

IAS

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LITTORAL'94 - International Symposium

The LITTORAL'94 International Symposium took place in Lisbon on the 26-29 September 1994 upon the initiative of the Eurocoast-Portugal Association, a member of the Eurocoast Federation.

Two hundred and fifty researchers, teachers, engineers and managers interested in the problems of coastal zones from France, The United Kingdom, The Netherlands, Spain, Portugal, Italy, Japan, Greece, Turkey, Egypt, Ukraine, Croatia, Russia, Denmark, Tahiti, Brazil, USA, Poland, Northern Ireland, Malta and Iceland participated.

The opening session was chaired by the Portuguese Minister of the Environment and Natural Resources and co-chaired by the Minister of the Marine.

About one hundred communications previously edited and distributed were presented during the four days of scientific sessions. The themes included: Geomorphology and Geology, Sedimentology, Hydrodynamics, Biological Resources, Management, Conservation and Pollution. Ten posters were also presented during a special session and the Symposium also included a technical visit to the Sado Estuary, Harbour and Natural Reserve.

The Symposium showed that actually unprecedented coastal change

occurs on the shorelines of all continents at all latitudes.

The Symposium pointed out unprecedented coastal pressure on most European and American shores. High levels of urban industrial and recreational activities on the coastal fringes have been reported. Estuaries and lagoons - acknowledged as the most sensitive elements of the coastal systems - are at constant risk. Rare examples of non-artificial coastal wetlands persist in Europe, and these must be saved. The Symposium participants showed a concern about nature conservation issues. It was reported that environmentally sensitive areas can be conserved and, more importantly, developed in cooperation with other interests, such as tourism, to mutual benefit.

The Symposium pointed out how, in many cases, scientific knowledge helps in solving or minimising delicate problems of the coastal environment. Presented case studies showed that considerable progress, both in scientific data and knowledge, was achieved since the last Eurocoast Littoral '90 Symposium in Marseille.

The Symposium's communications particularly emphasised that our ability in predicting the behaviour of the coastal systems has substantially improved in the past few years. However it also showed that the degree of confidence in these predictions is, in many cases

presented, still unsatisfactory. It was particularly emphasised that in the actual moment of accelerated coastal evolution and change, prediction of coastal behaviour is a critical issue. The Symposium showed that we can only predict coastal phenomena with reasonable reliability in regions where extensive research and monitoring data was previously available. This implies that better management of the coastal environment and better use of its natural resources can only be reached through a long term commitment to coastal research, coastal planning and public involvement.

The Symposium discussions highlighted the absolute need for a coordinated and more intensive approach to the understanding of several critical scientific issues. Among others, the study of coastal morphodynamics, the effects of global climate change and sea level rise, and the risks of coastal stabilisation were constantly cited.

The Symposium pointed out the validity of several extremely different approaches to coastal evolution, monitoring and prediction, coastal planning and coastal management. Most participants agreed that there is a strong need to exchange these experiences, and there is still a lot to be done in this field. Networks of scientists, planners, managers and decision makers should be intensively encouraged. During the discussions this was a theme of critical importance. Most participants felt that governmental and inter-governmental agencies and

international organisations should increase their support and commitment to the coastal zone networks, as the actual levels are clearly unsatisfactory and ineffective.

Finally the Symposium participants highlighted the importance of public involvement in coastal issues such as planning, use of natural resources and nature conservation. Dissemination and education will therefore be vital activities for the future.

In conclusion, we would emphasise that the coastal fringe is the worlds most valued territory. The Littoral'94 International Symposium clearly showed that this territory is at risk. But it also showed that there is a considerable scientific knowledge, technical experience, and personal commitment from the coastal professionals. However, a lot more can and must be done, to save our coasts.

During the Symposium, the General Assembly of the **Eurocoast** Federation took place with the presence of the national associations from France, The United Kingdom, Portugal, Poland and Spain.

The General Assembly elected the new Executive Bureau composed of:

President: Dr. Susan Gubbay (United Kingdom);

Past-President: Dr. Roger Emmanuel Quélenec (France);

Vice-Presidents: Prof G. Soares de Carvalho (Portugal), Dr. José Luis

Mansó (Spain), Prof. Maurice Aubert (France);

Treasurer: Dr. Robin Wingfield (United Kingdom).

The offer to host **LITTORAL'96** in Portsmouth, UK was approved by the General Assembly.

The Proceedings of the Symposium, including the texts of conferences, papers and abstracts of posters, available to all participants on the opening day of the Symposium, have been published in two volumes of 1055 pages. They can

be obtained through the Eurocoast-Portugal Association, Instituto de Hidráulica e Recursos Hídricos, Faculdade de Engenharia, 4099 Porto Codex, Portugal, fax 351-2-310870, 319280.

The Proceedings may be purchased for the sum of 12,000 PTE (Portuguese escudos) plus post and packaging: 500 PTE (Portugal), 4,000 PTE (Europe), 5,000 PTE outside Europe. Cheques should be payed in PTE to the Eurocoast-Portugal Association and sent to the headquarters of the Association.

REPORT ON THE THIRD MEETING OF SWISS SEDIMENTOLOGISTS

January 28, 1995, Fribourg

Swiss-Sed is an informal organization which brings together people interested in sedimentology from different institutions and companies in Switzerland and abroad (currently 169 members). During the summer season a fieldtrip is offered in an area of current research and interest, and at the end of January, an annual one-day meeting is organized at the University of Fribourg. This past January, Swiss-Sed held its third meeting, a meeting that covered many different fields in sedimentology and attracted 80 participants.

Central to the theme of the meeting were advances in lake research. Limnology groups from Geneva, Lausanne, Neuchâtel, and Zurich presented new data from Lake Isli (Morocco; E. Zeroual et al.), pro-glacial lakes in Patagonia and the Swiss Alps (D. Ariztegui et al.), Lake Geneva (A. Moscardi et al.), Lake Neuchâtel (M.-L. Filippi et al.; P. Lambert), and Lake Greifen (J. Teranes et al.).

Of major interest was also the work presented by members of the Fribourg group, which focussed on Oxfordian and Berriasian marine sediments and used a multidisciplinary approach based on facies, palaeoecology, cyclo- and sequence stratigraphy, and diagenesis

(C. Dupraz, B. Pittet, J.-B. Pasquier, and J. Plunkett). S. Dall'Agnolo and M. Thalmann (Fribourg) proposed a new ("butterfly") classification scheme for sediments of the Breccia Nappe in the Swiss Prealps.

The power of integrating micropalaeontological, mineralogical, geochemical, and stable isotope data into sedimentology was beautifully demonstrated by the Lausanne group, which presently works on Permo-Triassic, upper Triassic, and Jurassic sections (A. Bartolini et al., F. Amodeo et al.; V. Atudorei et al.).

A similar approach is used by the Zurich group, which also includes observations on phosphate-rich sediments (S. Hennig, M. Mutti, O. Kuhn, and K. Föllmi). Key areas for Zurich geologists are the carbonate platform margins in the southern Apennines, and results from sequence stratigraphical, sedimentological, and palaeoecological observations were presented by D. Sanders et al., J.H. Van Konijnenburg, and I. Stössel. P. Brack et al. (Zurich) convincingly showed that radiometric age dates put important new constraints on interpretations of cyclic sedimentary successions in the Triassic Italian Dolomites. Of major interest was the presentation by P. Huguenberger et al. (Zurich) who used sophisticated radar techniques to

reveal three-dimensional structures in Pleistocene fluvial sediments.

T. Adatte et al. (Neuchâtel) explored the controversies around the K-T boundary in presenting a detailed sedimentological and micro-palaeontological account of upper Cretaceous clastic deposits in Mexico. Modern carbonates of Mauritius Island were the subject of presentations by members of the Neuchâtel group (S. Brocero; B. Kübler et al.).

Amongst the main working areas of the Basel group are the Jura Mountains and Plateau, and V. Allia, A. Wetzel, and J. Schlaf presented results from detailed stratigraphical, sedimentological, and structural observations.

From the Bern group, A. Immenhauser explored the bathymetric history of the Mashira Island ophiolites offshore Oman, F. Schlunegger et al. used a magneto-stratigraphic approach to the interpretation of Oligocene and Miocene Molasse Basin sediments, and U. Menkveld-Gfeller et al. proposed a new stratigraphic nomenclature and type locality for Eocene occurrences in the Helvetic Zone of eastern France and western Switzerland. F. Viard from the Geneva group used structural and sedimentological observations in

these Eocene occurrences to demonstrate the presence of an irregular palaeotopography during their development. C. Nussbaumer et al. (Geneva) showed petrophysical results from an upper Carboniferous cyclic succession in the Paradox Basin. Also from Geneva, B. Piguet et al. re-interpreted the "Lower Ultrahelvetice Melange" of the Haute-Savoie as a well-ordered, non-chaotic, succession of turbidites and debris-flow deposits. S. Wood et al. presented a palynofacies interpretation of Oligocene to Pleistocene sediments of Site 903 (ODP Leg 150, offshore New Jersey).

Finally, H. Graf (Gächlingen) offered us splendid illustrations of the occurrence of caliche, shrinkage cracks, ripple marks, and stromatolitic structures in Pleistocene glacial-periglacial sediments of northern Switzerland.

The third Swiss-Sed meeting offered valuable insights into current projects and themes of Swiss sedimentological working groups; it also served as a platform for gathering and seeing each other again. The record number of participants showed that Swiss sedimentology is as alive as ever, despite menacing federal cuts and foreseen closures of institutes.

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SEDIMENTOLOGICAL SOCIETY OF EGYPT

S*edimentology of Egypt* (Vol. 3, January 1995) announces the following activities:

- Members of the Society can apply for Soliman's Grants and Prizes (1995) for research in Sedimentary Geology, Applications and Economics:

- a) Research grants (four grants, 200 E£ each)
- b) Prize for excellent M.Sc. Thesis (one prize, 300 E£)
- c) Prize for excellent Ph.D. Thesis (one prize, 300 E£)

- The Society has established a "Sedimentologic Library" as a service to its members and others. All are kindly requested to offer their extra publications, papers, and volumes of journals to the library. This will be acknowledged in the Newsletter *Papyrus*.

- Titles of M.Sc. and Ph.D. projects approved or granted in 1994 will be published. It is also planned to

publish titles of complete papers published in 1993-94 concerning Egyptian sedimentary geology.

- The "Sedimentological Lecture Season" continues to be held on the first Mondays of February, March and April 1995 at Ain Shams University, Cairo.

- A sedimentological field trip was conducted to the Maghara Coal Company and its coal mines in Sinai (January 5-6, 1995).

- A workshop on Sedimentary Geology will be organized in April 1995.

- The 4th Conference of the Society on "Egyptian Sedimentary Geology" is scheduled for January 2-3, 1996. It is planned to be held at the Faculty of Sciences, Ain Shams University, Cairo. Research papers presented at the Conference will be published in *Sedimentology of Egypt*.

Information furnished by
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SEDIMENTOLOGICAL NEWS FROM NEW ZEALAND

New Zealand has no shortage of topics for sedimentologists. It has an exposed example of a Neogene active plate margin, it has large coalfields, active coastal processes related to Quaternary and modern sea-level changes and tectonics and a large marine continental borderland. There are seven universities, at least two large Crown Research Institutes and several consultants, all doing sedimentological research. Please feel free to write to anyone mentioned.

The Geological Society of New Zealand held its annual conference in New Plymouth this year. There were over five sessions on sedimentary geology - a particularly strong aspect of the conference. At an informal meeting of many of those interested in this theme Peter Ballance gave an overview of the results of the IAS strategy meeting that he had attended, Gerrit van der Lingen discussed ODP work, Brad Field described the benefits of the Society of Luminescence Microscopy and Spectroscopy and Cam Nelson broached the suggestion that an Australasian branch of the SEPM be established. There was a strong expression of interest in welcoming more sedimentary geologists from other parts of the world to visit New Zealand.

News from New Zealand organisations and IAS members:

The Institute of Geological and Nuclear Sciences (formerly mainly NZGS and Geophysics Division of DSIR) is New Zealand's largest geological research organisation. The former NZGS Sedimentology Laboratory in Christchurch has been closed and much of the Institute's sedimentology is now "applied" and done through its Sedimentary Basins Programme, which covers New Zealand's Cretaceous-Cenozoic basins (with a hydrocarbon resource emphasis). Sedimentological databases are about to be incorporated into the Institute's new GIS system.

Some current researchers in the Lower Hutt office of the Institute are: David Smale (heavy minerals of East Coast, diagenesis in Taranaki basin, modern harbour studies and some cathodoluminescence (CL) studies); Brad Field (East Coast Neogene sedimentation history and outcrop sequence stratigraphy of the Hikurangi plate margin; some CL work); Chris Uruski (lowstand fans in East coast seismic); Peter King (Taranaki basin history and, with Greg Browne, detailed studies of a Miocene slope-fan complex from a sequence stratigraphy and hydrocarbon reservoir perspective); Greg Browne is also involved in other reservoir studies and a study of Quaternary-Recent systems tracts in

Canterbury; Richard Sykes (study of Eocene-Oligocene coal facies and organic petrology of Paleocene black shale); Steve Edbrooke (Eocene-Oligocene coalfields); Hai Zhu, Simon McMillan (Dunedin office) and Richard Cook (Great South Basin seismic and sequence stratigraphy); Rick Herzer (study of Northland basin just published; working on Reinga basin stratigraphy, and Neogene sedimentation offshore Fiordland); Alan Beu (late Neogene limestones and Pliocene sequence stratigraphy) and George Scott / Martin Crundwell (foraminiferal "biologs" for paleoenvironmental control; recently calibrated against a Vailian seaslug model from Taranaki). Jon Lindqvist (Dunedin) is studying onshore SE Otago basins.

The Institute has been fortunate to have hosted several visitors recently, including Dale Leckie, Roger Slatt, Jim Trexler and Jim Kennett. To contact the Institute of Geological and Nuclear Sciences write to Box 30368, Lower Hutt, NZ or fax: 064-4-569-5016. Brad Field (email: SRLNBDF@lhn.gns.cri.nz).

Recent collaboration between the Institute of Geological and Nuclear Sciences, National Institute of Water and Atmosphere and French researchers has produced detailed swath bathymetry and side-scan sonar images of the Hikurangi and Fiordland subduction margins. This should assist understanding of both the development and sedimentation controls of the Neogene margin and subduction margins in general.

The New Zealand Oceanographic Institute (NIWA) continues to run investigations into the offshore extension of the Pacific/Australian Plate boundary. Keith Lewis, in collaboration with Serge Lallamond (Fr) and Jean-Yves Collot (Fr), are evaluating the collision of seamounts borne by the Pacific Plate as it subducts beneath New Zealand. In the nearby back-arc basin, Ian Wright is undertaking extensive swath mapping to evaluate the extent of active arc volcanism and associated tectonic framework. Further offshore, along the eastern margin of the New Zealand plateau, Lionel Crater together with Nick McCave (UK) and Phil Weaver (UK) are investigating the past and present dynamics of the globe's largest deep western boundary current. At the other end of the depth spectrum Phil Barnes is investigating the plate boundary deformation where it extends onto the Canterbury shelf and Scott Nodder is attempting to come to grips with the vagaries of sediment fluxes in near surface waters from several sites around the country.

Malcolm Laird (email: geol033@csc.canterbury.ac.nz) has recently left the Institute of Geological and Nuclear Sciences but will be continuing his studies (in Christchurch) mainly on aspects of the Cretaceous of New Zealand. Gerrit van der Lingen (also based in Christchurch) is continuing his work on the history of the Tasman Sea.

At the University of Auckland, Peter Ballance is wrapping up joint

work with Russian colleagues on the sedimentology and history of the Kermadec Arc and Colville remnant arc north of New Zealand. As on other oceanic arcs, there is much reworking of rocks and fossils. The Kermadec Trench contains considerable quantities of rhyolitic vitric mud derived from New Zealand, 1000 km to the south. PhD student Naseem Aadil is writing up the burial history of the Northland Allochthon, a passive margin suite of sediments (mid-Cretaceous to late Oligocene) which were obducted onto northern New Zealand in the early Miocene and subsequently re-buried. The original diagenesis (clay mineralogy, vitrinite reflectance) has not been overprinted.

Two new PhD students at Auckland, Ayesha Saeed and Axel Leverenz, are working on the provenance and sedimentology of parts of the basement metagreywacke rocks which underpin New Zealand. These are accretionary prism and terrane collision rocks of Mesozoic age. Murray Gregory has been working on marine disposal of dredge spoil and on avian bioturbation in intertidal sediments. Justin Faulconbridge submitted a Masters thesis on slope channels cut into the Urenui Formation (Late Miocene) of the Taranaki Basin.

The Department of Earth Sciences at the University of Waikato in Hamilton has an active staff and postgraduate research programme in sedimentation and sedimentary geology, involving seven staff (Cam

Nelson, Peter Kamp, Terry Healy, Willem de Lange, Helen Neil, Tim Naish, and Jeanette Gillespie) and about 20 MSc and PhD students. The marine geosciences group is involved particularly in a variety of coastal and shelf sedimentation studies, including sediment facies mapping, hydrodynamic measurements, numerical modelling, and coastal planning and management issues. The group also conducts research on the sedimentology of North Island rivers and lakes.

Waikato's sedimentary geology group has major on-going projects investigating the nature and diagenesis of modern and Cenozoic nontropical limestones in New Zealand, the application of stable oxygen and carbon isotopes in sedimentological and stratigraphic problems (e.g., diagenesis, isotope stratigraphy, sea-level changes), the Cenozoic paleoclimatology and paleoceanography of the Southwest Pacific region, the fission-track analysis of apatite and zircon for uplift and thermal analysis of sedimentary basins, and the structure and tectonic development of New Zealand during the Cenozoic. Special facilities include a radio carbon dating lab; an F-T and paleomagnetic lab; CL, FI, and SEM microscopy; marine vessels and associated recording equipment such as side-scan sonar, ROV, current meters, and magnetometer; and small flumes and automated fall tubes for grain-size work. Information about activities is welcomed and should be addressed to Cam Nelson, Chairperson of Earth Sciences, on

email: c.nelson@waikato.ac.nz or fax +64-7-856-0115.

Massey University (Palmerston North) now has a specialist sedimentologist on staff with the appointment of Julie Palmer (formerly Petrocorp). She, Alan Palmer and clay mineralogist John Kirkman teach the paper "sedimentology and clays" to second and third year students. Julie also teaches an honours course in applied sedimentology. Most of the emphasis in teaching and research at Massey in sedimentology is in the Quaternary, to complement strong programmes in soils, Quaternary studies, tephrochronology and volcanoclastics. Julie Palmer is continuing her research into the Eastern part of Taranaki Basin, in particular the Tariki Sands, an Oligocene submarine fan system and proven oil reservoir, and reservoir quality in the Eocene Kapuni Group. Alan and Julie Palmer are supervising Monique van der Neut (MSc student) in a project looking at the sedimentology of units younger than Potaka Pumice (1Myr) between Turakina and Marton. Similar studies are being undertaken on the eastern side of Wanganui Basin and near Dannevirke (with Vince Neall and Frank Kreiger). Another MSc student, Giancarlo Hannan, is working with Alan Palmer in the Tutaekuri River, Hawkes Bay, investigating Pliocene cycles of sedimentation, and a large landslide that blocked the river ca. 700 years ago.

Andrew Wards (MSc student) is working with Vince Neall and

Alan Palmer on a revision of the marine terrace chronology near Hawera, south Taranaki. In doing so he is characterising types and styles of sedimentation on the wavecut surfaces. Current work on volcanoclastic sedimentology and stratigraphy is on two sectors of the ring plains surrounding Tongariro Volcanic Centre. Vince Neall and Alan Palmer are working with Jerome LeCointre (Post-Doc) on the western side of Ruapehu Volcano and Shane Cronin (PhD student) is working on the eastern side of Tongariro. Vince continues his collaboration with Brent Alloway (Auckland University) on the Egmont ring plain.

Another facet of sedimentological research at Massey is the sedimentary record preserved in active fault trenches and ponds / swamps etc. dammed by recent earth movement. Vince Neall, Jude Hanson (PhD Student), and Alan Palmer are investigating the Ruahine and Wellington/Mohaka faults of western Hawkes Bay to separate tectonic from storm events and to date earth movements. Bob Stewart (currently on sabbatical) continues his collaboration with NIWA staff investigating the sedimentary record and significance of events in offshore cores.

At Victoria University of Wellington Peter Barrett and Warren Dickinson have their project on siltation and pollution of Wellington Harbour well under way. The real work is being done by post-doctoral fellow James Goff, formerly U

Western Ontario, who has traded SCUBA diving in clear Canadian lakes for 10 cm visibility of the Harbour on a good day. Sedimentation history from cores studied by MSc student Gavin Dunbar indicates pre-European rates of 1-2 mm per year with post-forest clearing rates more than 10 times that. Present day mud also has high levels of lead and other heavy metals, currently being measured by another MSc student, Paul Pilotto. Future harbour studies are assured with James Goff's very recent appointment as Lecturer in Geography here.

Other sedimentological projects at Victoria include studies of hydro dams in different parts of the North Island (MSc students Richard Purdon and Jarrod Bowler and co-supervised with Jack McConchie, Geography Department), in one case indicating a 50 year life and the other a dam almost full. Quaternary studies have experienced a slight hiatus with the departure of Brad Pillans to Australian National University, though Les Singh is making good progress in his PhD study of Holocene sea-level rise in Marlborough Sounds from dating vegetation beneath marine muds. Brad's position has been taken by James Schulmeister, who is picking up on his post-doctoral work at Canterbury a couple of years ago, and working with Jane Soons on Late Pleistocene climate and sea-level change from drill cores on Banks Peninsula.

Victoria's studies of Holocene Antarctic coastal sedimentation took a dive last year when Alex Pyne's \$200K vibracorer was lost in 300 m of water off the Victoria Land coast. In the meantime Alex and Peter Barrett are spending a lot of time on the Cape Roberts Project, an effort by NZ, USA, Italy, Germany and UK to core continuously 1500 m of strata at 780S for a record of Late Cretaceous and early Cenozoic climate change. First core is due up in October 1996. For more information see EOS (January 4, 1994) or contact Peter Barrett, fax +64 4 495 5186.

At the University of Canterbury, Doug Lewis is getting back to more research after the publication early this year of his books "Practical Sedimentology" and "Analytical Sedimentology". After a season of teaching with them, he wonders how those damned errors occur after all the proofing by two authors and an editor!? Adriaan Bal is into his second year PhD work on the Canterbury Plains, in part using ground penetrating radar in an attempt to define the three-dimensional relationships of the hierarchy of bounding surfaces that it can detect. Simon Ward is finishing his PhD on one of the West Coast, South Island, coal-measure formations; his study has combined "traditional" sedimentology with coal petrography and palynology in about equal parts. Carl Stark has begun MSc studies of onshore equivalents of a prospective petroleum target in the largely offshore Taranaki Basin province; he will be applying

"traditional" sedimentology to the Paleocene unit in the northwest corner of the South Island.

Also at Canterbury, Rebecca Manley is underway in an Honours project on another of the onshore equivalents of a prime Taranaki Basin target - the Miocene unit Mt. Messenger Formation - while working for the New Zealand Oil Company Petrocorp; besides measuring sections in the largely bathyal deposits, she will be doing some size and petrographic analysis, and will be taking particular note of the trace fossils; some attempts may be made to coordinate her data with gamma-ray and permeameter outcrop profiles

At the University in Otago (Dunedin), James D.L. White's primary NZ research topic (in collaboration with IGNS) is drainage system response to young volcanic eruptions in the Taupo Volcanic Zone. Chuck Landis is addressing

problems of sedimentation associated with peneplanation and diagenetic modification of clastic materials in Quaternary littoral sands. Ewan Fordyce is studying depositional environments and stratigraphy of Eocene-Miocene sediments of the Canterbury basin, especially vertebrate-bearing limestones and greensands. Daphne Lee is working on depositional environments and stratigraphy of mid Tertiary brachiopod-bearing sediments, especially hardgrounds associated with North Otago volcanics, and Earth Science education in schools. Stuart Owen's PhD topic is marine sedimentation: active margin turbidite systems and response to relative sea-level fluctuations in the late Paleozoic and Mesozoic limestones in the Nelson area. Vernon Manville's PhD is on syntectonic sedimentation, sedimentary response to late Cenozoic tectonism, basin analysis, provenance studies, fluvial sedimentology - Te Anau region.

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ROMANIAN SEDIMENTOLOGY GROUP

During 1995 the activity of the Grupul Român de Sedimentologie will be focused upon:

1) **"Sedimentology Colloquium"** - monthly meetings (January-June; October-December):

"Abyssal Plains - Sedimentary Processes and Products" by Stefan Szobotka (January);

"The Evaporative Formations between Buzau and Teleajen Valleys - A Sedimentologic Study" by Dumitru Frunzescu (February);

"Mesozoic Carbonate Platforms in Romania - A Comparative Study" by Cristina Panaiotu (March);

"Cratonic Basins - Eustasy and Sedimentation" by Adriana Raileanu (April);

"The Statistical Processing of Sedimentologic Information- Codification Principles" by Daniela Vlad-Csobuka (May);

"A New Regard Concerning Stratigraphy of the Sedimentary Formations from East Carpathians, Based on Sequence-Stratigraphy Concepts" by Nicolae Anastasiu, Marius Popa and Bogdan Varban (June);

"The Magnetism of Sedimentary Rocks - A Useful New

Method in the Study of Sediments" by Cristina Panaiotu (October);

"Slon Olistostroma - Palaeo-environmental Significances" by Marius Popa (November);

"Diagenetic Processes in Clays and Siliciclastic Rocks Containing Organic Matter" by Lucia Momea (December).

2) **Workshop** on "Sandstone Provenance - Recognition of the Source Areas - A Comparative Study Problem" Bucharest, September 4-9, 1995, discussing:

a) Criteria and methods;

b) Comparative studies;

c) Examples of provenance studies on ancient sandstones related to plate tectonics.

An additional field trip (within the Neogene Congress) will be possible for one or two days.

3) Organising of **geological field trips and field seminars** oriented towards sedimentary formations situated in Dobrogea and Carpathians, as follows:

April 18-21: Northern Dobrogea, with our students;

July 10-13: East Carpathians (Teleajen Valley);

September 4-10: "R.Weimer" field trips (Putna and Zabala Valleys).

Also, beginning this year, we will initiate international fieldtrips and seminars in Romania. In this regard, we wish to announce a geological fieldtrip in cooperation with the "L. Mrazec" Society of Environmental Mineralogy and Petrography:

Teleajen Valley, Romania

Date: July 10-13, 1995

We are looking forward to the reaction of sedimentologists in connection with this proposal.

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On occasion of the 8th International Coral Reef Conference, held 24-29 June 1996 in Panama-City, we are preparing a conference symposium on

CORAL REEFS AND CARBONATE PLATFORMS WITHIN SILICICLASTIC SETTINGS: MODERN AND ANCIENT

Many modern coral reefs and carbonate platform systems grow in close spatial association with fine or coarse siliciclastic deposition and/or have a subrecent siliciclastic foundation. Many ancient coral reefs likewise grew in close spatial or temporal association with siliciclastics. Some coral reefs appear not to be influenced by the surrounding siliciclastics whereas others seem to be pronouncedly different from reefs of pure carbonate settings. Both cases deserve special attention because it is

assumed that in mixed systems biota, sediment characteristics and depositional architecture should sensitively monitor balanced or shifting environmental conditions.

Focus should be on the role of reefal biota in mixed settings (how do they do it there?), and on the discrimination of the interplay between biotic, oceanographic, tectonic, climatic and eustatic factors controlling and determining mixed systems.

Possible aspects to be discussed include: Role of climate; other mechanisms fencing off siliciclastics; handling and physical removal of siliciclastics reaching reefs; temporal dynamics of mixed sedimentation; the effects of nutrient and siliciclastic increase (always negative?); community changes and functional morphology; biogenic carbonate production under siliciclastic contamination (who does it?).

Process-oriented case studies from Modern and Ancient examples on spatial and/or temporal coexistence of reefal carbonates and siliciclastics, contributions to

functional, physiological and community adaptations of reef biota, and qualitative as well as quantitative studies on carbonate productivity/producers within siliciclastic settings are most welcome. Publication of a set of symposium papers is planned.

Interested? If so, please contact Reinhold Leinfelder at your earliest convenience, if possible by sending a preliminary title for oral/poster presentation.

The symposium convenors: Reinhold Leinfelder, Stuttgart, Martin Nose, Stuttgart, and Robert Ginsburg, Miami.

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CALENDAR

PETROTECH-95: COMPETITIVE EDGES IN PETROLEUM TECHNOLOGY

January/April 1995

INDIA (Dehra Dun)

Contact: Dr. Anil K. Garg, KDM
Inst. of Petroleum Exploration, 9
Kaulagarh Road, Dehra Dun-248195,
India.

Tel: 0135-23193, 27101-5

EPABX-5748/5000/5001;

Telex: 0585/273 MIPE IN

Fax: 0135-25265

10TH HIMALAYA- KARAKORAM-TIBET WORKSHOP (Incl. a special session on geological processes related to uplift, exhumation and elevation of the Himalaya, Karakoram and Tibet)

April 4-8, 1995

SWITZERLAND (Monte Verità)

Contact: Dr. David A. Spencer,
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CH-8092 Zürich, Switzerland.

Tel: 41-1-632-3698; Fax: 41-1-632-
1080

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COHERENT FLOW STRUCTURES IN OPEN CHANNELS: ORIGINS, SCALES AND INTERACTIONS WITH SEDIMENT TRANSPORT

April 10-12, 1995

U.K. (Leeds)

Contact: S. McLelland, School of
Geography, University of Leeds,
Leeds, LS2 9JT, U.K.

Tel: 0532-333324; Fax: 0532-333308

E-mail: geo5sm@geog.leeds.ac.uk

2ND INTERNATIONAL CONFERENCE ON MECHANICS OF JOINTED AND FAULTED ROCKS (MJFR-2)

April 10-14, 1995

AUSTRIA (Vienna)

Contact: Doz. Dr. H. P. Rossmannith,
Inst. of Mechanics, Technical Univ.
Vienna, Wieder Hauptstrasse 8-
10/325, A-1040 Vienna, Austria.

16TH IAS REGIONAL MEETING

April 24-26, 1995

FRANCE (Aix-les-Bains, Savoie)

Contact: Isabelle Cojan, Congrès Aix
95, Ecole des Mines de Paris,
Laboratoire de Sédimentologie, 35
rue St. Honoré,
77305 Fontainebleau Cédex, France.

Tel: (33) 1-64 69 49 11

Fax: (33) 1-64 69 49 35

**PETROLEUM GROUP OF THE
GEOLOGICAL SOCIETY OF
LONDON**

May 7-9, 1995: **In pursuit of
subtle traps;**

June 27-28, 1995: **Development
and evolution of the Wessex
Basin and adjacent areas;**

September 26-27, 1995: **Petroleum
geology of South East Asia;**

October 24-25, 1995: **Reservoir
characterisation and modelling;**

November 28-29, 1995: **Petroleum
geology of North Africa.**

ENGLAND (Bath and London)

Contact: The Conference

Department, The Petroleum Group,
The Geological Society, Burlington
House, Piccadilly,

London W1V 0JU, England.

Tel: 01 71 434 9944

Fax: 01 71 439 8975

**INTERNATIONAL
SYMPOSIUM ON SEQUENCE
STRATIGRAPHY IN
SOUTHEAST ASIA**

May 16-18, 1995

INDONESIA (Jakarta)

Contact: The Indonesian Petroleum
Association, JI. M. Ikhwan Ridwan
Rais 3, Jakarta 10110, Indonesia.

Fax: (62-21) 375228

**SEDIMENT '95: 10TH
ANNUAL MEETING OF
SEDIMENTOLOGISTS IN
GERMANY**

May 24-28, 1995

GERMANY (Freiberg/Sa)

Contact: Dr. M. Kurze, TU
Bergakademie Freiberg, Inst. für
Geologie, B.v.Cotta-Str. 2, 09596
Freiberg, Germany.
Tel: (03731) 51-3160; Fax: (03731)
51-3126

**7TH INTERNATIONAL
SYMPOSIUM ON THE
ORDOVICIAN SYSTEM**

June 12-16, 1995

USA (Las Vegas, Nevada)

Contact: Dr. Margaret N. Rees, Dept.
of Geosciences, Univ. of Nevada-Las
Vegas, Las Vegas, Nevada 89154-
4010, U.S.A.

Tel: (702) 895-3262; Fax: (702) 895-
4064

**13TH SPANISH
SEDIMENTOLOGICAL
CONGRESS**

June 26-July 2, 1995 (incl. field
trips)

SPAIN (Teruel)

Contact: Alfonso Meléndez or Marc
Aurell, Dpto. Ciencias de la Tierra,
Universidad de Zaragoza, 50009
Zaragoza, Spain.

Tel: 34-76-351114; Fax: 34-76-
565852

**10TH INTERNATIONAL
BATHURST MEETING ON
CARBONATE
SEDIMENTOLOGY**

July 3-8, 1995

U.K. (London)

Contact: Dr. Dan Bosence, Royal
Holloway Univ. of London, Egham,
Surrey,

TW20 0EX, UK.

Fax: (00) 44 (0) 784-471780

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**11TH SYMPOSIUM ON
COASTAL SEDIMENTOLOGY**

July 3-9, 1995

BRAZIL (Rio de Janeiro)

Contact: Prof. Cleverson Guizan
Silva, Dept. de

Geologia/LAGEMAR, Univ. Federal
Fluminense, Av. Bento de Maria da
Costa 115-a, Charitas, Niteroi, R.J.
24.370-190, Brazil.

Fax: 5521-711-9917

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**CLASTIC AND
EVAPORATIVE SYSTEMS AS
ILLUSTRATED BY UPPER
OLIGOCENE AND LOWER-
MIDDLE MIOCENE
DEPOSITIONAL SEQUENCES,
TELEAJEN VALLEY,
ROMANIA - FIELD TRIP**

July 10-13, 1995

ROMANIA (Bucharest)

Contact: Prof. N. Anastasiu or Mr.
M. Popa, Bucharest University,

Faculty of Geology, Mineralogy &
Petrology Dpt., Bd. N. Balcescu No.
1, 70 111, Bucharest, Romania.

**INTERNATIONAL
WORKSHOP ON REEFS AND
CARBONATE PLATFORMS IN
THE PACIFIC AND INDIAN
OCEANS**

July 10-14, 1995

AUSTRALIA (Sydney)

Contact: Douglas Bergersen and
Peter Davies, Dept. of Geology and
Geophysics, Univ. of Sydney, N.S.W.
2006, Australia.

Tel: 61-2-692-4050; Fax: 61-2-692-
0184

E-mail: dougb@es.su.oz.au

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**SEPM CONGRESS ON
SEDIMENTARY GEOLOGY**

August 13-16, 1995

U.S.A. (St. Pete Beach, FL)

Contact: Myralee Rogers, SEPM's
Business Office, P.O. Box 4756,
Tulsa, OK 74259-0756, U.S.A.

Tel: (918) 493 3361; Fax: (918) 493
2093

e-mail: myralee@aip.org

Abstract deadline: April 1, 1995

Pre-registration: by July 15, 1995

**THE FIRST INTERNATIONAL
LIMNOGEOLOGICAL
CONGRESS Research Methods
In Ancient and Modern
Lacustrine Basins**

Sponsored by: IAS, GLOPALS,
UNESCO-IUGS, IGCP-324 Project
August 21-25, 1995

DENMARK (Copenhagen)
Contact: "ILIC", Nanna Noe-
Nygaard, Geological Institute, Øster
Voldgade 10, DK-1350 Copenhagen
K, Denmark.

Tel: (45) 35322491; Fax: (45)
35322499

**SANDSTONE PROVENANCE
(Source area recognition - a
comparative petrology
problem)**

An RCMNS workshop co-sponsored
by the IAS.

September 4-9, 1995

ROMANIA (Bucharest)

Contact: Nicolae Anastasiu,
Department of Mineralogy,

University of Bucharest

1 N. Balcescu Bd., 70111 Bucharest,
Romania.

Tel: 400-14 35 08/152

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**2ND INTERNATIONAL
SYMPOSIUM ON THE
GEOLOGY OF THE EASTERN
MEDITERRANEAN REGION**

August 27-September 1, 1995

ISRAEL (Jerusalem)

Contact: Symposium Secretariat,
P.O.B. 50006, Tel-Aviv 61500,
Israel.

Tel: 973 3 5140014

Fax: 972 3 5175674 / 660325

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**3RD INTERNATIONAL
BRACHIOPOD CONGRESS**

September 2-5, 1995

CANADA (Sudbury)

Contact: Paul Copper, Laurentian
Univ., Sudbury, Canada P3E 2C6.

Tel: (705) 675-1151 (ext 6575)

Fax: (705) 673-6532

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**EUROPEAN MEETING OF
THE INTERNATIONAL
SOCIETY FOR REEF
STUDIES: "BIOLOGY AND
GEOLOGY OF CORAL
REEFS"**

September 5-9, 1995

U.K. (Newcastle)

Contact: Dr. Nicholas Polunin, Dept.

of Marine Sciences & Coastal

Management, University of

Newcastle, Newcastle-upon-Tyne,

NE1 7RU, U.K.

Tel: +44 91 222 6659; Fax: +44 91
222 7891

E-mail: n.polunin@ncl.ac.uk

**TETHYAN AND BOREAL
CRETACEOUS
IGCP PROJECT NO. 362
ANNUAL ASSEMBLY**

September 17-18, 1995

NETHERLANDS (Maastricht)

Contact: Mascha Tiemessen,
Laboratory of Palaeobotany and
Palynology, Heidelberglaan 2, 3584
CS Utrecht, The Netherlands.

Fax: 31-30-535096

E-mail:

M.Tiemessen@BOEV.BIOL.RUU.N
L

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**INTERNATIONAL
SYMPOSIUM ON KARREN
LANDFORMS**

(A thematic symposium of the
Commission on Environmental
Changes in Karst Areas)

September 19-22, 1995

SPAIN (Palma de Mallorca-Soller)

Contact: J. J. Fornos or A. Gines,
Dept. Ciencies de la Terra,
Universitat de les Illes Balears,
07071 Palma de Mallorca, Spain.

Fax: 34-71-173184

E-mail: dctjfa@ps.uib.es

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**ANNUAL MEETING OF THE
GERMAN GEOLOGICAL
SOCIETY (DGG)**

October 4-6, 1995

GERMANY (Greifswald)

Contact: Prof. G. Katzung, Institut
für Geologie und Paläontologie,
Ernst-Moritz-Arndt-Universität
Greifswald,

Jahn-Strasse 17A, D-17489

Greifswald, Germany.

Tel: +49-3834-77271, App. 298

Fax: +49-3834-883351

E-mail: dgg95@rz.uni-greifswald.de

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**10TH ANNIVERSARY OF THE
AACHEN SEDIMENTOLOGY
GROUP: "INFORMATION
PROCESSING AND
MODELLING IN GEOLOGY"**

October 11-13, 1995

GERMANY (Aachen)

Contact: Ulrich Mann, KFA/ICG-4,
D-52425 Jülich, Germany.

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**SEPM RESEARCH
CONFERENCE ON ALLUVIAL
FANS**

October 17-21, 1995

U.S.A. (Death Valley, CA)

Contact: Myra Rogers, SEPM
Business Office, P.O.Box 4756,
Tulsa, OK 74159, U.S.A.

Tel: (918) 743-9765; Fax: (918) 743-
2498

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**THIRD INTERNATIONAL
CONFERENCE ON
ASIAN MARINE GEOLOGY**

October 17-21, 1995

KOREA (Cheju Island)

Contact: Dr. Hong-Rhyong Yoo,
Marine Geology and Geophysics
Division, KORDI Ansan P.O. Box
29, Kyungki-do, Seoul, 425-600,
Korea

Fax: +82-345-408-5822

Telex: KORDI K27675

7th CANADIAN COASTAL CONFERENCE

October 18-21, 1995

CANADA (Halifax)

Contact: Mr. S. Solomon, Atlantic Geoscience Centre, Bedford Institute of Oceanography, Box 1006, Dartmouth, Nova Scotia, B2Y 4A2, Canada.

Tel: 902 426 9459; Fax: (902) 426 4104

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RIFT SEDIMENTATION AND TECTONICS IN THE RED SEA - GULF OF ADEN REGION

October 23-29, 1995

YEMEN(Sana'a)

Contact: Dr. Dan Bosence, Royal Holloway Univ. of London, Egham, Surrey, TW20 0EX, U.K.

Fax: (00) 44 (0) 784 471780

or Dr. Mohamed Al-Aawah, P.O.Box 13200, Sana'a, Rep. of Yemen

Fax: (00) 967-1-214075

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ANCIENT AND RECENT LACUSTRINE SYSTEMS IN CONVERGENT MARGINS

November 12-18, 1995

CHILE (Antofagasta)

Contact (in Spain): Dr. Alberto Sáez or Dr. Lluís Cabrera, Dept. of Geologia Dinámica, Geofísica i Paleontologia, Campus of Pedralbes, 08028 Barcelona, Spain.

Tel: 34-3-4021364; Fax: 34-3-4021340

E-mail: alberto@natura.geo.ub.es or lluis@natura.geo.ub.es

Contact (in Chile): Dr. Prof. Guillermo Chong or Dr. Prof. Arturo Jensen, Departamento de Ciencias Geológicas, Avda.

Angamos, Antofagasta, Chile.

Fax: 5655248198 or 241714

E-mail:

gchong@socompa.cecun.ucn.cl

ajensen@socompa.cecun.ucn.cl

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BRITISH SEDIMENTOLOGICAL RESEARCH GROUP ANNUAL GENERAL MEETING

December 13-16, 1995

ENGLAND (Durham)

Contact: Maurice Tucker, Department of Geological Sciences, University of Durham, Durham, DH1 3LE, England.

Tel: +191 374 2524; Fax: +191 374 2510

E-mail: M.E.Tucker@Durham.ac.uk

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FAUNA, FLORA AND SEQUENCE STRATIGRAPHY

December 14-15, 1995

FRANCE (Paris)

Contact: APF, Fauna, Flora and Sequence Stratigraphy Meeting, Laboratoire de Paléontologie, 8 rue Buffon, F-75005 Paris, France.

Tel: +33 40 79 30 46;

Fax: +33 40 79 35 80

E-mail:

simmonmd@txpcap.hou.xwh.bp.com

or: Annie Arnaud-Vannaue, Institut Dolomieu, rue Maurice Gignoux,

38031 Grenoble Cedex,

France.
 Tel: +33 76 63 59 07;
 Fax: +33 76 87 82 43
 E-mail: arnaudah@grenet.fr

Tel: 54 91 23555/20704
 Fax: 54 91 553933
 E-mail: Perillo@CRIBA.EDU.AR

**4TH CONFERENCE OF THE
 SOCIETY OF EGYPTIAN
 SEDIMENTARY GEOLOGY**

January 2-3, 1996
 EGYPT (Cairo)
 Contact: Prof. Soliman M. Soliman,
 Geology Department, Ain Shams
 University, Cairo, Egypt.

**6TH SPANISH CONGRESS
 AND INTERNATIONAL
 CONFERENCE ON
 ENVIRONMENTAL GEOLOGY
 AND LAND-USE PLANNING**

April 24-27, 1996
 SPAIN (Granada)
 Contact: Technical Secretariat, VI
 CNGAOT, Dpto. de Congresos de
 Viajes Sacromonte, C/ Angel Ganivet
 6, 18009 Granada, Spain.
 Tel: 34-58-225598/9; Fax: 224617
 Telex: 78484

**6TH ARGENTINIAN
 SEDIMENTOLOGICAL
 MEETING**

**"La Sedimentología, el Medio
 Ambiente y la Productividad"**
 May 17-23, 1996
 ARGENTINA (Bahía Blanca)
 Contact: G.M.E. Perillo, Instituto
 Argentino de Oceanografía,
 Avda. Alem 53, 8000-Bahía Blanca,
 Argentina.

**CORAL REEFS AND
 CARBONATE PLATFORMS
 WITHIN SILICICLASTIC
 SETTINGS. MODERN AND
 ANCIENT**

**Subsymposium on the occasion
 of the 8th International Coral
 Reef Symposium**

June 24-29, 1996
 PANAMA (Panama City)
 Contact: Reinhold Leinfelder, Institut
 für Geologie und Paläontologie,
 Universität Stuttgart, Herdweg 51,
 D-70174 Stuttgart, Germany.
 Tel: ++49 711 121 1339 (or -1340)
 Fax: ++49 711 121 1341
 or: Robert Ginsburg, University of
 Miami, RSMAS, 4600 Rickenbacker
 Causeway, Miami, Florida 33149-
 1098, U. S. A.
 Fax: ++1 305 361 4094