

All photos Peter Crosdale

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Council of the International Committee for Coal and Organic Petrology (ICCP)

President (1999 - 2003) Dr. Alan C. Cook Keiraville Konsultants Pty. Ltd. 7 Dallas Street Keiraville, NSW 2500 AUSTRALIA Tel: +61-2-4229 9843 Fax : +61-2-4229 9624 mailto:acc@ozemail.com.au





Vice-president (1999 - 2003)Prof. Dr. hab. inz. Barbara K. Kwiecinska mailto:kwiecin@uci.agh.edu.pl



General Secretary (2000 - 2004)Dr. Petra David mailto: p.david@nitg.tno.nl





Treasurer Editor (2000 - 2004)(1997 -)Dr. Rudolf M. Schwab Dr. Peter J. Crosdale mailto: rudi@chesternet.co.uk mailto: peter.crosdale@jcu.edu.au



Commission 1 Chair (2000 - 2004)Dr. Walter Pickel mailto:walter.pickel@syd.dpr.csiro.au



Commission 1 Secretary (2000 - 2004)Dr. Deolinda Flores mailto:dflores@fc.up.pt



Commission 2 Chair (1999 - 2003)Prof. Dr. Wolfgang Kalkreuth



Commission 2 Secretary (1999 - 2003) Dr. M. Ángeles Gómez Borrego mailto:wolfgang.kalkreuth@ufrgs.br mailto:angeles@incar.csic.es



Commission 3 Chair (2000 - 2004)Dr. Rosa Menéndez mailto:rosmenen@incar.csic.es



Commission 3 Secretary (2000 - 2004)Dr. Henrik Ingerman Petersen mailto:hip@geus.dk

Past President
Manuel João Lemos de Sousa mailto: mlsousa@fc.up.pt
Returning Officer
Harold Smith mailto: a.h.smith@sheffield.ac.uk
Honorary Auditor
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Webmaster (<u>http://www.iccop.org</u>)
David E. Pearson mailto: dpearson@coalpetrography.com
Archives
Faculdade de Ciências, Universidade do Porto
Manuel João Lemos de Sousa mailto: mlsousa@fc.up.pt
Handbook Administration
Petra David mailto: <u>p.david@nitg.tno.nl</u>
Membership Enquiries
Dr. Petra David
Netherlands Institute of Applied Geoscience TNO
National Geological Survey, Department of Geo-Energy

N P.O. Box 80015 3508 TA Utrecht THE NETHERLANDS Ph. +31 30 256 4648 Fax +31 30 256 4605 Email: mailto: p.david@nitg.tno.nl **OR** visit our web site http://www.iccop.org

From the Editor

Items of special interest in ICCP News No. 28 are 1) news from the commissions and accreditation programme; 2) the appearance of a number of articles from our Indian members, giving this ICCP News a focus on Indian contributions to coal petrology; and 3) some timely reminders on the use of our classification system. You will note that contributors now have their photograph published alongside their article, a policy I hope to continue in the future.

News from the commissions and accreditation programme is meant to encompass only brief updates of some of the activities happening in those areas. It is not meant to be a detailed summary of all activities and in no way covers the wealth of material presented by individual working groups at the annual meeting. It is hoped that this will become a regular feature of ICCP News.

Contributions received from our Indian members help to give this edition of ICCP News a 'focus on India'. A brief history of coal petrology in India by Dr H.S. Pareek makes us realise how much India has given to the coal petrology community in the past, while the research article by Dr H.K. Mishra indicates that Indian coal petrologists have much to offer us in the future. Again, it is hoped that these thematic papers will be a feature of future ICCP Newses and give an individual focus to each edition.

Coincidentally, an article by Dr Paul Lyons in this edition on the incorrect use of the term 'sclerotinite' mirrors sentiments by the President on the vigilance we must all take in the correct use of our terminology. If we are not vigilant, our classification scheme will become irrelevant.

Finally, please read carefully the information on the upcoming ICCP meeting in Utrecht as well the summary information given for the concurrent Carboniferous and Permian Congress. Beware, one is ICCP and the other is ICC-P!! Please log on the websites given for the most current information. More will information appear in the next newsletter on the ICCP Meeting.

I cannot end this column without my usual plea for contributions and also a very big thanks to the people who took the time to submit an item for this edition. Cheers,

Peter

ICCP Editor - mailto:Peter.Crosdale@jcu.edu.au

From the President

In the last Newsletter, I mentioned the goal of wider use of ICCP nomenclature and I believe that we should all use every opportunity to try to achieve this. One member in supporting this also drew my attention to a problem that is almost the reverse of this proposition. This was a case where a petrologist had used ICCP terminology correctly in a manuscript, but encountered referees who requested changes that were based on an incorrect interpretation of published ICCP work. I believe that we should also try to assist where this occurs.

It is appropriate first to request referees, and the editors for whom they work, to consult the work of ICCP where there appears to be some doubt in relation to terminology or nomenclature. In cases relating to general nomenclature matters, advice could be obtained from the Chair of Commission I. If problems arise relating to applied petrology, questions could be addressed to the most appropriate Commission. In future, I suggest that members who encounter this sort of problem refer the matter to ICCP. Hopefully, publication of the new handbook will reduce problems and extend the correct use of ICCP terminology and methodology, but I do not for a moment imagine that it will be an all-encompassing panacea or solution.

The International Journal of Coal Geology Vol 50 has appeared and a number of the papers are valuable contributions such as those on mechanisms of coal metamorphism and on coal for metallurgical coke. However, other than its use in coke studies and in relation to oil generation, there is no example of the more general use of coal type in geological studies. One paper mentions "a way ahead" for coal petrology, but it appears to this writer that most petrologists were already "there" about half a century ago. The achievement of ICCP in providing a method for the classification and description of the vast majority (or all depending on your view of how classifications can be applied) of the organic matter present in coals does not appear to be recognised, nor is its use advocated in any really active manner. Perhaps the fault for this lies with us, the organic petrologists. Could we have achieved all there is to do with organic petrology (seems pretty unlikely) or is our work too confusing to be understood? If either extreme is the case, or as is more likely, the truth lies somewhere in between, it seems that we do need to look to reinforcing the

extent to which organic petrology is accepted and used.

When you look at the diversity of material in coals and dispersed organic matter, it is surprising that we do not hear more commonly during ICCP meetings a clash between lumpers and splitters that is, the use of a small number of categories (lumping) compared with the use of a large number of terms (splitting). There seems to be an unspoken agreement between members about the need to, at one and the same time attempt to group like with like, but to avoid an overabundance of terms. Since we can disagree about most things, this underlying level of agreement about the level of complexity of classification that can be sustained is really quite remarkable (I have a feeling that I will live to regret writing that sentence, but at this stage it does seem to be true). Perhaps we have got the level of complexity for our current version of the Stopes Heerlen system "about right".

It is, however, true that most applications of coal petrological data use very few of the categories that we so laboriously analyse. Partly this may be related to levels of precision but it also seems to be related to the level of difficulty of the mathematics involved once you use more than "a couple of variables". There are plenty of large databases of maceral analyses, but very few studies employing factor analysis or cluster analysis of these data. The most intensive use of maceral data (outside that for the steel and power generation industries) generally appears to be for reconstructing peat environments. Most studies of modern peats and Tertiary coals suggest, however, that the data for older coals cannot be applied to modern analogues in any simple fashion.

One area where petrological data are being accepted is the ISO coal classification system where vitrinite reflectance, maceral composition and ash yield are the major classification parameters in the classification now in its final stages of approval. This has resulted from sustained input from ICCP over more than ten years. In turn, acceptance of petrological methods has been aided by the success of the original accreditation program. Hopefully, the blend accreditation program will be equally effective in drawing attention to the unique ability of petrological method to analyse mixtures of coals.

Preparations are now well in hand for the Utrecht meeting and my desk is strewn with colour maps of various parts of that city that I have printed from a file sent to me. The detailed conference information will soon be sent out (not true - it just arrived!) and Petra David is doing a splendid job (still true) along with all the work associated with the position of General Secretary - I wonder if she would have invited us had she known that in 2003 she would be General Secretary! We are still hoping to get the material together to send out relating to the possibility of formalizing at least part of the ICCP as a registered organization of some type in time for a vote before the Utrecht meeting. Getting the material together is proving to be relatively difficult but we are still hoping to have a paper ready for voting. So in addition to voting, please come to Utrecht and tell us what you believe we should do. If you cannot come, there is always Email, or even paper and a quill pen! One way or another, it is important that you express a view over the future structure of your ICCP. So while comment on any aspect is welcome and important at any time, comment on structure is especially welcome.

Please contact me at acc@ozemail.com.au

Alan Cook Wednesday, 19 February 2003

Coal Petrology in India

by H.S. Pareek Pallav Puram, Meerut, India



The first attempt to study Indian coal under the microscope was made by Sir Cyril S. Fox (1926, 1927) in the Geological Survey of India (GSI), using slides prepared in the U.K. A.K. Banerji (1932) followed up this work in the GSI on sections prepared in Germany.

P. N. Ganju (1955) made detailed studies on Indian coals in thin sections in Durham and set up the first coal petrology laboratory in India at Aligarh Muslim University with H.S. Pareek as the first research scholar; the detailed account of coals of the Talchir coalfield was presented for the first time for any individual coalfield (Pareek, 1956, 1963). Bankim Mukherjee opened a laboratory undertaking vitrinite reflectance measurements at the Jadarpur University, Kolkata, which formed the first laboratory in this aspect in India. That is how coal petrology gained shape in India. Unfortunately, both of the laboratories at Aligarh and Jadavpur are closed due to the demise of their founders.

In 1958, H.S. Pareek opened a coal petrology laboratory at GSI and presented the first detailed petrological account of the coals of the Karanpura Coalfield (Pareek, 1965), training several scientists; this laboratory is still functional. Coal petrology as a subject gained rapid interest country-wide and laboratories started opening at Kolkata University, the Central Fuel Research Institute, the Birbal Sahni Institute of Palaeobotany, the Central Mine Planning & Design Institute and Banaras Hindu University, in the main. The subject that initially began with a morpho-petrological approach, basically in thin sections, has today exclusive reliance on polished sections, aiming at quantitative estimation of macerals and microlithotypes, leaving the Leitz six- spindle integrating stage, to the point counter. All laboratories are quite well equipped for the purpose and spectrofluorometric studies are initialised. The nomenclature and terminology of the microconstituents of coal, after ICCP, is being followed everywhere. Thus coal petrology that gained shape in 1952 has journeyed for a full 50 years.

During this half a century, all the significant Gondwana (Permian) and Tertiary coalfields and Tertiary lignite fields have been petrologically reported by various workers in about 550 publications. But the data, compared to 211 billion tons of solid fuel resources, is not fully characteristic, though representative fully. Petrographic composition and vitrinite reflectance throw light on the non-coking nature of the coals, predominating the deposits (Pareek, 1988). Accumulated data available in various publications exists on the Raniganj, Jharia, Bokaro, Ramgarh, Daltonganj, Hutar, Auranga, Karanpura and Saharjuri coalfileds of the Damodar Valley Basin; of Rajmahal Basin; Singrauli, Sohagpur, Umaria, Johilla, Bisrampur and Chirimiri Coalfields of the Son Valley Basin; Pench, Kanhan, Upper Tawa Valley and Pathakhera of the Satpura Basin; Talchir, Ib River and Korba of the Mahanadi Valley Basin; of Godavari Valley and Wardha Valley; Rangit Valley Coalfield; Kameng and Bhangtar Coalfields of the Gondwana; Ghuneri of the Cretaceous; and Tertiary coals of the Jammu,

Meghalaya and Assam Coalfields. The Tertiary lignites of Rajasthan, Kashmir, Gujarat, Assam, Kerala and Tamil Nadu have also been investigated. Natural coke of Jharia and Raniganj has also been investigated in detail. Fluorescence studies, having become an integral part of coal petrology, are extremely helpful in locating high proportions of liptinite in certain coals.

Evaluation of petrological data has led to solving of problems of basinal geology and coal industry. Petrographic profiles of coal seams have been helpful in establishing usefulness of coal petrographic data in correlation of coal seams (Pareek, 1964; Pareek, Sanyal and Chakrabarti, 1964) also by trace element geochemistry (Pareek and Bardhan, 1985). A relationship has been brought out between vitrinite oil reflectance and the palaeodepth and palaeotemperature by Pareek (1988, p300-1). Mishra and Cook (1992) and Bardhan and Ghosh (1999) have revealed the tectono-sedimentary and geothermal history of the Peninsular Gondwana basins.

Vitrains from various coals were studied to ascertain the coking characteristics of coals (Pareek, 1969). The different techniques employed to study the coking nature of bituminous coals were reviewed (Pareek, 1975). Washability characteristics of coals from plants have been studied (Bardhan and Sen Gupta, 1998) and run of mine raw samples (Devbhuti and Bandopadhyay, 1996). Mukherjee and Samuel (1987) presented data on the hydrogenation characteristics of lignites and coals. Petrographic studies of deep seated coal cores have been helpful in concluding the potentiality of the basin for underground coal gasification (Pareek, 1983; Samanta, 1987). Predicting carbonisation properties of coking coals has been studied by Chaudhuri, Choudhuri, Sarkar, Bhatt, Ghose, Chatterjee and Mukherjee (1997). Suitability of coals for coal bed methane potential has been brought out in the Jharia Basin by Katiar, Kohli, Rawat, Pangtey, Thomas, Misra and Chandra (2000).

However, in consistence with the international trend, there is progressive and marked decline in coal petrological interests and activity. This is linked with paucity of job opportunities and financial constraints at all levels, coupled with industrial needs. The subject of coal petrology has now entered a waning phase after being in glory for a full 50 years.

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Petrographic Image Analysis - A case study of Indian Permian coals

Dr.H.K.Mishra, Deputy Chief of Geology and Head Coal Petrography Laboratory Central Mine Planning & Design Institute, Ranchi, India,834008



Abstract

An attempt has been made to carry out maceral analysis of Indian Permian coal through Petrographic Image Analysis (PIA). This PIA system developed in the present study is capable of identifying the major maceral groups, viz. vitrinite, inertinite and

liptinite, in high rank coals using gray-level characteristics based on the gray-level and colour detection techniques both in reflected-white and fluorescence light. Results obtained from the PIA method is compared with that of the conventional method; a strong correlation exists between the two results.

Introduction

Commercial application of Coal Petrographic data in the Indian coal industry is a recent phenomena. Since1983, CMPDI (Central Mine Planning and Design Industries Ltd), a subsidiary of Coal India Ltd., took the lead to introduce commercial application of Coal Petrography in the industry. Over the years CMPDI has built an experienced team of Coal Petrologists, with modern hardware and software facilities in its laboratory.

CMPDI is the nodal agency for detail coal exploration in the country and has been drilling over 200,000 m of core annually. The Coal Petrography laboratory of CMPDI is routinely engaged in coal petrographic analysis of coal core samples through conventional methods. In the present study an attempt is made to develop a methodology to carry out the maceral analysis through computer assisted Petrographic Image Analysis technique.

Methodology

In the present study altogether 260 samples were examined using conventional petrography as well as PIA technique. Coal samples were collected from the major coalfields of India, viz. Raniganj, Jharia, East Bokaro, West Bokaro, North Karanpura, Sohagpur, Pench Kanhan and Singareni; The samples were mounted and polished as per specification IS 9127(Part II), 1979.

Organic matter has been classified according to Stopes-Heerlen system as expanded by the ICCP (1963,1971,1973) and Stach *et al.* (1982).The maceral analysis is carried out as per the IS 9127 (Part-III: 1992).

The samples were examined in reflected white light and reflected fluorescence mode using a Leitz Orthoplan Polarizing Microscope with MPV-compact II. A Leica DMRXE microscope along with a Leica Q5501W Image Analysis system is used in the present study. A JVC KY-F55B 3-CCD colour video camera is attached to the microscope using a C-mount. The camera uses a CCD (Charge Coupled Device) as a light sensor to convert the optical image into the corresponding electrical signal.

Computer-assisted microscopy is well established (Petruk, 1989; Russ ,1990; Mukherjee *et al.*, 1993) wherein the optical image in the field of view of the microscope is digitized and stored in a computer as an array of values.

The PIA technique works principally on 1) Image Acquisition and 2) Image Processing. Image acquisition involves obtaining an image and storing it in a computer. In computer-assisted coal petrography the sample is typically a standard polished section (coal pellet). The polished section is examined under the petrographic microscope using a magnification selected to obtain a statistically meaningful sample of the feature of interest. Images from the microscope are captured by the video camera and transmitted to an image grabber board. Each image is composed of picture elements (pixels) and each of these can assume a digital value proportional to the gray level at the corresponding location in the image.

Result and Discussion

In the present study, maceral analysis was carried out using the PIA technique; the basic assumption of the study was that a particular gray level in an image, or a range of gray levels, is correlated with particular maceral group. The frequency distribution of gray levels is then converted into phase percentage of macerals. Although most of the individual macerals were identified by conventional petrography study, an attempt was made to identify only the major maceral groups (vitrinite, liptinite and inertinite) in this study. Indian coals vary widely in their vitrinite, inertinite and liptinite content. An experiment was carried out with different coal types and ranks.

It was observed that PIA technique matches very well with that of point counting technique for high rank coals $R_r \% > = 1.25$ (Damuda and Rajapur of Jharia Coalfields), where the liptinite content is nil or negligible. There was greater variation in the results when coal having higher liptinite content was analysed.

As the study is still in developmental stage, CMPDI is undertaking advance research on the design and development of PIA system based on morphology and observation of liptinite in fluorescence mode.

Conclusion

The PIA system has been used for maceral analysis of high rank Indian Permian coals (R_r % 1.25 and above) with low liptinite content. The results of maceral analysis using PIA technique matches well with that of the conventional petrographic technique.

Acknowledgements

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Call for nominations for the 2003 Thiessen Medal

Nominations are sought for candidates for the year 2003 Reinhardt Thiessen Award. The award is made for individuals who have made outstanding contributions in the field of coal or organic petrology. Any person of high standing is eligible to be considered for the award; ICCP membership is not a prerequisite. Only full members of the ICCP may submit a nomination.

The award is made by the ICCP Council acting on the recommendation of the members of the Thiessen Award Committee and will be presented at the 2003 ICCP meeting to be held in Utrecht. The committee invites you to send nominations to: Prof. R.M. Bustin Chair of the Reinhardt Thiessen Award Committee Department of Geological Sciences University of British Columbia 6339 Stores Road Vancouver, B.C. V6T 2B4 Canada

mailto:bustin@interchange.ubc.ca

Letters of nomination should provide the reasons for and justification of the proposal and must be received by March 28, 2003 at the latest.

Know Your Coal Petrologist #4



Who is trying to liven up the Commission I meeting in Maputo? Answer page 20.

News From Commission I

After a very successful meeting in Maputo, Commission 1 continued to progress its projects over the rest of 2002 and early 2003.

Another *accreditation* round is, thanks to Aivars' efforts, close to its end. There are some unfortunate delays in this year's exercise and we will have to see, how the timing issue can be dealt better with in the future. These are due to some internal difficulties but also to participants, who in part even have not sent their results back by the time I am writing this summary. The list of successful participants can be found in this Newsletter.

A reminder of the *ICCP calibration standards*: reflectance standards (R=0.89) were purchased and calibrated against the results of the standard round robin. The standards will be made available to interested laboratories. One standard will be sent out on request, the convenors will keep the other and analysts/laboratories are asked to send one of their standards in to get them calibrated.

Both services, due to a decision already made in Copenhagen, are available for US\$50 (+ a US\$500 bond + postage, if the standard is mailed to the lab). However, for ICCP members, this service is free of charge, but not the bond. Early this year, two members sent in a standard and had them calibrated. A note: you do not have to send all your standards. One (best close to the reflectance of the ICCP standards) is enough. So you can still use your others for ongoing work and calibrate them against the returned and newly calibrated one afterwards. Dave Pearson and I are making (slow) progress in getting the procedure of how these ICCP standards were set up into a publication, which we hope will advertise the offer outside ICCP.. To get your standard(s) calibrated against the ICCP standard, please contact Dave or me.

The *Standardization working group* is expected to continue its round robin as scheduled in Maputo. The participants of the latest round robin will be notified soon about the new exercise and everybody who wants to join newly is very welcome. Please contact Harold Read.

A lot of effort goes into the publication of various finalised *editorial* work, '*Graphite, semi-graphite natural coke and natural char',* '*Huminite*' and '*Liptinite*' are being prepared for Elsevier publications. Other editorial groups are still working on finalising their proposals for ICCP approval, e.g. *Lithotypes, Bitumens, Pyrolytic Carbon, Oxidation.*

It is understood that Petra David's compilation of a handbook by the next meeting will also supply us with the information, which further editorial groups will be needed.

The Working Group to Investigate the Status of Degradinite of Peter Crosdale is looking for new additional members. Wan Hasiah Abdullah, Jane Newman and Adrian Hutton have already joined the group.

The Review of new methodologies and

techniques in Organic Petrology is open to further contributions. Please contact Lila Gurba.

The groups 'Sample Preparation' and 'Training Programmes' did not report any recent progress but they are most likely to do so at the next meeting in Utrecht.

I would like to thank all conveners and active members for their enthusiasm and effort

Regards

Walter Pickel (Chair Comm. 1).

News From Commission II

The working group on Qualifying System for Reflectance Analysis (convenor Dr Ángeles Gómez Borrego) has placed its report on the web site (http://www.iccop.org). The objective of the working group is to find a system to label vitrinite reflectance readings to determine the quality of reflectance data. This report is the presentation given at the last meeting and all members are encouraged to download it. [An extended summary of this report will appear in the next ICCP News ed.]

Wolfgang Kalkreuth (Chair CommII)

News From Commission III

The convenor of Coal Blends WG (Isabel Suárez) has distributed the 2002 Exercise Report to all participants. In connection with these activities, she has initiated contacts for the selection of the coals for the Accreditation Program on Coal Blends, as well as for selecting the procedure for the evaluation of the future results. A review of all the activities of Coal Blends WG since 1997 is being undertaken.

The convenor of Application of Reflectance for Estimation of Structural Order (Slawka Pusz) is in the process of preparing samples of anthracite treated at temperatures between 400-1000 °C to be distributed among partners to measure R_{max} and $R_{min.}$ Optical parameters will be compared to those from XRD and TEM.

Rosa Menéndez (Chair Comm. III)

News From the Accreditation Programme

ICCP's Accreditation Programme 2002 Exercise Summary

The 2002 Exercise realised another record number of participants. There were 61 petrographers who indicated initially that they would participate in the 2002 Exercise, with 53 petrographers completing the required analyses. Eight sets of data are still to be received. These petrographers are employed by 35 laboratories in 15 countries.

The Accreditation Committee is proud to announce that the following petrographers have gained Full Accreditation status, Accreditation status or have been re-accredited in the ICCP's Accreditation Programme:-

Full Accreditation:

Alan C. Cook Mohinudeen M. Faiz Elizabeth Gawronski Barry M. Jenkins - IS02 David E. Pearson - Digipet José R. Montes Sánchez Nicholas A. Moore Sandradurage P. Ranasinghe Kathrin Reimer Magrieta Segers Katia Stefanova Milenkova Paul Sullivan

Accreditation:

Brian du Cann Marge Ellis Eric Hatfield Herudiyanto Zeba Imam Jhumjhumi Maitra Hrusi K. Mishra Jennifer S. Pearson Pravin K. Sharan Michael Spennemann

Re-Accreditation:

Colin J. Atkinson Elvira Barcelona Helen Beath Gerd Bieg Claus F.K. Diessel Vivien M. du Cann Deolinda Flores M. Ángeles Gómez Borrego Carsten Guvad James C Hower Paul Johnson Wolfgang Kalkreuth Pirkko Karvosenoja Kenneth W.G. Loudon Neil R. Manery Gareth D. Mitchell Axel Nelles Jane Newman Graham O'Brien David E. Pearson Henrik Petersen Walter Pickel Harold W. Read Martin Reinhardt Jodi T. Reynolds Raymond J. Smith Ben Stonehouse Maria A. Tomica Harry Veld Nicola J. Wagner Chris Wilson

This is the last exercise where three categories of accreditation will be used. The Full Accreditation category will be removed, beginning the 2004 Exercise.

Successful petrographers will be listed on the official Accreditation Programme's Register of Accredited Petrographers at:

http://www.iccop.org

Four petrographers were denied accreditation in the maceral analysis technique. All will have to analyse additional coal blocks this year.

The Committee congratulates all participants on their achievements.

Aivars Depers Deolinda Flores Rosa Menéndez Walter Pickel *Accreditation Programme Committee*

55th meeting of the International Committee for Coal and Organic Petrology



Invitation

The President of International Committee for Coal and Organic Petrology - ICCP, Dr. Alan C. Cook and the Utrecht Organising Committee invite all geoscientists interested in organic petrology to attend the meeting in Utrecht to participate in the working group discussions and present current research and new ideas in organic petrology.

The 55th meeting of the International Committee for Coal and Organic Petrology - ICCP, is associated to the XVth International Congress of Carboniferous and Permian Stratigraphy. This meeting also represents the 50th anniversary since the founding of ICCP in 1953.

The history of the International Committee for Coal and Organic Petrology is closely related to that of the Carboniferous and Permian Congress. Coal Petrography has always been part of the scientific programme of the Carboniferous and Permian Congress from the beginning in 1927. At the IIIrd Congress in 1951 it was recommended by the 'Round table conference on coal petrography' that a committee on petrographic nomenclature should meet every two years. In 1953 the first meeting of the International Committee for Coal Petrology, was held in Geleen, the Netherlands. After more than 40 years, the 48th meeting of the International Committee for Coal and Organic Petrology was organised by the Geological Survey of the Netherlands in 1996 in Heerlen, the Netherlands, again.

International Committee for Coal and Organic Petrology ICCP

The International Committee for Coal and Organic Petrology is a professional organisation of scientists representing more than 40 countries. Its members are engaged in many different branches, fundamental and applied, of coal and organic petrology.

The science interests of ICCP involve the study, of the organic constituents of coal and other rocks. Their efforts have resulted in major contributions to the understanding of the origin of coal, the behaviour of coal in industrial processes, the exploration for petroleum, and the thermal/burial histories of sedimentary basins. The ICCP has begun a program of Standardisation, Training and Accreditation through which laboratories can obtain ICCP accreditation in petrographic analysis.

Although the ICCP may hold symposia or technical sessions at its annual meetings, the main activities consist of discussions in active working groups. The working groups change from time to time depending upon current interests. The Working Groups of the ICCP are organised within three main Commissions:

Commission I: General Coal and Organic Petrology

Chair: Walter Pickel – CSIRO, Sydney Australia Secretary: Deolinda Flores – University of Porto, Portugal

Current working groups:

- Accreditation program for vitrinite reflectance and maceral group analysis
- ICCP training programmes
- Standardisation
- New Handbook Edition
- Temporal variation of coals
- Review of new methodologies and techniques in organic petrology
- Sample preparation techniques

Commission II: Geological Applications

Chair:	Wolfgang Kalkreuth – University of Rio Grande do
	Sul, Porto Alegre, Brazil
Secretary :	Angeles Gomez Borrego – CSIC-INCAR,
	Oviedo, Spain

Current working groups:

- Thermal indices
- Coalbed methane
- Coal facies
- Classification of dispersed organic matter
- Environmental applications of coal and organic petrology
- In situ analysis of coal macerals, electron microprobe
- Reflectance Data Qualifying System
- Pseudovitrinite

Commission III: Industrial Applications

Chair: Rosa Menendez – CSIC-NCAR, Oviedo, Spain Secretary: Henrik Petersen – GEUS, Copenhagen, Denmark

Current working groups:

- Coke petrography
- Combustion
- Coal blends
- Automation

	Sunday 10 August	Monday 11 August	Tuesday 12 August	Wednesday 13 August	Thursday 14 August	Friday 15 August	Saturday 16 August
9.00		Opening Plenary Session	Commission II	Special session:	Commission I	Commission I	
10.30		coffee break	coffee break	coffee break	coffee break	coffee break	
11.00		Opening Plenary Session	Commission III	Colloquium in Honour of Professor M.Th. Mackowsky	Commission I	Commission I	
12.30		Lunch	Lunch	Lunch	Lunch	Lunch	Field trip to Zeeland
13.30	Council mosting	Commission II	Commission III	Invited scientific and memorial lectures	Commission I	Closing Plenary Session	
16.00	Council meeting	coffee break	coffee break	coffee break	coffee break	coffee break	
16.30		Commission II	Commission III	organised by Prof. Dr. M. Lemos de Sousa University of Porto	Commission I	Closing Plenary Session	
18.00							
20.00	Ice breaker						
21.00				Conference Dinner			
24.00				Comercine Diffice			

Tentative programme

Results of working group activities will be presented and discussed during 5 days. A one day field trip after the meeting has been organised.

A detailed programme will be posted on the website of the 55th meeting of ICCP and published in the ICCP News. For more information on the organisation see: *www.iccop.org*.

Microscope session

A microscope session will be held at the Integrated Laboratory of the Netherlands Institute of Applied Geoscience TNO – *National Geological Survey* (TNO-NITG) and the University of Utrecht in the building of the Faculty of Geosciences at the University Campus.

Poster and oral presentations

Posters will be exhibited during the week in the Transistorium building, close to the meeting room (Poster size: 100 cm (w) x 200 cm (h).

A restricted number of oral presentations can be given during the commission meetings after consultation with the chairs of the commissions. For more information contact Petra David (*p.david@nitg.tno.nl*).

Abstracts

Abstracts are invited for poster presentation at the meeting. Please submit your abstract before 1 June 2002. For instructions see our website.

Field trip

A 1day field trip has been planned to the province of Zeeland of the Netherlands. Detailed information will be posted on the website and published in the ICCP News in April 2003.

Special session: Marie Theres Mackowsky Colloqium

In the honour of Professor Marie Theres Mackowsky, Prof. Dr. Lemos de Sousa, University of Porto, Portugal, will organise a colloquium on Wednesday, 13 August 2003. Invited speakers will present scientific and memorial lectures. The programme will be posted on the website and published in the ICCP News. For more information contact Prof. Dr. Lemos de Sousa at : *mlsousa@fc.up.pt*

Venue

The venue of the Congress and the Meeting, the 'Educatorium', is one of the famous buildings at the Utrecht University campus. It was designed and built by Rem Koolhaas, winner of the Pritzker Price for architecture. The Educatorium is within 5 minutes walking distance from the Faculty of Earth Sciences of Utrecht University and TNO-NITG.

The city of Utrecht may rightly be called the 'heart of the Netherlands' for its central position in this country. With a population of about 250,000 it is the fourth largest among the cities of Amsterdam, Rotterdam and The Hague. The historic city has a friendly lively academic atmosphere, due to the presence of Utrecht University and its students. The city offers an attractive, historical venue for this conference, and is easily reached by air, train or road. From Utrecht, there are good connections with other major cities in the Netherlands.

• The Utrecht organising committee

Chair: Secretary: Treasurer:	Drs. H.J.M. Pagnier (TNO-NITG) Dr. P. David (TNO-NITG) Dr. O.A. Abbink (TNO-NITG)
Members:	Dr. John Vleeskens Dr. Harry Veld Ms. Margriet de Ruijter Ing. J.C. Hooghart Drs. Heelco Dudok van Heel

• Conference Secretariat

All communication concerning the Meeting should be sent to the Conference Secretariat at the following address:

FBU Congress Bureau Utrecht University C/o Ms. Margriet de Ruijter P.O. Box 80 125 3508 TC Utrecht The Netherlands Tel.: +31 30 253 2728 Fax: + 31 30 253 5851 e-mail: *m.deruijter@fbu.uu.nl* or contact Petra David: *p.david@nitg.tno.nl*

Conference dates

Registration:

Sunday,	10 August 2003:	18.00 – 21.00 h
Monday,	11 August 2003:	8.30 – 12.00 h
Sunday,	10 August 2003:	18.00 – 21.00 h
Monday,	11 August 2003:	9.00 – 13.00 h
Monday,	11 August 2003:	18.00 – 19.30 h
Friday,	15 August 2003:	14.30 – 16.00 h
Saturday,	16 August 2003:	8.00 – 20.00 h
	Sunday, Monday, Sunday, Monday, Friday, Saturday,	Sunday, 10 August 2003: Monday, 11 August 2003: Sunday, 10 August 2003: Monday, 11 August 2003: Friday, 15 August 2003: Saturday, 16 August 2003:

*Offered by the Mayor of Utrecht

Deadlines

Submission of abstracts:	1 June 2003
Hotel registration	1 June 2003
Registration:	1 June 2003

Registration

Registration

Please complete the Registration Form and send it to the Conference Secretariat before June 1st, 2003. Please note that registration forms are also available on the website: www.nitg.tno.nl







<mark>Univer</mark>siteit Utrecht

• Fees

Registration Fee:	EUR	100
Conference Dinner	EUR	50
Field trip	EUR	75

• Payment

For the payments the Registration Form must be used. Payments for registration should be made in advance in Euro free of charge for the beneficiary. Payments can be made by bank transfer or by credit card (American Express, Diners Club, Euro Card/Master Card, Visa). On your Registration Form you can indicate how you wish to pay. If you mark the box 'Bank Transfer', you will receive an invoice with your letter of confirmation explaining how to transfer the money. If you mark the box 'Credit Card' please provide all the information required for authorisation. A proof of payment will be sent with the letter of confirmation after authorisation is completed. Cheques will not be accepted.

Accommodation

Hotel accommodation has been pre-booked at favourable rates for participants of the XVth ICC-P and 55th Meeting of ICCP. A selection of hotels has been made for participants of the ICCP meeting for the hotels given in the table below. If you wish, you may also book a hotel from the list given in the 2nd announcement of the XVth ICC-P. The location of the different hotels can be seen from the Utrecht city map in 2nd announcement of the XVth ICC- P. All reservations have to be made through the Utrecht Hotel Service (see Hotel Reservation Form in 2nd announcement of the XVth ICC-P or website).

More information on hotels and booking details are available on the website: *www.nitg.tno.nl* (55th Meeting of the International Committee for Coal and Organic Petrology). From most of the hotels in Utrecht the conference site can be reached within 10-20 minutes by public transport.

If you like to make a reservation for accommodation, please fill in the Hotel Reservation Form. The form must be sent directly to the Utrecht Hotel Service (UHS) before June 1st, 2001. If you would like to share a hotel room with someone, please state your roommate's name on your Hotel Reservation Form and return the forms together.

Note that a Credit Card guarantee or deposit of EUR 110.-, is needed for a hotel reservation. The rooms will be assigned in order of Credit Card guarantee or deposit. The full Accommodation Fee has to be paid at the hotel.

Hotel		City	Number of rooms	Prices per room	and night (€)	Breakfast (€)
				Single	double	
Malie Hotel a Hampshire Classic 1)	****	Utrecht	25	99.50/109.50	120/130	Incl.
Hotel Mitland ²)	****	Utrecht	25	95.00	112.50	Incl.
NH Centre Utrecht Hotel ³)	***	Utrecht	25	105.00	118.00	Incl.
Best Western Amrath Hotel ⁴)	****	Utrecht	25	125.50	130.50	13

No pre-bookings were made for hotels in the middle to lower price range given in the table below. Prices listed are approximations and are subject to change. You are advised to book early to make sure that the hotels are not booked out. Reservation of these hotels can also be made by the Utrecht Hotel Service using the Hotel Reservation Form.

Hotel		City	Prices per room per night (€)		Breakfast (€)	
			single	Double		
Hotel Ouwi⁵)	**	Utrecht	70	80	Incl.	
Hotel De Admiraal ⁶)	**	Utrecht	56/75	90	Incl.	
¹) www.hampshirehotels.nl/malie	hotel/					
²) www.mitland.nl						
³) www.nh-hotels.nl						
⁴) www.amrath.nl						
5) www.hotel-ouwi.nl						
6) www.hoteldeadmiraal.nl						

• Cancellation policy

All cancellations and changes regarding the Conference Registration must be done in writing to the Conference Secretariat. The cancellations and changes regarding Hotel Accommodation must be done in writing to the Utrecht Hotel Service.

Registration Fee Refunds

If a Cancellation is received before 1 August, 2003, registration fees will be refunded minus an administration fee of EUR 20,-.

Hotel Accommodation Fee Refunds

For the cancellation policy regarding the Accommodation Fee for the hotels see the Hotel Reservation Form.

Letters of Invitation

Participants who need a personal invitation for funding purposes should mark the appropriate box in the

For more information and registration see www.nitg.tno.nl/eng/55iccp.shtml or www.iccop.org. Registration Form, or write to the Conference Secretariat, requesting a letter of invitation and stating their intended contribution to the scientific programme of the 55^{th} ICCP.

• Tourist and travel information

Tourist and travel information are given in the $2^{\mbox{nd}}$ announcement of XV^th ICC-P or on the website.

Website

We ask you to visit the website of the 55th Meeting of the International Committee for Coal and Organic Petrology at *www.nitg.tno.nl* regularly. The site will frequently be updated.





55th meeting of the International Committee for Coal and Organic Petrology

Mr.	Family name
Ms.	First name
Dr.	Company/organisation
Prof.	Mailing address
Student	City
	Postal code
Male	Country
Female	Telephone
Fax	
	E-mail address
Accompanying persons:	
_	
Fees	
Registration Fee	EUR 100,-
Conference Dinner	EUR 50,-
Field trip	EUR 75,-
Total amount	EUR
Method of payment	
Payment for registration should be made in advance in Euro free of ch	arge. Cheques will not be accepted.

I will pay by:

- □ Bank Transfer (an invoice will be sent to you with your letter of confirmation)
- □ Credit Card (a proof of payment will be sent with the letter of confirmation after authorisation is completed)

□ American Express	Card number:
□ Diners Club	CVC code:
EuroCard/MasterCard	Expiry date:
🗆 Visa	Cardholder's name and full address:
Date:	Signature:
\Box I would like to receive a letter of invitation	
\Box I will submit an abstract for poster presentation:	Author(s):
	Title:

Important deadlines

Submission of abstracts:	1 June
Registration:	1 June
Hotel registration:	1 June

June 2003 June 2003 June 2003

Please submit this form to: FBU congress bureau Utrecht University C/o Ms. Margriet de Ruijter P.O. Box 80125 3508 TA Utrecht The Netherlands Fax: +31 30 253 5851 Email: m.deruijter@fbu.uu.nl

ICCP News





The Maceral Term "Sclerotinite" has been Officially Abandoned by the ICCP

Paul C. Lyons 206 Amber Road Middleboro, MA 02346, U.S.A.



The recent literature (e.g. International Journal of Coal Geology, v. 50, p. 125; v. 51, p. 99, 100; v. 52, p. 36) shows that the m a c e r a l t e r m "sclerotinite"-which was officially abandoned by the ICCP in 1996 (reaffirmed in 1997)-is being used by some

authors who perhaps are not aware that it is improper to use maceral terms that have been abandoned by the ICCP, the international organization responsible for maceral classification. Also, there are some authors who do not accept the new ICCP inertinite maceral group classification (e.g. Scott, 2001). This new classification has been published (ICCP, 2001), and, furthermore, is a part of the draft of the TSOP-ICCP Classification of Dispersed Organic Matter (Stasiuk *et al.*, 2002).

The fact that sclerotinite has been abandoned was the subject of a short paper by Lyons (2000), but for the sake of clarification of the history of this maceral a synopsis will be set forth here so that authors have a better understanding of why it was abandoned. Sclerotinite was introduced by Stach (1952) for fungal bodies such as sclerotia (hence the name sclerotinite) and other fungal bodies in coal and was formally accepted by the ICCP (see ICCP Handbook, 2nd ed., 1963). Most of what Stach was first referring to was fungal masses in Tertiary coals, but later Stach and Pickhardt (1957, 1964) also included with sclerotinite pseudocellular bodies found in upper Paleozoic coals. Some of the problem related to the misidentification of "sclerotia" for such bodies (e.g. see ICCP Glossary, 1963, sclerotinite, Fig. 1). Later it was realized that there was a paleobotanical mix of cellular (i.e. fungal) and non-cellular (i.e. non-fungal) bodies, so Stach (1966, 1982) subdivided sclerotinite into two submacerals "fungi-sclerotinite" or

"fungosclerotinite" and "resino-sclerotinite" or "secretion sclerotinite".

In connection with this story, the ICCP Handbook (1963) shows the term "resin rodlets" for bodies in upper Paleozoic coals. The fact that these bodies are rodlets is beyond doubt, but their resinous origin was not at all demonstrated by Kosanke and Harrison (1957). They showed chemical data that proved they were not resinous and only a suspected origin from resins could be hypothesized, at best. Lyons and others (1982) gave a detailed report on them, including chemical and paleobotanical data, which indicated they were highly aromatic bodies with H/C atomic ratios of about 0.4-0.5, unlike modern and fossil resins that have H/C atomic ratios of about 1.5. Van Bergen et al. (1995) called the chemistry of these rodlets "unusual resin chemistry", but in fact it is not resin chemistry at all. Scott (2001) speculated they are of char-resin origin, but they could be of humic-acid origin and not of resinous origin as also supposed by Van Bergen et al. (1995). It is difficult to understand how a substance that is highly aliphatic such as resins can be transformed into a highly aromatic substance such as the organic substance of the so-called "resin rodlets", which are inertinite bodies for the most part. Experiments such as those proposed by Scott (2001), without knowing what the starting substance is, are prone to meaningless results. Secretinite takes it name from secretory canals in which they occurred and not from the supposition they were originally secretions from plants such as resin and mucilage. In other words, these secretinite bodies are secondary products (Lyons and Mastalerz, 2001). The rodlets in longitudinal section from the Appalachian basin were cut across in polished section (Lyons et al., 1982) and found to be the same bodies that Stach (1982) called "secretion sclerotinite."

In Lyons and others (1982) there is undoubted evidence of the non-resinous nature of the North American "resin rodlets." Thus, they renamed them "rodlets of the inertinite maceral group" to indicate their non-resinous and aromatic nature and high reflectance. The paleobotanical origin of the rodlets was based on coal-ball studies. They found that the histological relationships between the bodies found in coal and those in coal-ball tissue from the seed-fern genus Medullosa in the Illinois Basin of Illinois are unmistakable.

Because it was believed that a paleobotanical mix of cellular (i.e. fungal) and non-cellular (i.e.

non-fungal) was inappropriate within the same maceral, the maceral name "secretinite" was proposed by Lyons *et al.* (1986) for the non-fungal bodies. In 1996, Lyons proposed at the 48th ICCP Meeting that the maceral names secretinite and funginite (Benes, 1956) replace sclerotinite. The proposal was accepted and reaffirmed at the 49th ICCP Meeting in 1997. Thus, secretinite is a new maceral and funginite is a new name for sclerotinite as originally defined by Stach (1952). Sclerotinite was abandoned by the ICCP.



Figure 1 Funginite, Balikpapan Group, Miocene, Kalimantan, Kitadin underground mine. Rv 0.46%. From left to right: mycorrhizome, fungal spore (teleutospore), and sclerotium. Width of field: 340 μ m. Data and photograph courtesy of Alan Cook, Keiraville Konsultants, Keiraville, NSW, Australia

The two macerals are easy to distinguished and are virtually separated in geologic time. Funginite (Fig. 1) is a common maceral in Tertiary coals and is distinguished by its shape and cellularity, whereas secretinite (Fig. 2) is common in some upper Paleozoic coals, is rounded, non-cellular, and shows a variety of other features commonly including vesicles, a notch, kerfs (peculiar fractures), and sometimes an oxidized rim. Fungal masses in upper Paleozoic coals are rare or absent (Taylor and Cook, 1962), but have been mentioned by Stach (1982, p. 136, 138), supposedly documented by Stach and Pickhardt (1957, 1964), and also documented by Lyons (2000). Most of Stach and Pickhardt's (1957, 1964) fungal masses is secretinite.

It is hoped that this historical sketch will allow authors to better understand more about the origin of the macerals funginite and secretinite and will encourage them to use these maceral names in future papers. It will be the job of editors to see that these internationally accepted maceral names be used, and not sclerotinite--an abandoned maceral name.



Figure 2 Secretinite, St. Rose No. 5 coal bed, Upper Carboniferous (Langsettian, ex. Westphalian A), St. Rose Coalfield, Atlantic Maritime Canada. Note the vesicles, notch (lower left) and the generally rounded aspect. The reflectance is much higher than the surrounding vitrinite (top) and fusinite/semifusinite below. Rv 0.61%. The width of the field is approximately 200 µm. Coal sample courtesy of P.A. Hacquebard, Geological Survey of Canada, Dartmouth, Nova Scotia, Canada

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News from TSOP

TSOP 2003 Annual Meeting

The Society for Organic Petrology (TSOP), 20th Annual Meeting, September 21-24, 2003, Washington, DC, USA. Information:

Dr. Peter Warwick US Geological Survey 956 National Center Reston Virginia 20192 USA Phone: +1 703 648-6469

Fax: +1 703 648-6419

mailto:pwarwick@usgs.gov

Further details: http://www.tsop.org/mtgdc.htm

Abstracts due 4/15/03. Oral and poster sessions September 22-23. Topics include petroleum systems, source rocks, coalbed methane, coal characterization (Ron Stanton memorial session), government and energy. Short courses (Sept. 21) on trace elements in coal, health impacts of coal plus a core workshop on coal and petroleum source rocks of the National Petroleum Reserve in Alaska. Field trip (Sept. 24) on geology and energy resources of the Triassic basins of northern Virginia.

TSOP 2003 Student Grant Program

The Society for Organic Petrology (TSOP) invites applications for graduate student research grants. The purpose of the grants is to foster research in organic petrology (which includes coal petrology, kerogen petrology, organic geochemistry and related disciplines) by providing support to graduate students from around the world, who demonstrate the application of organic petrology concepts to research problems.

<u>Grant Size</u>: Monetary awards up to a maximum of \$1,000.00 US will be granted. TSOP will also provide Merit Awards, in the form of certificates redeemable for TSOP publications, to top-ranking applicants not receiving grants. The program awards a maximum of two grants each year.

<u>Use of Grant</u>: Grants are to be applied to expenses directly related to the student's thesis work, such as summer fieldwork, laboratory analyses, etc. A portion (not to exceed 25%) of the funds may be used to attend TSOP Annual Meetings. Funds should not be used to purchase capital equipment, to pay salaries, tuition, room, or board during the school year. Funds must be spent within 18 months of receipt of the award.

<u>Application Deadline</u>: TSOP graduate student research grant application deadline is May 1, 2003. Grants will be awarded in September, 2003.

Detailed information and an application form on the TSOP web site http://www.tsop.org/grants.htm or applications may be obtained from

S. J. Russell Shell UK Exploration and Production 1 Altens Farm Rd Nigg Aberdeen AB12 3FY United Kingdom fax: +44(0)1224 88 4184; mailto:suzanne.j.russell@shell.com

CARBON'03

The CARBON'03 Conference will be held in Oviedo, Spain, from July 6 to 10, 2003 and will be organized by the Spanish Carbon Group. CARBON'03 will attempt to promote and interactive atmosphere by facilitating debate, with state-of-the art keynote lectures and by making maximum use of posters. The aim of CARBON'03 is to emphasize new carbon materials and the need to enhance the efficiency of established materials, focussing sharply on need and application. Further information is available on the web: http://www.carbon2003.com

Answer to "Know your Coal Petrologist"

Ricky Pinheiro (South Africa) and Cândida Garcia Neto (Portugal) either practising the tango or doing stretching exercises to prevent deep vein thrombosis during the Commission I proceedings. While Ricky is well know to most of us, Cândida only became a member of ICCP at the last meeting. Both clearly enjoyed the meeting tremendously.

Special Offer

As a special introductory offer, the *International Handbook of Coal Petrography* 2nd *Edition (1963)* (in English) as CD ROM is available to ICCP Members for **only \$15US** until 1st July. The CD is PC and Mac compatible and requires Adobe Acrobat Reader version 4 or above (available for free from http://www.adobe.com).

Ordering details on back cover

DEADLINE FOR NEXT ICCP NEWS : <u>16th June 2003</u>

For the Archives

A recent search of the ICCP Archives has revealed that the published proceedings from the first three meetings are absent. The covers of these proceedings are shown below (images courtesy of Dr Petra David).

PROCEEDINGS
OF
THE INTERNATIONAL COMMITTEE
FOR COAL PETROLOGY
No. 1
AUGUST 1994
(NETHERLANDS) 9-11 JUNE 1953
* *
REDACTION - SECRETARIAT WESTWALL DA, KREFELD GOERMANY)
PUBLISHER JERNEST VAN AELST, MAASTRICHT (HOLLAND)

Proceedings of the International Committee for Coal Petrology No. 1, August 1954. First Meeting in Geleen (Netherlands) 9 - 11 June 1953.

	PROCEEDINGS
	OF
THE	INTERNATIONAL COMMITTEE
	FOR COAL PETROLOGY
	N' 2
	1956
	SECOND MEETING IN LIFGE (BELGIUM) 23-25 MAY 1955
	\mathbf{x}
	REDACTION : INSTITUT MATIONAL DE L'INDUSTRES CHARBONNERS, LEGE (RELGQUE) SIGNEMBRAT : WESTWALL 34, ANT F.R. EQUENCIESCIEND, REFERID (CERMAN)
	RUITOR: INTERNATIONAL COMMITTEE FOR COAL PETROLOGY PUBLISHER: R LOUIS 37:3% RUE BORRENS, IXELLES-BRUXELLES

Proceedings of the International Committee for Coal Petrology Nr. 2 1956. Second Meeting in Liege (Belgium) 23-25 May 1955.



Proceedings of the International Committee for Coal Petrology Nr. 3 1960. First International Congress on Coal Petrology in Heerlen (Netherlands) 10-13 September 1958.

If any member has copies, or is aware of copies, that can be donated to the ICCP archives could they please contact :

Prof. Dr. Manuel Lemos de Sousa Departamento de Geologia Faculdade de Ciências do Porto Praça de Gomes Teixeira 4099-002 Porto PORTUGAL Tel.: +351-22-340 1470 Fax: +351-22-332 5937 / +351-22-205 6456 mailto:mlsousa@fc.up.pt

XVth International Congress on Carboniferous and Permian Stratigraphy

Invitation:

Dear colleagues,

it is our pleasure to invite you to participate in the XVth International Congress on Carboniferous and Permian Stratigraphy, organised by the Netherlands Institute for Applied Geoscience and the Faculty of Earth Sciences of the Utrecht University. The Congress will be held at the Educatorium located at the Uithof, the campus of the Utrecht University, in Utrecht, the Netherlands. The conference dates are from August 10 - 16, 2003.

Website of the Congress:

The XVth ICC-P has a web site (http://www.nitg.tno.nl/eng/iccp.shtml), where you can get updated information about the conference. The second announcement (including forms) can also be downloaded from this website.

Registration Fees

Registration:EUR 300,-Students:EUR 40,-Late Registration (after 1 April 2003)EUR 330,-Accompanying membersEUR 50,-

The registration fees covers admission to the poster and oral presentation sessions and workshops, abstract volume, icebreaker reception, reception offered by the Mayor of Utrecht and coffee break refreshments.

Deadlines

Submission of abstracts: 1 April, 2003 Early registration: 1 April, 2003 Late registration 1 August, 2003 Hotel registration 1 June, 2003

Conference dates:

Registration: Sunday, August 10 : 18.00 – 21.00 h (during Icebreaker) Monday, August 11 : 08.30 – 12.00 h Icebreaker Sunday August 10 : 18.00 - 21.00 h Opening plenary session: Monday, August 11 : 10.00 – 11.00 h Plenary key note lectures: Monday August 11 : 11.30 - 13.00 h 14.30 – 16.00 h Reception Monday August 11: 18.00 – 19.30 h (offered by the Mayor of Utrecht) Closing session: Friday August 15 : 14.30 – 16.00 h

Plenary sessions:

The plenary keynote lectures will represent a general overview and different aspects of Carboniferous and Permian research. There will be four plenary keynote lectures (in alphabetical order):

Michiel Dusar, Belgium Geological Survey, Brussels, Belgium: Overview of Carboniferous Research and its reflection in the ICC-P congresses

- Ken Glennie, Honorary Professor University of Aberdeen, Aberdeen, UK: The Rotliegend of NW Europe
- **Philip Heckel**, University of Iowa, Iowa City, USA: Recent advances with Pennsylvanian glacial-eustatic cyclotherms
- **Rien Herber**, NAM, Assen, The Netherlands: The Rotliegend, a rich resource that continues to deliver

Scientific Programme:

The scientific programme consists of a five day meeting with oral and poster presentations. Four parallel oral sessions are planned. The organising committee reserves the right to modify the timing and structure of the sessions for better exchange of information and more efficient programme. All talks are 20 minutes in length, which include times for questions and discussion.

The poster display will be mounted in the Transitorium I building. Posters will be exhibited for 1 day. Maximum dimensions of space for posters are $100 \text{ cm}(w) \ge 200 \text{ cm}(h)$.

Workshops on Carboniferous and Permian Stratigraphy will be organised, as well as a core workshop.

Various pre-meeting and post-meeting field trips will be organised to classical sites in UK, Germany, Belgium and Spain.

The official language of the conference is English.

Session 1: Economic geology

- Session 1 A: Economic geology of NW Europe
- Session 1 B : Economic Geology of the Pericaspian and Caspian region
- Session 1 C: World petroleum
- Session 1 D: CO₂ storage and coalbed methane
- Session 1 E: Post mining activites

Session 1 F: Salt

Session 2: Carboniferous basin development and climate

- Session 3: Permian basin development and climate
 - Session 3 A: Rotliegend
 - Session 3 B: Zechstein

Session 3 C: The Permian Triassic boundary

Session 4: Carboniferous and Permian time scales

Session 5: Late Paleozoic Palaeontology

- Session 5 A: Macro-palaeontology
- Session 5 B: Micro-palaeontology
- Session 5 C: Palynology
- Session 5 D: Paleobotany
- Session 6: Structural development of Carboniferous basins and Variscan tectonics Session 7A: Global correlations and Pangea

Session 7 B: Permian global biogeography and Gondwana-Eurasia inter-continental

correlations

Workshops:

Carboniferous Stratigraphy

Co-ordinator: P.H. Heckel, University of Iowa, Iowa City, USA

- Permian Stratigraphy
 - Co-ordinators: Bruce Wardlaw, US Geological Survey, Reston, USA and Charles Henderson, University of Calgary, Calgary, Canada
- Core Workshop

Field trips

More information about the field trips (including description, figures and photos) are presented on the website.

Pre-conference field trips

- **FT 1** Carboniferous of the Cantabrian Mountains, NW Spain in northern Palencia and NE Leon
- **FT 2** Early Carboniferous (Mississippian) of the Rhenish Massif, Germany
- **FT 3** The Carboniferous and related rocks of the Northumberland and Tweed Basins, NE England and SE Scotland
- **FT 4** The classical Meuse profile and type sections in the Ardennes, Belgium
- FT 5 Coal mine and mine museum, Germany
- FT 6 Stratigraphy and tectonics of the intra-Variscan Carboniferous-Rotliegend basin (Saar –Nahe Basin, Rheinland-Pfalz), Germany
- **FT 7** Visit to the Carboniferous fossil and plant collection of Naturalis, Leiden, the Netherlands

Post conference Field trips

- FT 8 Borth salt mine, Wesel, Germany
- **FT 9** The Silesian in the Foreland Basins of NW-Germany
- FT 10 Dinantian of Southern Belgium and

Co-ordinator: Harmen Mijnlieff, TNO-NITG, Utrecht, the Netherlands

Avesnois

- **FT 11** Upper Carboniferous (Pennsylvanian) and Permian of the Harz Mountains, Germany
- **FT 12** Namurian basinal and deltaic successions of the Pennines of northern, England
- FT 13 Active coal mine in the Ruhr area

Conference Secretariat

All communication concerning the Congress should be sent to the Conference Secretariat at the following address:

FBU Congress Bureau Utrecht University C/o Ms. Margriet de Ruijter P.O. Box 80 125 3508 TC Utrecht The Netherlands Tel.: +31 30 253 2728 Fax: + 31 30 253 5851 mailto:m.deruijter@fbu.uu.nl http://www.nitg.tno.nl/eng/iccp.shtml

Images of the 54th ICCP Meeting 2002

(images courtesy of Lopo and Barbara Kwiecinska)



WHAT'S HAPPENING

10 - 16 July 2003

Carbon 2003, Ovievo, Spain

Contact : Dr. J.J. Pis or Dr. R. Menéndez mailto:jjpis@incar.csic.es mailto:rosmenen@incar.csic.es http://www.carbon2003.com

<u>10 - 16 August 2003</u>

55th Annual Meeting of ICCP, Utrecht, The Netherlands. Contact : Petra David mailto:p.david@nitg.tno.nl http://www.iccop.org http://www.nitg.tno.nl/eng/55iccp.shtml

<u>10 - 16 August 2003</u>

XVth International Congress on Carboniferous and Permian Stratigraphy (XV ICC-P), Utrecht, The Netherlands.

Contact : Petra David mailto:p.david@nitg.tno.nl http://www.iccop.org http://www.nitg.tno.nl/eng/iccp.shtml

21 - 24 September 2003

TSOP Annual Meeting, Washington DC, USA. mailto:pwarwick@usgs.gov http://www.tsop.org/mtgdc.htm

2 - 6 November 2003

12th International Conference on Coal Science, Cairns, Australia. mailto:iccs@aie.org.au http://www.aie.org.au/iccs

<u>2004</u>

56th Annual Meeting of ICCP, Budapest, Hungary Contact : Dr Mária Hámor-Vidó mailto:vidom@mafi.hu http://www.iccop.org

September 2005

57th Annual Meeting of ICCP, Patras, Greece Contact : Assoc. Prof. Dr. Kimon Christanis mailto:christan@upatras.gr http://www.iccop.org

ICCP Publications ICCP Handbook

International Handbook of Coal Petrography 2nd Edition (1963) (in English) as CD ROM PC and Mac Compatible Requires Adobe Acrobat Reader Ver. 4 or above ICCP member \$25US (including postage) Special Offer only \$15US until July 1st for ICCP members only ICCP non-member \$50US (including postage)

International Handbook of Coal Petrography, supplement to the 2nd edition, second print (in English) 1985 US\$30

International Handbook of Coal Petrography, 2nd supplement to the 2nd edition (in English) 1986 US\$10

International Handbook of Coal Petrography, 3rd supplement to the 2nd edition (in English) 1993 US\$20

Prices do not include shipping unless stated (approx US\$15 in Europe and outside US\$23 Europe per item) or cost of money transfer.

Orders to

Dr Petra David Netherlands Institute of Applied Geoscience TNO National Geological Survey Department of Geo-Energy P.O. Box 80015 3508 TA Utrecht THE NETHERLANDS Ph. +31 30 256 4648 Fax +31 30 256 4605 mailto:p.david@nitg.tno.nl

Payment to

Dr. Rudolf M. Schwab ICCP Treasurer 3 Manor Close, Great Barrow Chester, England CH3 7LP UNITED KINGDOM Tel.: +44-1829-740 239 Fax: +44-1829-740 384 mailto:rudi@chesternet.co.uk

Payment can be accepted by credit card (Mastercard or Visa) or cheque.

If undeliverable return to :

Dr P. Crosdale, Editor, ICCP School of Earth Sciences James Cook University Townsville, Qld 4811 <u>AUSTRALIA</u>