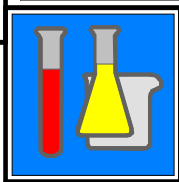


THE SOCIETY FOR ORGANIC PETROLOGY



NEWSLETTER

Vol. 19, No. 3

September, 2002

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Banff CSCOP-TSOP Meeting



THE SOCIETY FOR ORGANIC PETROLOGY



Call for Papers

Twentieth Annual Meeting

September 21 - 24, 2003

Washington, D.C. Area

HYATT ARLINGTON

ARLINGTON, VIRGINIA, USA

For our 20th Annual Meeting, TSOP will return to the city which hosted its first meeting.

Meeting Themes:

- Session 1 Petroleum Systems, Source Rocks, and Coalbed Methane (Monday AM)
- Session 2 Ron Stanton Memorial Session Coal Characterization (Monday PM)
- Session 3 General Submissions (Tuesday AM)
- Session 4 Government and Energy (Tuesday PM)

Field Trip: Geology and Energy Resources of the Triassic Basins of Northern Virginia (Wednesday)

Short Courses:

- Modes of Occurrence of Trace Elements in Coal (Sunday AM)
- Health Impacts of Coal: Should We Be Concerned (Sunday PM)
- Petroleum Source Rocks and Coal in the National Petroleum Reserve in Alaska - A Core Workshop (Sunday)

Abstract submission deadline: April 15, 2003; See <http://www.tsop.org/mtgdc.htm> for more details

Spousal and Social Activities Planned

Meeting Hotel: The Hyatt Arlington

Conveniently located across the Potomac River from Washington, D.C., within walking distance of Georgetown, and is adjacent to the Rosslyn Metro Stop. See: <http://www.arlington.hyatt.com/>

For more Information:

Contact Peter Warwick, U.S. Geological Survey, 956 National Center, Reston VA 20192, USA; Phone: (703) 648-6469, Fax: (703) 648-6419, E-mail: pwarwick@usgs.gov; also see our website at: <http://www.tsop.org/mtgdc.htm>

First Announcement

**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.

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Address Changes

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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: photos of Banff meeting, clockwise from top left:

Martin Fowler, Conference Chair, oversees technical session;

Donald Cameron Hall, dining room at center of ground floor;

Auditorium in Max Bell Building during Archie Douglas Symposium.

Cover photographs by David Glick.

President's Column:

Maria Mastalerz



After our very successful meeting in Banff, Canada, I am very excited to be leading The Society for Organic Petrology. This year's meeting has shown how seamlessly organic petrology blends with organic geochemistry, how these disciplines complement one another with an advantage for both, and how we can appreciate and enjoy this combination. We were very honored by the participation of Dr. Duncan G. Murchison, who received TSOP's lifetime Honorary Membership this year; Dr. Archie G. Douglas, who received the 2002 Treibs Award; and Dr. Fariborz Goodarzi, who received CSCOP's Peter Hacquebard Award. I, personally, was delighted to see my colleagues and friends at the meeting, some of whom I had not seen for many years. The organizers did a superior job of attracting world class scientists and put together an outstanding scientific program.

For me, the Banff meeting reinforced the idea that we are stronger when united. The organizations TSOP, CSCOP, ICCP, as well as others, all need to work closely together. Our experience at the meeting highlights the point that when we join forces, excellent things happen. Joint events, sessions, conferences, and projects always bring better results, attract new people, contribute to better communication, and give all of us better exposure.

The role of organic petrology is evolving and there is no guarantee what the future will bring for the field. The Society needs to change proactively in order to maintain its strength and appeal. What should we do in order ensure it? I would like to follow up on the challenge from past TSOP President Tim Moore to discuss the future directions of organic petrology. I would like to encourage TSOP

members and others who are actively working in the field to express their views as to where organic petrology might be in 20 years. What equipment will we be using after all our old Leitz and Zeiss microscopes become obsolete? Who could use the skills of organic petrologists? Please e-mail me or other Council members with your comments. Your views are very important, and will help the Society to grow and become better prepared to serve its members into the future.

At the Incoming Council meeting in Banff we discussed some changes that will or could be introduced to serve our members more effectively. I would like to mention three of them:

1. The Council has voted to post the TSOP Newsletter on the web site, making it available to everyone. We want people to hear about the Society, to learn what we are doing, and to use us as a resource, whether they are TSOP members or not. We believe that the change from publishing only a paper version of the newsletter will be welcomed and that many of you will access it on the Internet.
2. The Council expressed deep concern over the declining availability of coal geology programs at North American universities and elsewhere. We believe that our Society is well positioned to fill this gap. Our members have excellent qualifications and the Council has decided to work toward developing a TSOP education program to serve this purpose.
3. I personally believe that it would be an advantage for the president to serve a term longer than one year. One year is too short a time to make an impact, and the extension of the term would allow a president to better serve the Society. I always feel sad seeing presidents leave at just the point when they have gained in experience and have so much more to offer. Changing the length of president's term from one to two years would require changes in TSOP's by-laws; for this change we need to hear from TSOP members. At this point I would like you to think about this issue; soon all members will be asked to respond to this question.

Finally, I would like to say that I am looking forward very much to working with you this year. I appreciate your dedication to the Society, and on my part I would like to leave you with a promise that I will try to serve the Society and all of you as well as I can. Y

Outgoing Co-Editors Bid Farewell

from Bill Huggett and Jack Crelling

As we step down from the editorship of this newsletter, we would like to thank all who contributed their work, ideas and opinions to help ensure that the TSOP newsletter stays a viable and valuable information source. To many members this newsletter is the only "material" contact they have with the society and to that end it is essential that it contain as much pertinent information as possible.

Please welcome long-time TSOP member Dave Glick as new editor; please continue to provide any ideas or information that would be useful to our many members. Thank you!

Y Y Y Y Y

ROMANIAN ATLAS CARBOPETROGRAFIC: Ordering Procedure Update

from Peter Crosdale

This volume was reviewed in the last Newsletter. I contacted Editura Academiei Romane to confirm costs (including postage) and availability of credit card facilities etc. They informed me that they do NOT handle the book for foreign orders. You must order it through

Orion Press Impex 2000 SRL

PO Box 77-19

Bucuresti 3

Romania (ph./fax +40-1-335-0296)

It now costs \$50. U.S. including postage. They have no credit card facility and will not ship on a purchase order, i.e. the order must be pre-paid. I also know that this works as I bought (by bank draft) a copy which is now sitting on my desk.

Y Y Y Y Y

Bethany Burnett Awarded 2002 TSOP Graduate Student Research Grant

by Suzanne Russell

A total of eight applications, from the USA and Romania, were received for the 2002 TSOP Graduate Student Research Grants. The applications were submitted by two Master's candidates and six PhD candidates. This year TSOP grant application reviewers were Joe Curiale, Unocal; Brenda Pierce, U.S. Geological Survey; and Colin Ward, University of New South Wales. Our 2002 awardee is Bethany Burnett of the University of New Mexico (thesis advisor Dr. Tobias Fischer), with the research topic "Formation Mechanisms of Hydrocarbons in Volcanic Gases". Bethany is working towards a Master's degree. Mrs. Burnett was unable to attend the Banff meeting, hence, her award will be mailed to her. Mrs. Burnett's summary of her topic follows.

Formation Mechanisms of Hydrocarbons in Volcanic Gases

by Bethany Burnett

Many highly populated areas are located in the vicinity of active volcanoes. Therefore, it is important to understand the dynamics of the various components of volcanic gases in order to better monitor and predict volcanic activity. While studies have characterized the light hydrocarbon fraction of volcanic and geothermal gaseous emissions in some locales, the low concentrations of these compounds have been inhibitive to numerous analyses. The two major questions to be addressed by this research are as follows: 1) Is the proportion of organic compounds present in the gas sample dependent on the H/C (hydrogen/carbon) ratio of the gas? and 2) Is there a correlation between the hydrocarbons present and the setting?

Theoretically, the more highly saturated hydrocarbons should be thermodynamically stable in volcanic gases with high H/C ratios, because they are more reduced. It is expected that aromatic hydrocarbons and alkenes will be present in greater proportions in gas samples with low H/C ratios than in samples with high H/C ratios. Correlations between the distribution of hydrocarbons and the geologic and tectonic setting will also be examined. Magma temperatures, redox conditions, and underlying crustal material differ between convergent margins, divergent margins, and hotspots. The stability of hydrocarbons will therefore vary between these settings, which is expected to lead to different distributions of hydrocarbons.

We will identify and quantify the hydrocarbon content of gaseous emissions from a variety of geothermal and volcanic areas using a gas chromatograph. Methane is typically the predominant hydrocarbon found in these emissions, but we are also interested in the following types of hydrocarbons: n-alkanes (C2-C10), alkenes, benzene, toluene, and xylenes. Additionally, carbon stable isotope analyses of the light alkanes will be performed. Although results from previous studies of hydrocarbons have generally been suggestive of a biogenic origin, the possibility of abiotic synthesis has not been ruled out. Carbon stable isotope values can be used to distinguish between thermogenic and biogenic gases, with biogenic gases having lower $\delta^{13}\text{C}$ values than thermogenic gases. The combined results from these analyses will then be correlated with geologic setting in order to determine trends. This research will further the understanding of the stability of organic molecules at high temperatures and could potentially provide input regarding the formation of the initial organic compounds on the early Earth. Y

TSOP Technical Session at ICCP Copenhagen, Denmark, 2001

Meeting Report by Henrik Petersen

The 53rd annual meeting of the International Committee for Coal and Organic Petrology (ICCP) was held in Copenhagen, Denmark, from August 12–19 2001. The meeting was organised by the Geological Survey of Denmark and Greenland (GEUS), and the meeting venue was the newly established Geocentre Copenhagen, which includes GEUS, the Geological and Geographical institutes of the University of Copenhagen, the Geological Museum, and the Danish Lithosphere Centre. In addition to the usual ICCP programme the meeting included a one-day TSOP session in the middle of the meeting and a Marlies Teichmüller Symposium at the end of the meeting. This was the first official TSOP meeting outside North America, and the idea to include a TSOP session in the ICCP meeting in Copenhagen was developed together with Charlie Barker at the TSOP meeting in Halifax in 1998. As chairman of the organising committee of the 53rd ICCP meeting, I was in contact with Charlie Barker during the year 2000 in order to realise the idea, and we decided to announce a one-day TSOP session with the theme “Organic petrology applied to petroleum and coalbed methane studies.”

The ICCP meeting was indeed an international meeting with about 70 participants from 20 different countries: Australia, Brazil, Canada, Czech Republic, Denmark, Germany, Greece, Hungary, Malaysia, Mozambique, Poland, Portugal, Romania, Russia, South Africa, Spain, Thailand, The Netherlands, United Kingdom and USA. It was particularly pleasant to see that nine Australian colleagues made the long way to Denmark to participate in the meeting. I got the impression that many of the delegates found the inclusion of a more “regular” scientific session in the ICCP meeting attractive.

Charlie Barker and I, who organised the TSOP session, were

very pleased to notice the interest in giving an oral presentation or presenting a poster at the session, which made it possible for us to set-up a one-day programme consisting of 15 oral presentations and 20 posters. After an introduction by Charlie Barker, Vern Stasiuk et al. gave the



Two of the speakers at the TSOP session, W. Kalkreuth and C.J. Kommeren, at the balcony of Restaurant Nimb during the conference dinner.
—photo courtesy of Henrik Petersen



The magnificent Cretaceous chalk cliffs at Møns Klint on the island of Møn, Denmark.

----photo courtesy of Henrik Petersen

opening presentation on a basin-wide thermal maturity evaluation of Devonian–Mississippian source rock strata in the Western Canada Sedimentary Basin. This was followed by a talk by A. Carr on thermal history modelling using vitrinite reflectance. M. Mastalerz & A Schimmelmann continued with a presentation on isotopically exchangeable hydrogen in coals. Petrographic insights into liquid hydrocarbon generation and expulsion from oil-generating coals of Sarawak, Malaysia, were discussed by A. Wan Hasiah & Q. Bachir. C.J. Kommeren gave a talk on the "good and the bad news" deduced from organic petrology for petroleum exploration offshore the Falkland Islands, whereas J.A. Bojesen-Koefoed et al. presented the role of organic geochemistry and petrology in exploration activities in West Greenland. B. Ratanasthien et al. compared liptinite in the source rocks of the Fang oilfield in northern Thailand and the Pattani gasfield in the Gulf of Thailand. M. Glikson et al. discussed isotope geochemistry, py-MS and electron microscopy of coals associated with hydrogen sulphide seam gas in the Bowen Basin, Australia, and later she presented results from a coalbed methane project in the Hubei Basin, China. L.W. Gurba & C.R. Weber talked about a new look at coal optical properties and their application in coalbed methane evaluation. W. Kalkreuth et al. gave a presentation on the assessment of the coalbed methane potential in the Santa Terezinha Coalfield in the Parana Basin in Brazil, whereas C. Barker on behalf of E.R. Landis and co-workers presented the results from a coalbed gas study in the Mecsek Basin, Hungary. The three final oral presentations in the TSOP session dealt with other than petroleum related aspects of organic petrology. K.J. Kruszewska discussed fluorescing macerals in South African coals, A. Iordanidis & A. Georgakopoulos presented results from a petrographic study on the Pliocene lignites from the Amynteo Basin in northwestern Greece, and finally G. Predeanu et al. gave a talk on carbonisation behaviour of inertinite by thermoplasticity and coke microstructure assessment.

The oral presentations were followed by poster viewing while the delegates could enjoy draught beer from Carlsberg. The posters covered a variety of areas of applied organic petrology and geochemistry, including facies studies, coal combustion, and presentation of different analytical techniques. I consider the TSOP session a great success and would once again like to thank all speakers, poster contributors, chairmen, and delegates for their participation. A special issue of the International Journal of Coal Geology with about nine papers presented at the TSOP session is in publication.

Most delegates participated in the conference dinner the day after the TSOP session. The dinner was held on Thursday on a very warm summer evening in Restaurant Nimb with its large balcony with a view over the "Tivoli"-gardens in the centre of Copenhagen. The organising committee was pleased to notice that a majority of the conference delegates participated in the excursion on Saturday to the beautiful Chalk cliffs on the island of Møn in the Baltic Sea. The exposed Cretaceous chalk deposits constitute an analogue to the Danish offshore chalkfields in the Danish Central Graben. The excursion also visited a passage grave from about 3200 B.C. and the Fanefjord church with the famous wall paintings from the Middle Ages.

Some Observations on the 53rd Annual Meeting of the ICCP in Copenhagen, Denmark, 2001

by Jack Burgess

This meeting covered the same Commission work as in previous years, but I will touch on isolated topics of interest to me and to the membership of TSOP.

One of these topics is accreditation of coal petrographers through ICCP, and its relevance to the coal industry. The actual accreditation program has been in effect for several years, however, the results presented at the Copenhagen meeting are worth documenting.

The accreditation report was prepared by Aivars Deepers: 55 members had signed up for the exercise and it was completed by 50.

2 members used automated analysis, and both passed and were accepted.

19 members were reaccredited.

17 are fully accredited.

14 members were provisionally accredited; the term provisionally accredited is no longer used.

Thus for the year 2001 the ICCP has accredited 50 members, or just under one-third of the membership. Certificates of accreditation were mailed in August, 2001, to those members who qualified. For those interested, the fee structure for accreditation may be found on the ICCP web site, www.iccop.org

Accreditation brings up questions of liability of the ICCP to possible lawsuits from disgruntled failed applicants. This legal aspect of liability is to be researched and reported on in 2002. *Continued on p. 8*

The use of automated analysis for both maceral and reflectance analysis was either discussed or alluded to in four sessions, so it is a current topic.

Graphite and semi-graphite sheets were prepared by Dr. Barbara Kwiecinska for the Handbook, and were presented and approved by the members, a big job and very well done.

Peter Crosdale, Newsletter Editor, has reproduced the out-of-print 1963 ICCP Handbook on CD-ROM, and has included keyword references. It is available now for \$15.00, and I can't wait for mine to arrive. Order through Rudi Schwab or Peter Crosdale.

The ICCP has purchased two glass standards, both in the care of Walter Pickel. One can be loaned out for a deposit fee, while the other is to remain in Sydney, to be used for calibrating submitted standards, also for a fee. Interested parties may contact Walter Pickel by e-mail: Walter.Pickel@CSIRO.au

The Conference Dinner was held at the world-famous Tivoli Gardens, on the second floor balcony of the main Pavilion overlooking the gardens. Acrobats performed while we honored guests fraternized and drank to one another's good health – truly a fitting end to a wonderful conference. After dinner we strolled the grounds well into the night.

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2003 TSOP Dues Notice

Members whose dues expire at the end of 2002 will find a dues form enclosed with this Newsletter. Please check and correct the printed address and contact information and promptly return the form and payment to Secretary-Treasurer Mike Avery (see address on form). Dues should be paid by December 31.

At other times, please forward any changes in address or other contact information to the Membership Chair, Peter Warwick (see page 3).

Blank dues forms (and application forms for new members) may be found as PDF files on TSOP's web site at www.tsop.org Y

Call for papers: 20th Annual International Pittsburgh Coal Conference

The 20th International Pittsburgh Coal Conference (<http://www.engrng.pitt.edu/~pccwww/>) will be held 15-19 September 2003 at the Westin - Convention Center in Pittsburgh, PA. Abstracts for the meeting are now being solicited and are **due 1 January 2003**. The complete call for papers can be found at:
<http://www.engrng.pitt.edu/~pccwww/03firstcall.PDF>

Several program topics areas may be of interest to TSOP members, in particular topic area 8 (Sequestration) and 11 (Coal Geosciences and Resources). The latter session is being organized by Jim Hower. Potential topics for papers include:

8. Sequestration

- 8.1 CO₂ separation and capture
- 8.2 Sequestration of CO₂ in geologic formations
- 8.3 Enhancing natural sinks
- 8.4 Advanced CO₂ conversion concepts
- 8.5 Modeling and assessments
- 8.6 Non greenhouse gas capture and storage
- 8.7 Multi pollutant capture and storage

11. Coal Geosciences and Resources

- 11.1 Coal resource evaluation
- 11.2 Coal geology
- 11.3 Coalbed methane
- 11.4 Petrology and geochemistry of coals
- 11.5 Evaluation of trace elements considered to be health hazards
- 11.6 Geotechnical characterization of coal-bearing strata.

Please note that the Pittsburgh meeting is the week prior to the TSOP meeting in Arlington, VA. International participants may be interested in arranging travel so that they can participate in both meetings. Any questions about the meeting can be forwarded to the conference office at pcc@engr.pitt.edu. Any questions about session 11 can be sent to Jim Hower at hower@caer.uky.edu. We hope to see you in Pittsburgh and Arlington next September. Y

In Memoriam Dr. William A. Kneller 1929-2002

With the headline "Geologist Built University of Toledo Department," the Toledo (Ohio) Blade newspaper of Sept. 16, 2002, reported the passing of Dr. William A. Kneller on September 13. He had retired in 1989 for health reasons, and died at age 73 of kidney failure arising from diabetes.

According to that report, with information supplied by Dr. Mark Camp, an associate professor of geology at UT and former Kneller graduate student, Dr. Kneller was hired there in 1961 to chair a small geology and geography department. He separated those disciplines, serving a long term as chair of the geology department and starting its master's degree program in 1966. Among his accomplishments were setting up extensive laboratories with modern analytical equipment, creation of an endowed Institute for Silicates and Ceramic Research, and a Subsurface Data Center core storage facility. He and his students performed extensive work in coal characterization; his research included organic-inorganic interactions in combustion and synthetic fuel production.

He attended TSOP's first annual meeting in Virginia in 1984, bringing five of his graduate students to the inaugural meeting of a promising young society. That visit was the start of a productive relationship; he was a TSOP member since then, attending many more annual meetings with his graduate students. Several of his graduate students have become TSOP members and officers.

Kneller held bachelor's and master's degrees from Miami University of Ohio and a Ph.D. from the University of Michigan, and was a 30-year veteran of the Marine Corps Reserve, retiring with the rank of Colonel. In addition to professional geological societies he belonged to Sigma Gamma Epsilon and Phi Sigma honor societies, and served on the University's Faculty Senate. He is survived by Olga, his wife of 51 years; four children, three grandchildren, and a sister. Memorial contributions may be made to the American Diabetes Association, the National Kidney Foundation, or the Multiple Sclerosis Society.

Former graduate student Jeff Quick adds: Although many TSOP members are



familiar with Bill's work in organic petrology, this was only part of his research interests. Bill was also an expert in silicate science. He published extensively on highway aggregates, concrete petrology, the chemistry and behavior of chert, the beneficial uses of iron and steel slags, the geology of glacial sand and gravel deposits, historic building stones, and ancient mortars and cements. He also published on the use of thermal analysis to evaluate

carbon blacks, chert, power plant fly ash, clays, carbonates, and coal. He held a U.S. Patent for beneficiation of cement kiln dusts and was involved with the selective mining and combustion of an Ohio coal to produce a germanium-enriched ash. Many of his graduate students will recall pleasant hours spent studying in the cool quiet of the X-ray lab while tending his instruments to assay raw materials used to make the ceramic tiles on the U.S. space shuttle.

During a visit to Bill Kneller's home a few years ago, I saw a bookshelf with his students' theses prominently displayed. These forty-seven books were clearly important to him and attest to the importance of teaching in his life. As a former student, I count his ability to instill an enthusiasm and passion for science among his most enduring accomplishments.

Renee Klinger, also a former graduate student, remembers: I looked up to Dr. Kneller and admired him very much. I owe a lot to him; it was not just about learning organic petrology, organic geochemistry, or the coal industry, but about efforts gained from hard work and dedication. Dr. Kneller gave everything to his students, just ask his wife or his daughter. He was gruff on the outside to

many, but a big teddy bear to those of us who knew him well. Dr. Kneller truly cared about his students, probably too much. I know that for years after I graduated, when I would go back to see him in his office, I would see a picture of myself and a few of his other past graduate students. I think that pretty well says it all as to how much we mutually cared for and respected him, and how he certainly felt about his students.



Photos courtesy of Dr. Mark Camp

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19th Annual Meeting CSCOP - TSOP 2002 in Banff

Meeting Report by David Glick

TSOP's 19th Annual Meeting, its third held jointly with the Canadian Society for Coal Science and Organic Petrology, was held in Banff, Alberta, Canada August 31 - Sept. 4, 2002. The Banff Centre, a meeting, arts and inspirational facility with a large campus close to downtown Banff, provided an exceptionally scenic site with technical and dining facilities very well suited to the meeting.

Sponsored by Elsevier Science and the European Association of Organic Geochemists, the conference theme was "Emerging Concepts in Organic Petrology and Geochemistry." The meeting was organized by a committee of members in Canada and the U.K.; Martin Fowler (photo, front cover) of GSC-Calgary, Canada, was the Conference Chair. Among the committee members, Lavern Stasiuk of GSC-Calgary performed many duties as the TSOP liaison for the meeting, and Judith Potter of JP PetroGraphics provided the statistics presented in this article. There were 141 delegates in total, including 11 students and about 30 guests and accompanying persons.

Activity began on Saturday, August 30, with 19 people attending a short course on "A prediction of total organic carbon contents and hydrogen indices in marine sediments" presented by Richard Tyson.

Field trips were held Saturday and Sunday, and resumed on Wednesday and Thursday, with some trips being held twice for convenience in scheduling around other trips and arrival/ departure dates. In total, 20 people attended the Rocky Mountain Geology, Hydrocarbon Source Rocks and Coal trip; 29 attended the two trips to the Burgess Shale site (see photo on p.20, back cover); five attended the trip to see Upper Cretaceous Geology near Drumheller and the

Royal Tyrrell Museum of Paleontology; and 28 delegates and guests attended the sight-seeing tours of the Banff to Lake Louise area of Banff National Park.

Registration and a large welcoming ice-breaker party were held Sunday evening in the Max Bell Building, the location for all of the technical activities. TSOP's outgoing Council held its meeting later Sunday evening.

Parallel technical sessions on Sources of Natural Gas and Petroleum Systems were held on Monday morning. Poster displays were available for viewing throughout the conference. A luncheon was provided on Monday, and TSOP's business meeting took place immediately afterward. President Tim Moore conveyed that office to incoming President Maria Mastalerz, and TSOP Council members (photo below) and committee chairs were introduced and gave brief reports. TSOP's upcoming meetings in Washington, DC, 2003 and Sydney, Australia, 2004, were announced and invitations were extended. Karyn Pratt, manager of the Petroleum Geochemistry division of Geotech, Western Australia, received TSOP's Farthest Traveled award (photo below left).

Duncan Murchison became TSOP's seventh Honorary Member. The presentation was made by Tim Moore, outgoing TSOP President. CSCOP also conducted business, with Fariborz Goodarzi receiving CSCOP's Hacquebard Award (photos, page 11). On Monday afternoon, the parallel sessions continued. The meeting of TSOP's incoming Council was held Monday evening.

On Tuesday, the Dr. Archie G. Douglas Symposium, "Celebrating 45 Years of Organic Geochemistry," was held



Tim Moore presents Farthest-Traveled Award to Karyn Pratt, W. Australia. D. Glick photo



Members of TSOP Council 2002-2003 at Banff Meeting: left to right, front row: Pres.-Elect Bob Finkelman, Pres. Maria Mastalerz, Vice-Pres. Peter Warwick; back row: Sec.-Treas. Mike Avery, Editor David Glick, Councilor Ray Pheifer. Not shown: Councilor Bill Huggett. J.B. O'Donnell photo



Lavern Stasiuk presents TSOP Honorary Member plaque to Duncan Murchison.
D. Glick photo



Fariborz Goodarzi receives CSCOP's Hacquebard Award from Judith Potter.
D. Glick photo

to celebrate the outstanding achievements of one of the pioneers of organic geochemistry. The Symposium was chaired by Martin Fowler, Brian Horsfield and Steve Larter; each of them also made a technical presentation and, along with other colleagues and past students of Dr. Douglas, touched on the many topics of his research at the University of Glasgow and the University of Newcastle. Following an introduction by K.E. Peters, the Treibs Award was presented to Dr. Douglas by J.R. Maxwell, himself the 1989 recipient of the award. The Treibs Award is presented by the Geochemical Society's Organic Geochemistry Division for major achievements, over a period of years, in organic geochemistry. Dr. Douglas spoke in acceptance of the award, and also made a technical presentation reviewing medical aspects of carcinogenic compounds from organic sedimentary materials.

The evening banquet in the main room of Donald Cameron Hall featured a bagpiper leading the procession into the dining room. A group photograph (still being processed as of this writing) was taken. Following dinner, participants saw a good-humored slide show on Archie Douglas and in particular his students and their non-technical activities



Socializing follows the banquet.
D. Glick photo

through the years. Music and socializing continued after the program (photo below left).

Wednesday morning featured a session on Coal and Environment, with parallel sessions first on Shallow Thinking and then on Novel Analytical Techniques. The technical sessions ended mid-day Wednesday; in total over 2.5 days there were 66 oral presentations and 43 posters. Proceedings are to be published in special issues of *Organic Geochemistry* and *International Journal of Coal Geology*.

Field trips resumed Wednesday afternoon and Thursday. Many participants were also seen to enjoy the town, the mountain scenery, and geology on their own before departing.

Hamed Sanei Wins Student Paper Award

TSOP's Best Student Paper award was presented to Hamed Sanei (photo below) of the University of Victoria, British Columbia, Canada, for his poster, "Sources of Heavy Elements in the Recent Sediments of Pigeon Lake, Alberta: Assessment of the Impact from Coal-Fired Power Plants Versus Other Anthro-pogenic and Natural Sources,"



Hamed Sanei receives Best Student Paper Award from Colin Ward.
D. Glick photo

co-authored with Dr. F. Goodarzi. TSOP's committee for the award was chaired by Colin Ward and included MaryAnn Malinconico, Ray Pheifer, and Peter Warwick. Y

TSOP Research Committee News

Suzanne J. Russell
Research Committee Chairman

Student Research Grant Awarded

Bethany Burnett of the University of New Mexico was awarded the 2002 TSOP Graduate Student Research Grant; see page 5 for the story and research summary. Graduate students and professors should watch this Newsletter and the TSOP web site for the 2003 Student Research Grant forms and application deadline.

Research Committee Report on Subcommittees

There are presently four official subcommittees of the Research Committee. These are: 1) TSOP-ICCP Dispersed Organic Matter Classification Working Group (Vern Stasiuk, chairman), 2) Quaternary Climate Research Initiative (Tim Moore, chairman), 3) Maceral Ratios (Mick Frank, chairman), and 4) Coalbed Gas in Low-rank Coals (Peter Warwick and Maria Mastalerz, co-chairmen), the newest sub-committee which was approved by the TSOP Council at the Banff meeting. A description of this new subcommittee is given below:

Starting a Research Subcommittee

Starting a Research subcommittee is a straightforward process. A proposal is submitted to the Research Committee chairman using the form provided on page 13. With the endorsement of the Research Committee chairman, the proposal is submitted to Council for approval at their mid-year or annual meetings. Monetary grants (\$1000 US per year) are available through Council to pursue subcommittee activities. A subcommittee chairman will be nominated by the Research Committee chairman (volunteers are encouraged) and approved by Council. A subcommittee is discontinued when there has been no activity for two years.

Coalbed Gas in Low-rank Coals

The initial goal of this project is to form a working group of experts who will compile a list of recommended procedures for testing gas content of low-rank coals.

With the advent of major coalbed methane production from low-rank coals, such as in the Powder River basin of the United States, there is increased world-wide interest in evaluating low-rank coal basins for their gas potential. The gas content in low-rank coal basins has generally not been evaluated because of their presumed lack of significant thermogenic gas. The purpose of this working group is to identify the unique procedures and methods that need to be utilized when testing and evaluating coalbed methane resources in low-rank coal basins. This need results from the fact that not all techniques used to evaluate gas content of high-rank coals are applicable for low-rank coals. In the next phase, this working group will test reproducibility of selected analytical procedures, such as adsorption isotherms, and will conduct round-robin analyses of coal or gas samples. Future plans are to participate in multi-lab/multi-agency round robin testing of desorption and adsorption techniques used to characterize gas contents in low-ranked coals.

Anticipated products will include a list of recommended procedures and techniques for handling and evaluating coalbed methane from low-rank coal basins.

**TSOP Research Committee Proposal Form
For Subcommittees and/or TSOP Sponsored Projects**

Title of subcommittee:

Title of project:

Why is this project of benefit to TSOP? (use additional paper where needed)

Goal(s):

Approach or method(s):

Anticipated products:

Suggested subcommittee chairman:

Suggested subcommittee members:

Estimated time for completion of project:

Estimated cost of project:

Status Report on TSOP-ICCP Dispersed Organic Matter Classification Working Group

Lavern Stasiuk, Jack Burgess, Carolyn Thompson-Rizer, Adrian Hutton and Brian Cardott

During 2001-2002 the TSOP Dispersed Organic Matter Classification research group has made presentations to the ICCP DOM working group at the annual meeting in Copenhagen. Prior to this the draft classification was circulated via email to the TSOP DOM working group members for their comments. Table 1 is the current draft of the DOM Classification incorporating changes and suggestions made by ICCP and TSOP members during 2001-2002.

Currently images are being compiled and new images are being collected using the Geological Survey of Canada's Zeiss Axioplan II- Axiovision system. These images will show representative macerals in the DOM classification within strew mount samples and in polished block samples, in transmitted white, fluorescence, and reflected white light modes. Ideally the committee would like to use the same geological sample (e.g. Green River shale) to illustrate any given maceral in each of the various modes. For each image/sample and each maceral, age, formation, location, total organic carbon and Rock Eval Indices (e.g. HI, OI) will be quoted. Dr. Jack Burgess and Humble Instruments have provided a good set of samples for this purpose. Plate 1 on page 15 illustrates one example of the perceived product. Dr. Burgess is making a presentation to the ICCP Commission II at the annual meeting in Maputo, Mozambique, and Pretoria, South Africa, September 22-29, 2002.

TABLE 1. TSOP and ICCP Classification of Dispersed Organic Matter in sedimentary rocks and isolated organic matter¹ from petroleum source rocks, oil shales, clastics, and carbonate rocks² for reflected and transmitted light microscopy, with fluorescence illumination capability.

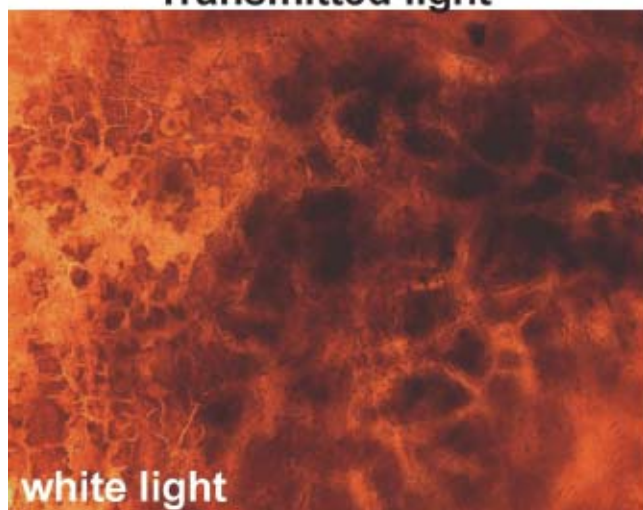
GROUP	MACERAL ³
Vitrinite	Telinite
	Collotelinite
	Vitrodetrinite
	Collodetrinite
	Gelinite
	Corpogelinite
Liptinite	Alginate
	Bituminite (Amorphinite) ⁴
	Liptodetrinite
	Sporinite
	Cutinite
	Suberinite
	Resinite
	Chlorophyllinite
Inertinite	Fusinite
	Semifusinite
	Funginite
	Secretinite
	Macrinite
	Micrinite
	Inertodetrinite
Zooclasts	Scolecodont
	Graptolite
	Chitinozoa
	Foram lining
Secondary Products	(Migra)bitumen
	Oil
	Pyrobitumen

Footnotes 1. Outcrop, core, side-wall core, well cuttings samples at moderate thermal maturity (within the oil window 0.5 to 1.3% Ro); 2. Sample processed with HCl and HF acids. 3. Using transmitted light and kerogen concentrates, it may not be possible to subdivide the vitrinite group into macerals, therefore vitrinite must be used. This may also apply to macerals within the inertinite group. 4. Bituminite is a defined ICCP maceral term, variety amorphinite is more commonly applied to this type of DOM and can be further expanded upon using the following recommendations: (i) fluorescing (fluoramorphinite) and non-fluorescing (hebamorphinite) amorphinite (Senftle et al., 1987) or (ii) Types A, B, C, D (Thompson and Dembicki, 1986). May 22/2002

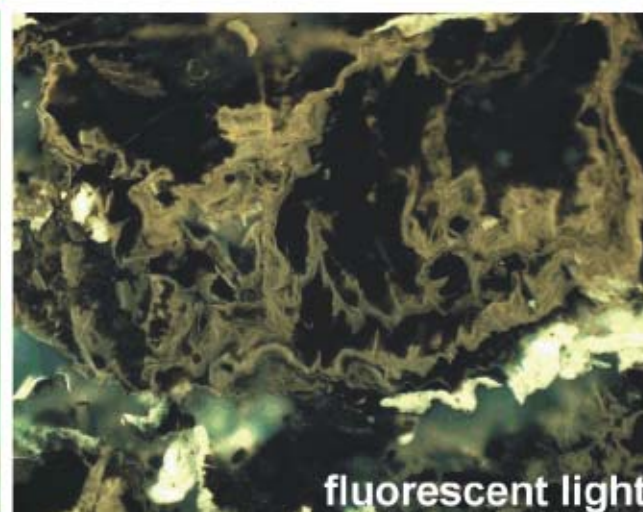
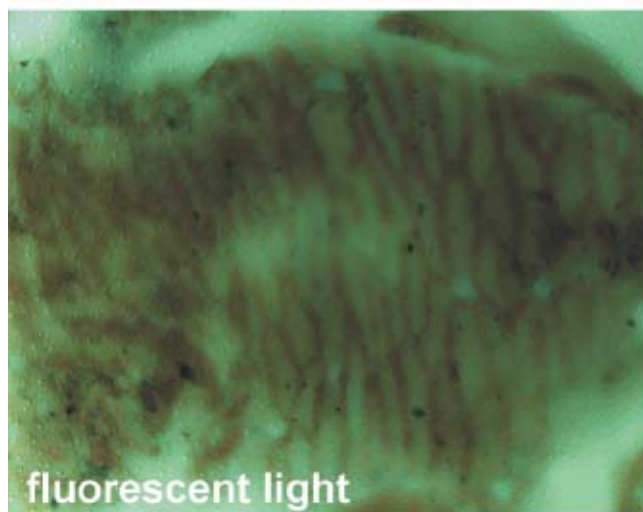
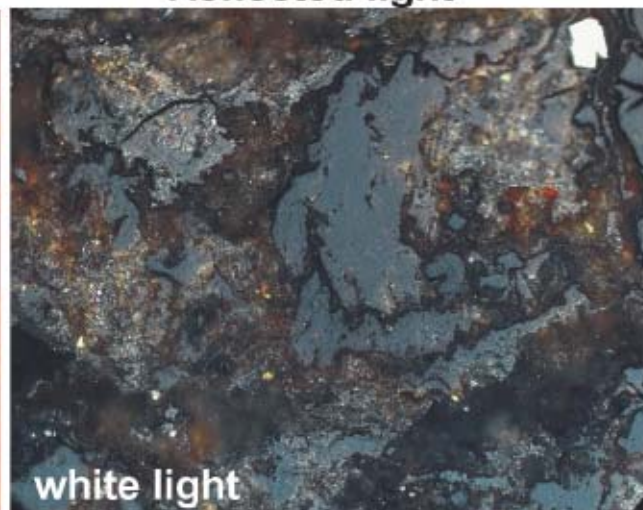
Plate 1. An example of a set of images showing representatives of macerals in the TSOP-ICCP Dispersed Organic Matter Classification, in progress.

**Formation/unit: Indiana paper coal. Age: Pennsylvanian. Location: Parke County, Indiana. %Ro = 0.72, TOC = 38.4, HI = 291, OI = 68
Macerals: cutinite and vitrinite**

Transmitted light



Reflected light



TSOP PUBLICATIONS

<u>TSOP Number (USD)</u>	<u>Name of Publication</u>	<u>Price</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 & 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

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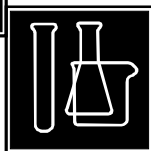
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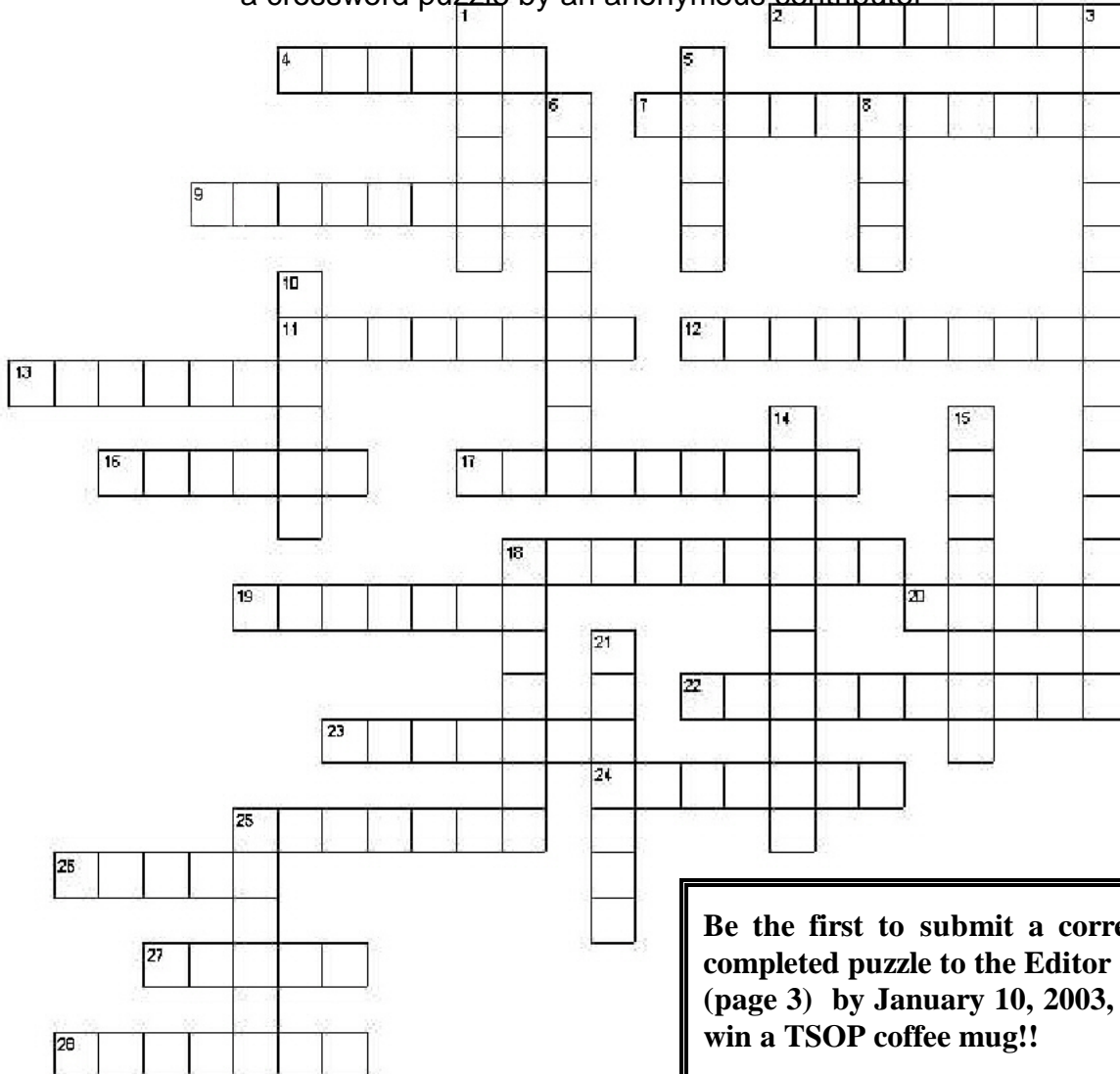
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COALFIELDS OF THE WORLD

a crossword puzzle by an anonymous contributor



Be the first to submit a correctly completed puzzle to the Editor (page 3) by January 10, 2003, and win a TSOP coffee mug!!

ACROSS

2. Widely exported coals from Colombia
4. Carboniferous lignite
7. World class producer of subbituminous coal in western Great Plains (USA)
9. Great Plains (USA) lignite
11. Turkish Tertiary lignite
12. Tierra del Fuego
13. Coalbed methane producer in Alabama
16. New South Wales major basin
17. Republic of South Africa

18. In the Rockies of British Columbia
19. Carboniferous of Poland
20. Southern Wyoming
22. Major basin in Central Appalachians
23. "Barkinite" locality
24. Major producer in Venezuela
25. English coalfield
26. Utah Cretaceous
27. South Island of New Zealand
28. Home of the Pittsburgh coal bed

DOWN

1. Major field in the Ukraine
3. Coalfield of Zola's Germinal
5. Permian of Queensland
6. Tertiary of Washington
8. Pennsylvanian of Germany
10. Spanish low rank
14. Saskatchewan lignite
15. Westphalian of France
18. Triassic basin in Queensland
21. Home of some of the earliest reptiles
25. Brazilian Gondwana

Calendar of Events

2002

December 9 -11, 2002: 'Black Shales' meeting: Organic-carbon burial, climate change and ocean chemistry (Mesozoic-Paleogene), London. Geological Society of London, Marine Studies Group. <http://www.earthsci.ucl.ac.uk/conferences/GSLC>

2003

February 4 -5, 2003: Reservoir Geochemistry Conference by the Geological Society of London, Petroleum Group, to promote the latest advances in organic and inorganic geochemistry and their applications in the evaluation and study of reservoirs. Deadline for submission of formal abstracts is 1 June 2002. Contact Dr. John Cubitt: john-cubitt@es-information.de mon.co.uk

May 12 -16, 2003: Fourth Geofluids Conference on fluid evolution, migration and interaction in sedimentary basins and orogenic belts, organized by the Netherlands Institute of Applied Geoscience TNO-National Geological Survey. In Utrecht, The Netherlands, at the campus of Utrecht University. See <http://www.nitg.tno.nl>

May 26 - 30, 2003: The Fifth International Symposium on Applied Isotope Geochemistry(AIG-5), P&O Resort, Heron Island, Great Barrier Reef, Queensland 4680, Australia. See <http://www.chem.mq.edu.au/aig-5>

August 10 - 16, 2003: 55th Annual Meeting of ICCP, The International Committee for Coal and Organic Petrology, Utrecht, The Netherlands. See <http://www.nitg.tno.nl/eng/55iccp.shtml>

August 10 - 16, 2003: XVth International Con-gress on Carboniferous and Permian Stratigraphy (XV ICC-P), Utrecht, The Netherlands. See <http://www.nitg.tno.nl/eng/iccp.shtml> Theme: 'Permo-Carboniferous around the Southern North Sea Basin'.

Sept. 21 - 24, 2003: 20th Annual TSOP Meeting, **TSOP 2003**, Washington, D.C. Area (Arlington, Virginia, USA). See page 2 and <http://www.tsop.org/mtgdc.htm>

October 20 - 22, 2003: International Ash Utilization Symposium, Lexington, Kentucky, USA. See <http://www.flyash.org>

TSOP 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 University of New South Wales, centrally located with respect to Sydney Airport, beaches and the city centre.

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(s), registration, icebreaker |
| 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	Colin Ward	Lila Gurba
Claus Diessel	Adrian Hutton	Joan Esterle
Herbert Volk	Harold Read	Tim Moore

For more information contact:

7Neil Sherwood, CSIRO Petroleum: Neil.Sherwood@csiro.au

Photo Gallery



Banff Meeting Field Trip to Burgess Shale outcrop, a UNESCO World Heritage Site, at the Walcott Quarry on Fossil Ridge, Thursday, 5 September 2002. Photo by Ray Pheifer.