/index.epl>

The conveners report, "The majority of regionally extensive source rocks are thought to have formed when brief periods of anoxia resulted in widespread organic carbon burial. These oceanic anoxic events (OAEs) have been the subject of intensive study for several decades, yet there is no consensus on their origin or nature. OAEs are marked by perturbations in the global carbon cycle, changing ocean conditions, and disrupted fauna and flora in the marine realm, culminating in preservation of organic matter, one of the requirements for source rock formation. This session will focus on all aspects of OAEs and source rock formation throughout geologic time. We encourage submissions encompassing a wide range of disciplines, including organic geochemistry, biogeochemical cycles, micropaleontology, and sedimentology. Interdisciplinary contributions are particularly welcome." Y

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## Directory Corrections

Please submit corrections or changes to Directory information to Peter Warwick, Membership Committee Chair, <[pwarwick@usgs.gov](mailto:pwarwick@usgs.gov)>.

Correct information for Etuan Zhang is  
Phone: 713-245-7692  
Fax: 713-245-7374

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## Cardott is EMD President-Elect

as reported in Oklahoma Geology Notes 63:1

Brian J. Cardott, geologist with the Oklahoma Geological Survey, has been elected president-elect of the Energy Minerals Division (EMD) of the American Association of Petroleum Geologists (AAPG). Cardott will serve as president-elect for one year beginning July 1, 2003, followed by one year as president.

Cardott served the EMD as Mid-Continent Section Councilor from 1994–1998, as Secretary from 1998–2000, and as Vice President from 2000–2001. He has been chairman of the EMD Alternative Energy Technology Committee from 1999–2003.

EMD members have an interest and expertise in one or more of the unconventional energy technical areas and geospatial information under the EMD banner. Technical areas include coal, coalbed methane, oil shale, oil (tar) sands, uranium, gas hydrates, geothermal, and energy economics and technology. Cardott has worked with coal, coalbed methane, oil shale, and oil sands in Oklahoma.

*[Brian Cardott has also served TSOP as President, 1993 Annual Meeting Organizer, and in numerous other offices - Ed.]* Y

## Retirement Equipment Sale

Petrographic Microscope with epifluorescence, camera

Zeiss 0.5, 10 micron motor scanning stages

Ultra-low C1-C6 soil gas chromatography system

### Inquire for complete list:

Pete Groth

303-986-3039 phone / Fax or

[Geochem@peakpeak.com](mailto:Geochem@peakpeak.com)

## TSOP Newsletters Available on Web Site

The TSOP Newsletter is now available on the TSOP web site at <http://www.tsop.org/news1.htm>. Issues since June, 2002 (volume 19, no. 2), are available, in Portable Document Format (PDF) files. These require the free Adobe Acrobat viewer program available from the linked location on the web site.

Each issue is available in two formats, a smaller file suitable for screen viewing and a larger file including graphics at 300 dpi which will provide better appearance when printed.

Work is in progress to make every back issue available as a PDF file. Scans of early issues are being converted back to text using optical character recognition software. Plans for future capabilities include linked tables of contents and searchable text.

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## GSA Annual Meeting to Include Coal Sessions

The 2003 Geological Society of America Annual Meeting & Exposition will be held November 2-5, 2003, at the Washington State Convention & Trade Center in Seattle. Two sessions will specifically address coal geology and petrology. Session 57 on Monday morning, November 3, is a Coal Geology poster session. Session 92 on Monday afternoon is a Coal Geology technical session with Cortland F. Eble and R. Marc Bustin presiding. Keywords in all sessions may be searched at <http://gsa.confex.com/gsa/2003AM/finalprogram/> which also provides links to the day-by-day lists of session titles. The home page for the meeting is <http://www.geosociety.org/meetings/2003/> Y

## 2005 TSOP Meeting Louisville, Kentucky

by Jim Hower

The 2005 TSOP meeting will be held in Louisville, Kentucky, on 11-14 September. Maria Mastalerz and Jim Hower will be co-conveners of the meeting. The Brown Hotel (<http://www.brownhotel.com/>) will be the meeting site, with a Monday evening reception planned for the Louisville Slugger Museum (<http://www.sluggermuseum.org/flash5.html>). A Sunday field trip will be to the Falls of the Ohio (<http://www.falloftheohio.org/>), not an organic petrology trip, but still a geology excursion to a Devonian reef (and walking distance [about 4 km, a healthy walk] from the hotel; we will provide transportation). Other events, such as a post-meeting (Wednesday) field trip, are under consideration.

Louisville is easily accessible from all points in the U.S. Louisville International Airport is minutes from downtown and the city is an easy drive from much of the midwest and south, about a six-hour drive, or less, from Chicago, Detroit, Pittsburgh, Atlanta, Birmingham, and St. Louis.

More details will be provided as planning continues.

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## AGI Earth Science Week and Poster

The American Geological Institute, of which TSOP is a Member Society, is organizing the annual Earth Science Week to be held October 12-18, 2003. AGI urges earth scientists to "join in the celebration and:

- Share your knowledge and enthusiasm about the Earth with others
- Raise public awareness that Earth science is all around us
- Give students new opportunities to discover the Earth sciences
- Encourage stewardship of the Earth through an understanding of Earth processes."

The Earth Science Week web site may be found at <http://www.earthsciweek.org>

Enclosed with this issue for North American members is a color poster to "Celebrate Earth Science Week." The theme of the poster and the week is "Eyes on Planet Earth: Monitoring our Changing World." TSOP members outside North America may request (preferably before August 30) one or more copies of the poster to be mailed with their next TSOP newsletter.

The front of the poster illustrates the Earth from space with insets of the geosphere, hydrosphere, biosphere, atmosphere and exosphere, and shows activities of geoscientists and students. The back describes Earth Science Week, lists the AGI Member Societies including TSOP, and shows a three-page example activity, "Monitoring the Quality of Your Water Resources," from AGI's school curriculum.

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## ALAGO Workshop on Petroleum Biodegradation

Eugenio Vaz dos Santos Neto, President of the Latin-American Association of Organic Geochemistry (ALAGO), has circulated an invitation to the Third ALAGO Workshop. "This workshop will be dedicated to the theme of Petroleum Biodegradation and will be held in Havana, Cuba, November 17-19, 2003." This scientific meeting is promoted as an opportunity for updating knowledge, exchanging experiences, and

discussing the main trends of research on biodegradation in oil and gas.

"The suggested scientific program includes the following themes:

- anaerobic versus aerobic processes,
- role of temperature, time and "natural poisons" on microorganisms' biogeochemistry,
- proxies for biodegradation detection,
- non-hydrocarbons as indicators of biodegradation,
- development of analytical techniques especially devoted to biodegradation studies,
- quantitative approach for biodegradation (ranking, prediction, and modeling), and
- case histories.

In addition to the scientific program, the organizing committee is planning a field trip to the heavy-oil production area of Varadero.

We hope to see you in La Habana next November!"

Instructions for authors, registration and lodging, etc., are available at

[www.alago.com.br/Tercer%20Taller%20Cuba.doc](http://www.alago.com.br/Tercer%20Taller%20Cuba.doc)

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## Black Shales Special Sessions at December AGU, San Francisco

Philip Meyers, Session Co-convenor, is publicizing two special sessions scheduled for the meeting of the American Geophysical Union, December 8-12 in San Francisco, that deal with black shales:

PP03 - Mesozoic Black Shales - Fresh Looks at an Old Problem; and

PP04 - Nature and Causes of Cyclicity in Mesozoic and Paleogene Paleoclimate Records.

"Organic geochemical parameters are central to identifying the processes and paleoenvironmental conditions that resulted in deposition of black shales. Consider contributing to one or both of these sessions. The deadline for electronic submission of your abstract is September 4. Check the AGU website <[www.agu.org](http://www.agu.org)> for more information about the meeting, the special sessions, and how to submit your abstract. If you need an AGU member to sponsor your submission, contact me or one of the other session co-convenors (Karen Bice, Ken MacLeod, Tom Wagner)."

Y

## 2003 TSOP Graduate Student Research Grant Applications Received

by Suzanne Russell,  
Research Committee Chair

A total of thirteen applications were received for the 2003 TSOP Graduate Student Research Grants. The applications were submitted by seven Master's candidates and six PhD candidates. This year the TSOP grant application reviewers are Brian Cardott, Oklahoma Geological Survey; Neil Sherwood, CSIRO; and Dave Wavrek, Petroleum Systems International. Applications are presently being reviewed. The Student Research Grant will be awarded at the TSOP Annual Meeting in Washington, D.C.

This year's applicants' research topics and institutions follow:

Abubakar Tafawa Belawa University, Bauchi, Nigeria, "Hydrocarbon Generative Potential of Some Coals from Benue Trough, Nigeria"

Universidade Federal do Rio Grande do Sul, Inst. De Geociencias:

- 1) "Environmental Monitoring of a Petroleum Exploration Well in Deep Water, Campos Basin, Brazil-Characterization of Organic Matter by Petrological and Geochemical Methods
- 2) "Source Rock Characterization Based on Organic Petrography, Palynofacies and Geochemistry of Jurassic Sediments From the Tectono-stratigraphic Unit Placetas, Cuba"

University of Oklahoma:

- 1) "Geochemical Characterization of Organic Matter in Victoria Harbour Sediments, Hong Kong, SAR"
- 2) "Geochemical Characterization of Solid Deposits within the Upper Mississippian Chester Sandstone in the Hitch Field, Kansas"
- 3) "Isotopic Composition of Acidic Biomarkers - Possible Application in Correlation of Heavily Biodegraded Oil with Its Source"

Utah State University, "Stratigraphic and Structural Analysis of the Ferron Coals, Price, Utah: Relationship to Coalbed Methane Production and Enhanced Methane Production by CO<sub>2</sub> Injection"

University of New South Wales, "Inorganic Constituents and Geochemistry of Bukit Asam Coalfield, Indonesia"

University of South Carolina, "Use of Chemical Oxidants in the Enhancement of Coal Permeability to Increase Methane Production from Carbonaceous Formations"

University of Calgary, "Quantitative Basin Modeling and Potential Source Rock Analysis in Trutch Map Area and Adjacent Plains, Northeastern British Columbia and Northwestern Alberta"

Trinity College, Dublin, "Assessment of Organic Maturity Based on Quantitative Determination of Acritarch Colour"

University of British Columbia, Vancouver:

- 1) "Gas Potential of Canadian Black Shales and the Role of Organic Matter"
- 2) "Sequence Stratigraphy of Black Shales and Coal seams from the Mid-Cretaceous Fort St. Johns, NE BC: Controls on Methane Gas Potential" Y

Not a member of TSOP?  
Download an application form at  
<http://www.tsop.org/tsopjoin.htm>

The Washington Monument  
with spring cherry blossoms.

Photo by Hal Gluskoter.



White House photo by Tina Hager.



**TSOP 2003 September 21 - 24:**

## **Twentieth Annual Meeting of The Society for Organic Petrology**

by the 2003 Annual Meeting Organizing Committee

The 2003 The Society for Organic Petrology Annual Meeting organizing committee renews its invitation for you to attend the Annual Meeting of the Society, September 21-24, 2003. This is the twentieth anniversary meeting of the Society and a special program has been arranged, as shown beginning on page nine. The meeting will include technical oral and poster sessions as well as short courses, and will address petroleum systems, source rocks, coal and coalbed gas. The highlight of the meeting is the ***Ron Stanton Coal Characterization Session*** on Monday. During this session, speakers will present the latest research on a range of coal-related topics. A special ***Energy and Government Session*** will be held on Tuesday. Research papers presented at the meeting will be published in the International Journal of Coal Geology. An award will be given for the best overall student paper presented at the meeting. Please plan to attend as TSOP returns to Washington, D.C., for the first time since its inaugural annual meeting in 1984. The 2003 organizing committee looks forward to seeing you at the meeting!

The venue is the Hyatt Arlington Hotel in Arlington, Virginia. The hotel is conveniently located near downtown Washington, D.C., has easy access to the Washington-area Metro subway system, and is within walking distance to Georgetown, a shopping and restaurant district of D.C. Hotel information may be found at <http://www.tsop.org/washington/hotel.html> Attendees must make hotel reservations directly at <http://arlington.hyatt.com/groupbooking/usgs> or +1 800 233-1234. Washington is an exciting city and has a lot to offer to visitors. We hope that you will come and stay several extra days to visit the museums and historic places in and near the Nation's capitol.

We are planning social activities for spouses. Please check the web site <http://www.tsop.org/mtgdc.htm> for the latest meeting details. Pre-registration has ended, but late registration continues (see the web site) and on-site registration will be available. At the time of this writing, short courses and field trips are still open for registration.

*continued on page 13*

## Abstracts and Program for the 2003 TSOP Annual Meeting

### Monday, September 22, 2003

#### 0800 - 1200 Technical Session A: Petroleum Systems, Source Rocks, and Coalbed Gas, *Peter Warwick, Chair*

0800-0805 Introduction

0805-0840 Cretaceous Crude from Canada – Organic Facies Analysis of the Colorado Group,  
Western Canada Sedimentary Basin *by L. Buckley and R.V. Tyson*

0840-0915 Mechanism of Hydrogen Gas Generation in Coalbed Methane Desorption  
Canisters — Causes and Remedies *by Basim Faraj, Anna Hatch, Derek Krivak,  
and Paul Smolarchuk*

0915-0950 Application of organic petrology in Astrobiology — ancient terrestrial life, &  
biological entities in meteorites and planetary samples *by Lavern D. Stasiuk*

0950-1005 **BREAK**

1005-1040 Coal Characteristics and Coalbed Methane Potential in the Jurassic Coal Measures  
of Tuha Basin, Northwestern China *by Liu Honglin, Zhang Jianbo, Wang  
Hongyan and Li Jingming*

1040-1115 Petroleum Prospects (Natural Gas, Condensates, and Gas Hydrates) of the Scotian  
Margin, Eastern Canada and its Significance to East Coast Energy Strategy  
beyond 2010 *by Prasanta K. Mukhopadhyay*

1115-1150 M & M — a sweet petroleum system *by Louis L. Tsai, Li-Chung Sun, Jane Hsieh,  
Hsien Tsung Lee*

#### 1200 - 1330 Lunch — TSOP Business Lunch

#### 1330 - 1730 Technical Session B: Ron Stanton Coal Characterization Session, *Leslie Ruppert, Chair*

1330-1400 Vitrinite Reflectance Trends in Tertiary-Age Coal Basins of Wyoming, Montana,  
and North Dakota, U.S.A. *by James Pontolillo, Ronald W. Stanton, and Brenda S.  
Pierce (speaker)*

1400-1430 Variations in coal maceral chemistry and mineral matter characteristics with rank advance  
in the German Creek Coal Measures of the Bowen Basin, Australia, using electron  
microprobe and other techniques *by Colin R. Ward, Zhongsheng Li and Lila W. Gurba*

1430-1500 Geological processes that control lateral & vertical variability in coal seam moisture contents — Latrobe Valley (Gippsland Basin) Australia by *G.R. Holdgate*

1500-1530 Mercury Variation in Powder River Basin Coal Samples by *Allan Kolker, Joseph R. Hatch, Curtis A. Palmer, and Linda J. Bragg*

1530-1545 **BREAK**

1545-1615 Distribution of mercury in Indiana coals by *A. Drobniak, M. Mastalerz, and G. Filippelli*

1615-1645 Response of major geochemical thermal maturity parameters to suppression of vitrinite reflectance, Gunnedah-Surat Basins, New South Wales, Australia by *Rushdy Othman and Colin R. Ward*

1645-1715 Coal Sample Storage — Preservation Using Foil Multilaminate Bags by *David C. Glick, Gareth D. Mitchell and Alan Davis*

**1730 - 1900 Happy Hour Poster Session**

**1900 - 2030 Conference Dinner — TSOP Banquet – TBA**

**Tuesday, September 23, 2003**

**0800 - 1200 Technical Session C: Energy and Government Session,**  
*Brenda Pierce, Chair*

0800-0830 Federal energy policy — The earth science dimension by *David Applegate, American Geological Institute*

0830-0900 The National Academy of Sciences by *Tamara Dickinson, NAS, National Research Council*

0900-0930 Federal science policy and science funding by *Gene Whitney, Policy Analyst for the Office of Science and Technology, Office of the White House*

0930-1000 Department of Interior — Land and Minerals Management by *Patty Morrison, Deputy Assistant Secretary of the Interior, Land and Minerals*

1000-1015 **BREAK**

1015-1045 The U.S. House of Representatives Resources Committee - Subcommittee on Energy and Mineral Resources by *Jack Belcher, Staff Director*

1045-1115 The USGS Energy Resources Program *by Brenda Pierce, USGS Energy Resources Program*

1115-1145 Some perspectives on long-term domestic oil and gas supply technologies and needs in a carbon-constrained future *by David Beecy, Director, Office of Planning and Environmental Analysis, of the DOE Office of Fossil Energy's Oil and Natural Gas Programs*

**1200 - 1310 Lunch — Light Lunch provided, Poster Session**

**1315 - 1330 Group Photo**

**1330 - 1730 Technical Session D: TSOP General Session,**  
*Robert Finkelman, Chair*

1330-1405 The source of the coal in the Titanic and effects of exposure to seawater *by Curtis A. Palmer, Robert B. Finkelman, Gerald H. Luttrell, Chaosheng Zhang, and Cortland Eble*

1405-1440 Influence of a basic intrusion on the vitrinite reflectance and chemistry of the Springfield (No. 5) Coal, Harrisburg, IL *by Alexander K. Stewart, Matt Massey, Penny L. Padgett, Susan M. Rimmer, and James C. Hower (speaker)*

1440-1515 Organic Pollutants from the Recent Sediments of the Halifax Harbour, Lake Ontario, and New York Bight — A Comparative Analysis *by Mukhopadhyay, P. K. (Muki), Kruge, M. A., Friedman, G.M., and Lewis, C. F. M.*

1515-1530 **BREAK**

1530-1605 Integrated Approaches to Understanding the Relationship of Coal to Human and Ecosystem Health *by Joseph E. Bunnell and Robert B. Finkelman*

1605-1640 Where do the Maidens fly? Trace elements and what controls their fate — Examples from the Greymouth Coalfield, New Zealand *by Z. Li, A.H. Clemens, T.A. Moore, D. Gong, S.D. Weaver, N. Eby*

1640-1715 Petrographic Comparison of Several Coal Seams in Ningxia Hui Autonomous Region *by Zhiwen Han*

**2000 - 2400 Council meeting — Hyatt Arlington**

## POSTERS

1. Coalbed Methane (CBM) Potential and Resources of the Anthracite Region, Eastern Pennsylvania, and CBM Production Data for the Bituminous Region of Southwestern Pennsylvania (U.S.A.) by *Paul C. Lyons, R. M. Bustin, and A.K. Markowski*
2. Effect of Geological Factors on the Permeability of Coal Seam Gas Reservoir by *Xingjin Wang*
3. The World Coal Quality Inventory by *Susan J. Tewalt and Robert B. Finkelman*
4. The Inorganic Chemistry of 15 Coal Samples from the Prince Charles Mountains, East Antarctica by *Lora A. Chiehowsky, Robert B. Finkelman, Tim A. Moore, Guy R. Holdgate, Jason C. Willett, Stephen McLouglin, and Andrew N. Drinnan*
5. The Influence of Extractable Organic Matter on Vitrinite Reflectance — Implications to Liquid Hydrocarbon or Bitumen Impregnation as a Suppression Mechanism by *C.E. Barker, M. D. Lewan, M.J. Pawlewicz and C. L. Carlson*
6. Characterization of the Petrology, Mineralogy, and Geochemistry of mined coals, Western Venezuela by *Paul C. Hackley, Peter D. Warwick, and Eligio Gonzáles*
7. Prediction of CO<sub>2</sub> sorption in coal seams using uncrushed coal cores under realistic P, T and moisture conditions by *Rachel Walker, Maria Mastalerz, Arndt Schimmelmann, Laurence Hawkes, Jon Fong, Wilfrido Solano-Acosta*
8. Rare-earth element systematics in Upper Permian mineralized coal, southwestern Guizhou Province, P.R. China by *Harvey E. Belkin, Baoshan Zheng, and Robert B. Finkelman*
9. Organic Geochemistry of Retained and Expelled Oil based on Hydrous Pyrolysis Experiments — An Example from the Irati Oil Shale, Brazil by *Noelia Franco, Wolfgang Kalkreuth, and Henrique Penteado*
10. Comparative Analysis of Moscow Lignite and Kama Coal Basins by *Albina Gazizova*

**See our next issue or the on-site program for late updates and presentations still being arranged.**

*continued from page 8*

In addition to the technical program, three short courses have been arranged. The short courses (described below) focus on the health impacts of coal use, the modes of occurrence of trace elements in coal, and a core workshop for petroleum source rocks and coal occurrence in the National Petroleum Reserve in Alaska (NPRA). Two field trips are planned: one to the Smithsonian National Natural History Museum, and the other to the Triassic basins near Richmond, Virginia. Meeting details and registration information can be found on the web at: <http://www.tsop.org/mtgdc.htm>

## Meeting Short Courses

### Health Impacts of Coal: Should We Be Concerned?

This short course will sort out the facts and fallacies that have been interwoven in this sensitive issue. We will explore questions such as: Are there confirmed cases of health problems associated with coal use? Under what conditions would coal present a threat to human health? What properties of coal are most dangerous? What can the coal science community do about it?

Limit: 25 participants.



Geologists study cores selected to illustrate key attributes of the main petroleum and coal systems of the National Petroleum Reserve in Alaska. Photo by Dave Houseknecht.

### Petroleum Source Rocks and Coal in the National Petroleum Reserve in Alaska (NPRA) - A Core Workshop

The USGS archives cores from about 60 exploration wells that have been drilled in and near NPRA during the past 50 years. This workshop will feature cores selected from that archive to illustrate key attributes of the main petroleum and coal systems of the region. Petroleum systems with principal source rocks in the Triassic (Shublik), Jurassic (Kingak), and Cretaceous (HRZ), and coal systems in the Mississippian (Endicott) and Cretaceous (Nanushuk) will be emphasized.

Limit: 30 participants.



Rosslyn, Virginia, and the Key Bridge viewed from across the Potomac River in the Georgetown section of Washington, D.C. Photo by Peter Warwick.

## Modes of Occurrence of Trace Elements in Coal

This short course will focus on modes of occurrence of trace elements in coal and the importance of trace elements in the overall context of coal quality. Emphasis will be placed on the elements that are of technological, economic, and environmental significance. We will review the current state of knowledge and describe state-of-the-art methods for quantifying element modes of occurrence in coal.

Limit: 25 participants.

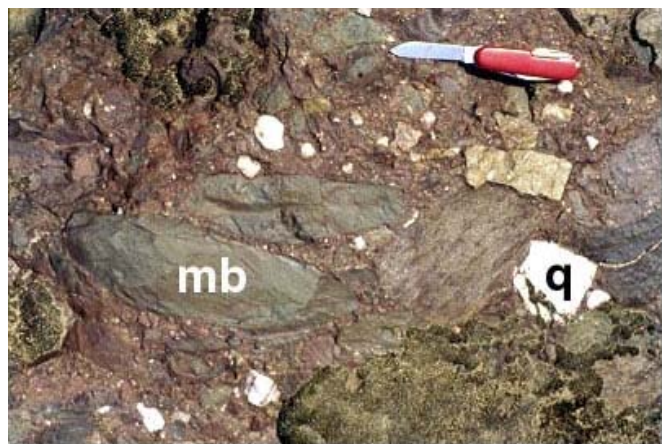
## Field Trips

### Geology and Energy Resources of the Triassic Basins of Northern Virginia

The TSOP field trip (September 24, all day) will review the geology of the Richmond and Taylorsville Basins in the Triassic coal mining district near Richmond, Virginia. Triassic-age coal was discovered and first mined for domestic needs in this area by Huguenot settlers during Colonial times (1703), and the resource was an important source of energy in the region during the 1800's. The mines were commonly gassy and the strata are faulted, so that mining conditions were difficult as well as primitive.

The field trip will visit exposures that illustrate the stratigraphy of the Richmond and Taylorsville Triassic Basins, as well as the available remnants of old mine workings. There may be a traverse of moderate length and difficulty.

A discussion of the geology and energy resources of the Triassic Basins of Northern Virginia will be presented. Field guides will be provided and there is a 25 person limit.



Sedimentary breccia with clasts of Catoctin metabasalt (mb) and quartz (q) exposed in the Scottsville Basin along James River south of Howardsville, Nelson County. The breccias formed when cobbles and boulders were deposited in rift basins approximately 210 million years ago during the Triassic period. Knife – 15 cm (6 inches) in length. Photo: C.M. Bailey & C. Roberts, College of William and Mary.

### Tour of the Smithsonian's

### Natural History Museum

On Wednesday, September 24, we are planning a half-day guided tour of the Smithsonian's Natural History Museum located on the Mall in Washington, D.C. This is your chance to see parts of the museum and collections not accessible to the general public. Metro transportation tickets will be provided to registrants.

The collections staff will provide a 1-2 hour tour of the Museum's fossil collections on the morning of Wednesday, September 24, 2003. Collections examined will be at the discretion of the tour guides, but we will probably tour the invertebrate, vertebrate, and possibly paleobotany areas. Limit: 10 participants. Y

## Historic Coal Mine to Close in New Zealand

by Tim A. Moore and  
Solid Energy New Zealand Staff

Strongman 2 Underground Mine, near Greymouth, will close on Friday, 15 August, ending 65 years of underground mining in the Nine Mile Valley by Solid Energy New Zealand Ltd and its predecessors.

Coal mining began at the original Strongman Mine in 1938. Together the Strongman 1 and 2 mines have produced around 8 million tonnes of coal and have employed upwards of 1000 people. Strongman coal has been burned in the grates of homes across much of the South Island and has been synonymous with the high quality coal produced by the company for the domestic market. In recent years Strongman coal has been exported for use by Asian steel and coke makers. It has been blended with Stockton coal and sold to Chile for power generation and industrial processing. In New Zealand, Strongman coal has been blended with other coals and supplied to cement manufacturers, dairy companies, food processors, brewers and timber processors to fire furnaces, boilers and kilns.



Location of the Strongman 2 Mine on New Zealand's South Island.

NZ State Coal Mines began prospecting in the Nine Mile Valley in 1930 to find a replacement for James Underground Mine at Rapahoe, identifying two seams, each more than 6 metres thick. The Government gave approval to develop the new mine in 1936. Over the next two years a new road was formed from the coastal highway up to the new mine entrance and a stone drive put through from the James Mine to the Nine Mile Valley to establish endless rope haulage between Rapahoe and the mine mouth.

Paddy Webb, Minister of Mines, officially opened the new mine on 31st October 1939, declaring it the Strongman Mine, in honour of Charles Strongman, the Superintendent of New Zealand State Coal Mines. The workforce reached 360 and output rose to 650 tonnes per day. Methane gas was encountered in all three seams worked. At 10:00 a.m. on 19 January 1967 an explosion ripped through the Greens No. 2 section of the mine killing 19 men.

With the formation of State-owned Enterprise, Coalcorp, on 1 April 1987, the operations of State Coal had to be put on a more profitable footing. The Strongman workforce was drastically reduced and hydraulic mining, using a high-pressure monitor, introduced. This has proven to be the most significant development in underground mining technology in New Zealand. By the 1990s Strongman Mine was reaching the end of its economic life and a new mine – Strongman 2 – was developed further up the Nine Mile Valley.

Strongman 2 Underground Mine was officially opened by an Undersecretary to the Minister of State-owned Enterprises, Warren Kyd, on 26 July 1994. More than 3 million tonnes (mt) has been produced at Strongman 2 Mine since then. Solid Energy opened Strongman Opencast Mine in May 2002 to secure continuity of supply for customers during the transition between Strongman 2 and Spring Creek Underground Mines. Y

## COAL: A Human History

by Barbara Freese

Perseus Publishing, 308 pp, \$45.95.

### Book Review

by Tim A. Moore

I knew something was up when upon entering the shop my partner immediately snatched up something on display and turned away. Too late. I had seen the small and beautifully presented book on coal, thus scuppering it as a potential birthday present. In my 25 years working as a geologist I have never seen a popular book on coal. These days, coal is either a four-letter word or the new black depending on which side of the global warming fence you stand.

As Barbara Freese demonstrates, the human race and coal have led a symbiotic existence for centuries that has empowered cultures and shaped empires. But while coal was giving us heat and the ability to forge metal, it was also causing our cities to fill with 'bad vapours.' As the story of 'Coal: A Human History' unfolds, Freese reveals the complexities of the good and the bad effects. While 17<sup>th</sup> century Londoners were already complaining about coal smoke, they were benefiting from better health from the heat and lighting that were provided by burning coal. The black seams of today maybe vilified by global warming advocates, but there is no denying that these same seams have also greatly benefited humankind. As Freese says "coal alone did not make the industrial revolution happen any more than coal alone made Britain a global superpower, but neither event could have happened without it." This revolution eventually bought us the modern car, house and the even piano sitting in our living rooms. To get here though, the booming coal industry needed labour and needed it fast. British coal barons two centuries ago were the forerunners in developing an economy based in part on child labour.

Only a few decades later in America 'King Coal' (as it was seen then and to many still is) was the force behind that nation's burgeoning industrial era. It is no coincidence that the cradle of America's coal-powered railroads was in the anthracite fields of Pennsylvania. It was not until those deposits were depleted and the much

more widely dispersed bituminous coals to the west were mined that the grip of the Pennsylvania rail tycoons was broken. Freese unfolds a fascinating web of relationships to show how labour unionisation was able to develop as a consequence of this decentralisation of power.

Are all those days of coal behind us now? Perhaps not. The last part of the book describes a trip made by the author to China. The coal reserves of China are huge and rival those of the U.S.A. Like most things about China, its use of coal was centuries ahead of the rest of the world. But paralleling other modern aspects of China, it is now a few centuries behind. Freese's description of what she found in China this century could equally apply to coal mining whilst in the 1800s in America.

As Assistant Attorney General for the State of Minnesota, Barbara Freese became interested in coal's 'other history', its human history, while enacting pollution legislation. The only time the story becomes a bit predictable in this otherwise well researched book is when she writes about the last decade. The link between climate change and fossil fuel is hotly debated but instead of letting the facts unfold for the reader to decide, Freese has a more heavy handed approach. Fortunately, there are only a few digressions along these lines and the book will allow readers to immerse themselves in the complexities of coal, its history, and the foibles of human nature. This is an absorbing and fascinating book for anyone interested in how humans interact with the natural environment for better and for worse.

**Tim A. Moore is a Christchurch-based photographer and a Senior Fellow at the Department of Geological Sciences, University of Canterbury.**

Y

<b>TSOP PUBLICATIONS</b>
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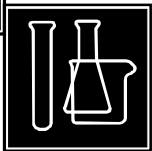
<u>Number</u>	<u>Name of Publication</u>	<u>Price (USD)</u> (includes shipping)
1.	<i>Fluoreszenz von Liptiniten und Vitriniten in Beziehung zu Inkohlungsgrad und Verkokungsverhalten</i> - (in German with photomicrographs) M. Teichmüller, 1982	\$ 10
2.	<i>Fluorescence - microscopical changes of liptinites and vitrinites during coalification and their relationship to bitumen generation and coking behavior</i> , TSOP Special Publication No. I (English translation by Neely Bostick, without photomicrographs) M. Teichmüller, 1984	\$ 5
3.	<i>Influence of Kerogen Isolation Methods on Petrographic and Bulk Chemical Composition of a Woodford Shale Sample</i> , TSOP Research Committee Report, October 1989	\$ 20
4.	<i>Fluorescence Microscopy Workshop Lecture Notes</i> , 1989 TSOP Meeting	Sold Out
5.	<i>Organic Geochemistry</i> , 2nd TSOP Meeting, Houston, TX, 1985; Vol. 11, No. 5, 1987	\$ 5
6.	<i>Organic Geochemistry</i> , 3rd TSOP Meeting, Lexington, KY, 1986; Vol. 12, No. 4, 1988	\$ 5
7.	<i>Organic Geochemistry</i> , 4th TSOP Meeting, San Francisco, CA, 1987; Vol. 14, No. 3, 1989	\$ 5
8.	<i>Organic Geochemistry</i> , 5th TSOP Meeting, Houston, TX, 1988; Vol. 17, No. 2, 1991	\$10
9.	<i>Organic Geochemistry</i> , 6th TSOP Meeting, Urbana, IL, 1989; Vol. 17, No. 4, 1991	\$10
10.	<i>Organic Geochemistry</i> , 7th TSOP Meeting, Calgary, Alberta, 1990; Vol. 18, No. 3, 1992	\$10
11.	<i>Organic Geochemistry</i> , 8th TSOP Meeting, Lexington, KY, 1991; Vol. 20, No. 2, 1993	\$10
12.	8th TSOP Meeting Field Trip Guidebook, Lexington, KY, 1991	\$ 5
13.	<i>Organic Geochemistry</i> , 10th TSOP Meeting, Norman, OK, 1993; Vol. 22, No. 1, 1994	\$10
14.	<i>Energy &amp; Fuels</i> , ACS symposium on kerogen/macerals; Vol. 8, No. 6, 1994	\$10
15.	12th TSOP Meeting Field Trip Guidebook, The Woodlands, TX, 1995	\$ 5
16.	<i>Organic Geochemistry</i> , 11th TSOP Meeting, Jackson, WY, 1994; Vol. 24, No. 2, 1996	\$35
17.	<i>International Journal of Coal Geology (IJCG)</i> , 12th TSOP Meeting, The Woodlands, TX, 1995; Vol. 34, Nos. 3-4, 1997	\$15
18.	IJCG, 13th TSOP Meeting, Carbondale, IL, 1996; Vol. 37, Nos. 1-2, 1998	Sold Out
19.	IJCG, Special Issue: Appalachian Coalbed Methane; Vol. 38, Nos. 1-2, 1998	\$20
20.	IJCG, 14th TSOP Meeting, Lexington, KY, 1997; Vol. 39, Nos. 1-3, 1999	\$25
21.	IJCG, Special Issue: Applied Topics in Coal Geology; Vol. 41, Nos. 1-2, 1999	\$25
22.	IJCG, 15th TSOP Meeting, Halifax, Nova Scotia, 1998; Vol. 43, Nos. 1-4, 2000	\$25
23.	IJCG, 16th TSOP Meeting, Snowbird, Utah, 1999; Vol. 46, Nos. 2-4, 2001	\$25
24.	IJCG, 17th TSOP Meeting, Bloomington, Indiana, 2000; Vol. 47, Nos. 3-4, 2001	\$25
25.	IJCG, 18th TSOP Meeting, Houston, Texas, 2002; Vol. 54, Nos. 1-2, 2003	\$30

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## Calendar of Events

### 2003

Sept. 7-11, 2003: 226th ACS National Meeting  
New York, New York, including symposia:

Geochemistry Division

CO<sub>2</sub> Sequestration: advanced technologies for  
predicting and monitoring isolation performance  
<http://membership.acs.org/g/geoc/upcoming.html>

Division of Fuel Chemistry

Environmental Issues in Fossil Fuel Utilization  
(Trace Metals, PM, PAHs)  
<http://oasys.acs.org/acs/226nm/fuel/program.html>

Sept. 8 -12, 2003: 21<sup>st</sup> International Meeting on  
Organic Geochemistry, Kraków, Poland. Official  
Conference of the European Association of Organic  
Geochemists. See <http://www.imog.agh.edu.pl/>

Sept. 15 - 19, 2003: 20<sup>th</sup> International Pittsburgh Coal  
Conference, Westin - Convention Center in Pittsburgh,  
PA. Focusing on "Coal - Energy and the Environ-  
ment." See <http://www.engrng.pitt.edu/~pccwww/>

**Sept. 21 - 24, 2003:** 20th Annual TSOP Meeting,  
**TSOP 2003**, Washington, D.C. Area (Arlington,  
Virginia, USA). See page 8 and  
<http://www.tsop.org/mtgdc.htm>

October 12 - 18, 2003: Earth Science Week,  
sponsored by AGI. See page 6.

October 20 - 22, 2003: International Ash Utilization  
Symposium, Lexington, Kentucky, USA. Registration  
fee increases after Sept. 2. See  
<http://www.flyash.org>

Nov. 2-5, 2003: Geological Society of America  
Annual Meeting and Exposition, Seattle, Washington.  
Including Topical Session 119, Revisiting the  
Biogeochemistry of Black Shales and  
Oxygen-Deficient Marine Environments.  
<http://www.geosociety.org/meetings/2003/>

Nov. 17 - 19, 2003: Third ALAGO Workshop,  
Havana, Cuba. Latin-American Association of  
Organic Geochemistry. Theme: Petroleum Bio-  
degradation. See page 6 and  
[www.alago.com.br/Tercer%20Taller%20Cuba.doc](http://www.alago.com.br/Tercer%20Taller%20Cuba.doc)

Nov. 2 - 6, 2003: 12<sup>th</sup> International Conference on  
Coal Science, Cairns, Queensland, Australia.  
Theme: "Coal - contributing to sustainable world  
development." <http://www.aie.org.au/iccs/>

Dec. 8 -12, 2003: AGU including Black Shales  
sessions. See page 6 and <http://www.agu.org>

### 2004

April 18 - 21, 2004: AAPG, Dallas, Texas, including  
Poster Session: Oceanic Anoxic events and Source  
Rock Formation. See page 4.

**Sept. 27 - Oct. 1, 2004:** 21st Annual **TSOP**  
Meeting, **TSOP: Organic Matter Down Under**,  
Sydney, Australia. See page 2 and  
<http://www.tsop.org/mtgsyd.htm>

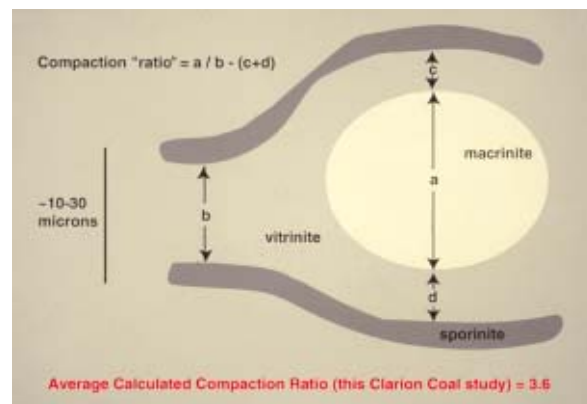
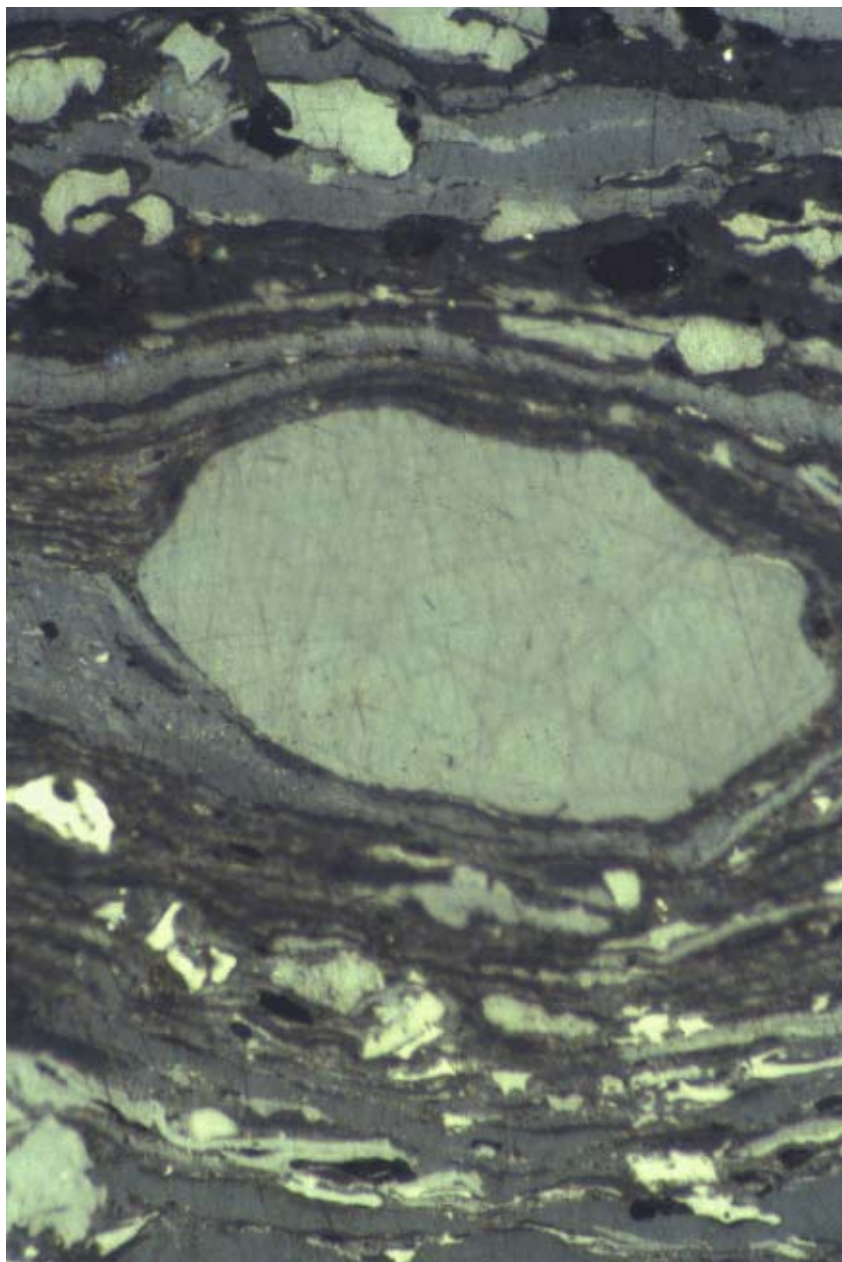
Sept. 5 - 11, 2004: 56<sup>th</sup> Annual Meeting of ICCP,  
Budapest, Hungary.  
<http://www.iccop.org/56AnnualMeeting.htm>

### 2005

**Sept. 11 - 14, 2005:** 22nd Annual **TSOP** Meeting,  
Louisville, Kentucky, USA. See page 5.

Sept. 18 - 23: 57<sup>th</sup> Annual Meeting of ICCP, Patras,  
Greece. Followed by a three-day excursion.  
<http://www.iccop.org/57AnnualMeeting.htm>

## Photo Gallery



One method for determining the compaction ratio of peat to coal is to study the deformation of macerals around undeformed macerals within a coal seam. In this photomicrograph from the high volatile A bituminous Lower Clarion Coal, Clarion County, Pennsylvania, cutinite and sporinite macerals that bent around the large macrinite grain during compaction are visible. Using the relationships displayed in the accompanying cartoon, and at least 50 compaction ratio determinations from each of seven whole seam columns from the Lower Clarion Coal, an average compaction ratio of 3.4:1 was calculated for the seam. This ratio, combined with measurements of seam thickness and modern estimates of tropical peat accumulation rates, can be used to estimate a duration for Lower Clarion peat accumulation ranging from 1000 to 2000 years. Photo and description by Tim White.