NEWSLETTER

N°177 December 2001

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http://www.blackwell-science.com/uk/society/ias

Report on the

INTERNATIONAL SEDIMENTOLOGY WORKSHOP ON FLORIDA / BAHAMAS QUATERNARY CARBONATES

(October 7 – 17, 2001)

This workshop, initiated and led by *Prof. Robert N. Ginsburg*, was sponsored by the International Association of Sedimentologists, the Ocean Research and Education Foundation, and the University of Miami's Rosenstiel School of Marine and Atmospheric Sciences. It gave 15 participants (who had mostly been working in ancient carbonates) a first-hand experience of modern carbonate depositional systems and their Pleistocene counterparts.

The participants were:

Andrea Ceriani (Pavia, Italy)
Giovanna della Porta (Amsterdam, The Netherlands)
Marcin Górka (Warsaw, Poland)
Michal Gruszczynski (Warsaw, Poland)
Janos Haas (Budapest, Hungary)
Kinga Hips (Budapest, Hungary)
Adrijan Kosir (Cardiff, U.K.)
Zoltán Lantos (Budapest, Hungary)
Steven Lutz (Miami, U.S.A.)
Jane Nobrè Lopes (Minas Gerais, Brazil)
Zolt R. Nagy (Missouri, U.S.A.)
Sarolta Pálfalvi (Budapest, Hungary)
Guillermina Sagasti (La Plata, Argentina)
Hairuo Qing (Regina, Canada)
Akos Török (Budapest, Hungary)

In the following, **extracts of the participants' reports** are given:

October 7th – Visit of the Pleistocene Miami Oolite exposures; discussions on cross bedding, directions of transport, selective cementation and burrowing... We were able to observe a mud storm layer produced by Hurricane Andrew in 1993. In the afternoon a quick look at fresh-water swamps where low-Mg calcite precipitation is induced by cyanobacterial activity.

October 8th – Mud banks of South Florida and carbonate-mud-producing organisms: calcareous green and red algae, *Thalassia* seagrass and calcareous epibionts living on it, branching corals (*Porites*)... We took cores to see the distribution of sediment types in the first meters (bioturbated mud, roots and mangrove peat)...

October 9th – Visit to Windley Key State Park. Beautiful exposure of nearly 2.5 meters of patch-reef

Sedimentologists on the beach. Note how sea level is rising through time (towards the right) (Photo: Hairuo Qing)

sediments and corals (Late Pleistocene Key Largo Limestone) very well preserved in cut rock face... Small caliche-sinkholes filled with reddish calcareous sediment and black pebbles, at the top of the Key Largo Limestone, represent periods of subaerial exposure.

October 10th – Transfer back to Miami.

October 11th – Interesting lectures on shallow-marine carbonate diagenesis (by Pamela Reid), siliciclastic sedimentation in South Florida (by Don McNeill), and isotopic signatures (by Peter Swart).

October 12th – Flight to North Andros (Bahamas).

October 13th – Roundtrip in Nicoll's Town visiting exposures of Pleistocene eolianites... Snorkeling gave us the chance to appreciate the living patch-reef community... We explored a fossil reef where we noted part of the same community and features of subaerial exposure...

October 14th – Visit to Andros tidal flats. Close view of a humid-climate carbonate tidal flat. There, wind-generated flooding and currents, instead of astronomic forces, play the major role in sediment transport and deposition. We analyzed the supratidal zone…

October 15th – Joulter Cays. We observed the difference between the so called "mobile sands", pure pearl-like ooids in the area facing the open sea, and the "stabilized sands" intensively burrowed and reworked by *Callianassa* and fixed in some areas (islands) by vegetation…

October 16th – Back to Miami late in the night.

October 17th – "Big brainstorming day"… Attractive talks by Christophe Dupraz about models on stromatolite formation, and by Gregor Eberli who described the facies in two cores... (***Andrea Ceriani***)

It is well known among Professor Ginsburg's students and it was frequently emphasized during the workshop that an essential point of the scientific thinking is to rise questions… (***Janos Haas***)

We have experienced how important the inherited topography is for carbonate sedimentology… In Florida Bay, the rock bottom is only a few metres below the present mean sea-level, as we could test it by coring. Thus, depending on the depositional environment, a few centimetres to a few metres of Holocene sediments are present… (***Akos Török***)

We spent a few days "wallowing" in mud. We were studying mud-dominated sedimentation of Florida Bay. Submarine exploration gave us the chance to see the famous banks: their northern slopes consist of large skeletal grains .... and their central-southern parts are composed of almost pure calcareous mud baffled by turtle grass or covered with small ripples. There we saw also some interesting mud-producing creatures such as *Penicillus* and epibionts attached to *Thalassia* blades (mainly peneroplids and the bivalve *Pteria pinctada*)… (***Marcin Górka***)

The influence of a muddy lagoon on the distribution of recent reefs – Sedimentation and biota between the Upper Keys and reefs is partly controlled by mud supply from Florida Bay. We studied sediment cores from Indian Key to sand shoals also illustrated on a satellite map. We observed the muddy delta at the head of channels located between the keys. Fine sediment carried by ebb tide from the Bay is deposited next to fine sand containing coarse skeletal debris in the back-shoal area. Opposite of the channels, sand shoals are formed instead of coral reefs… (***Kinga Hips***)

In a spectacular exposure of cross-bedded Pleistocene Miami Oolite we had a lesson on how ancient environments and sedimentological processes can be recon-

structed from observations in the outcrop, knowing the sea-level history. We examined the orientation, structure, and surfaces of bedsets and the grainsizes of couplets, and recognized a sand bar formed by dominantly ebb-tidal currents. We were able to determine the direction of transportation, the duration of sedimentation from couplets to different orders of bedsets, and processes of bar migration. It was very interesting to follow the evolution of the ooid sand shoal in space and time also in a 3D computer animation at the outcrop... (***Sarolta Pálfalvi***)

Ooids – These small, round and glossy particles are probably one of the most impressive examples of carbonate sedimentation. We could observe "living" ooids at Joulter Cays... The ooids occur on the windward side as shoals and building the beach... Wave ripples are visible on the upper surfaces of wandering shoals that are usually emerged during low tide, causing early cementation of grains. Cemented parts are often broken by waves, giving rise to intraclasts. The codiaceans *Udotea* and *Penicillus* are common creatures living on less mobile parts of the sediment. Some shoals stopped their development and are covered by peloid mud. A large amount of *Callianassa* mounds occur there. Both these oolitic subfacies, cross-bedded and burrowed, have their fossil equivalents ... in the Pleistocene Miami Oolite... (***Marcin Górka***)

Beachrock is generally found on windward beaches (Andros Island, Joulter Cays), and recent reef debris is cemented into the holes of the karst surface (top of Pleistocene) on the windward side of Andros. Thin surface dolomite crusts are widely distributed in the supratidal zone, flooded only during spring and storm tide, on the Andros tidal flat... (***Kinga Hips***)

This experience on recent coastal marine sediments, biota, depositional processes, and diagenesis significantly changed my way of looking at fossil carbonates... (***Kinga Hips***)

It was the first time I had the chance to study recent marine deposits and processes, and during this trip I learned a lot not only about the carbonates but about the research methods and about how to approach the problems, how to think about them and how to try to find answers from different aspects. The experiences have provided me with the possibility to better know and interpret the ancient sedimentary environments, too. This can help me to get closer to the solution of the problems in my PhD work... (***Sarolta Pálfalvi***)

The Joulter Cays carbonate sand belt is a good analogue for the Miocene oolitic sequence near and in Budapest. The oolitic limestone of this ramp, which is in the focus of my recent interest, provides the

building and ornamental stone of many public buildings in Budapest. A detailed study of this carbonate system is still missing and can now be performed by using the field experiences of this workshop and by using the references on Bahamian oolites... ***(Akos Török)***

The slides and my experience will be incorporated in my courses and will be disseminated among students (both civil engineering and geology students). The collected samples will be shown to the students and also be part of the course materials... (***Akos Török***)

It's obvious how important and how useful to me all the information I got from this unique experience will be. I will certainly remember Prof. Ginsburg's thoughts and lessons that were not limited only to the modern carbonates of Florida and the Bahamas. I would also like to thank the International Association of Sedimentologists for giving me the possibility to share with the other participants this great experience and, last but not least, the professors and students of the RSMAS, who kindly prepared these interesting talks and were ready to answer my many questions. (***Andrea Ceriani***)

Compiled by
André Strasser
General Secretary

Report on the

SEDIMENTARY SEQUENCES AND DEPOSITIONAL SYSTEMS OF THE CENTRAL-CARPATHIAN PALEOGENE BASIN

Field trip (October 8 – 12, 2001)

At the beginning of October, Slovakia hosted sedimentologists interested in deep-water sediments. The Geological Survey of the Slovak Republic and the Geological Institute of the Slovak Academy of Sciences, with the support of IAS, organized a field trip on "Sedimentary sequences and depositional systems of the Central-Carpathian Paleogene Basin".

This field excursion provided the opportunity to examine spectacular outcrops in several regions of the Slovakian Central-Carpathian Paleogene Basin (Orava, Spisská Magura, Levoca, and Hornád regions), which demonstrate a continuos transition from terrestrial to deep-water depositional systems in a forearc basin.

The basin, which is about 200 km long and 60 km wide, has a complex tectonic history related to the subduction of the North-European platform beneath the Carpathian block. The Eocene to Lower Miocene sedimentary fill is up to 4 km thick and mainly consists of deep-water turbidites. The post-sedimentary uplift of the basin margins exposed basal sedimentary successions providing the opportunity to follow lateral transitions from shallow-marine to deep-water sediments. The participants could see sediments of incised fluvial valleys, alluvial fans and delta fans developed at the basin margin. Lateral equivalents of these sediments – deltaic and shallow-water sediments – were also shown. However, most of the time was devoted to the demonstration of marine slope deposits and various kind of gravity-flow deposits. Among the most interesting points of the excursion were spectacular outcrops of coarse-grained canyon-fill deposits or massive sandstones deposited in basin floor fans.

The itinerary of the trip was arduous – during four days we covered almost 900 km from the western to the eastern part of the basin along its axis. As organizers, we were afraid of exhausting packing and unpacking backpacks every day, changing hotels and places. However, the program of the excursion, nice sediments, and

fantastic weather overcame all these drawbacks.

As the organizer, I was very pleased by great discussions in front of the outcrops, which were beneficial for both the people working in the region and all the other participants. As a rule, we continued the discussions accompanied by beer long into the night. I think that during these discussions many new ideas and common plans arose. I was also very pleased by the great people taking part in the excursion: 29 participants from the Czech Republic, Hungary, Norway, Poland, Slovakia, Slovenia, and the USA, who were extremely enthusiastic about geology and became good friends after the five days of the trip. I am sure that this field trip stimulated many new ideas for future research and, possibly, also for some new joint projects.

Juraj Janocko
Geological Survey
of the Slovak Republic
Slovakia

POSTGRADUATE GRANT SCHEME

IAS has established a grant scheme designed to help PhD students with their studies. We are offering to support postgraduates in their fieldwork, data acquisition and analysis, visits to other institutes to use specialised facilities, or participation in field excursions.

Up to 10 grants, each of 1000 Euros, are awarded twice a year.

These grants are available for IAS members only, and only for postgraduates. The application must include a short CV and a budget. A letter from the supervisor supporting the application must be sent directly to the Treasurer of the IAS.

Application forms can be downloaded from our website (*http://www.blackwell-science.com/uk/society/ias*) or can be requested from the Treasurer's Office (IAS, Office of the Treasurer, Ecole des Mines de Paris, 35 rue St-Honoré, 77305 Fontainebleau cedex, France; e-mail: *cojan@cges.ensmp.fr*).

Applications must be sent to the Treasurer of the IAS.

Application deadlines:	**1st session:**	**March 31**
	2nd session:	**September 30**

Recipient notification:	1st session:	before June 30
	2nd session:	before December 31

INCISED VALLEYS, IMAGES AND PROCESSES

In response to the continuing interest in incised valleys, SEPM will convene a research conference in Casper, Wyoming, from August 18 to 23, 2002, to examine the origin, geomorphology, facies, and stratigraphic organization of incised-valley deposits of all ages. Conveners for the conference will be *Rod Tillman, Bob Dalrymple, Dag Nummedal*, and *Dale Leckie*.

Over the last decade, a large body of work has appeared on incised valleys, providing important new insights into the factors that govern their location and the stratigraphic organization of the fill but many unanswered questions remain. If you are interested in attending the subject conference we would like you to consider submitting an abstract for consideration by the conveners. Please indicate whether you prefer oral or poster presentations. As a large number of people are expected to be interested in the topic, abstract submission will be used as a selection process.

Discussion will focus on the following topics:

- Depositional processes in modern valley-filling fluvial and estuarine environments, especially as they relate to the facies heterogeneity and stratigraphic organization of incised-valley deposits;
- Examination of tidal processes and deposits within incised valleys, with special reference to the tidal-fluvial transition zone;
- Recognition and differentiation of estuaries and tide dominated deltas;
- Controls and tectonic influences on the timing and location of valley incision, and on the internal architecture of valley-filling deposits;
- New techniques for imaging incised-valley deposits, including 3D seismic and ground-penetrating radar;
- Flow of fluids (groundwater or petroleum) through incised valley deposits.

The conference will consist of three days of talks and poster presentations, interspersed with two days of field trips to examine Cretaceous incised-valley deposits in the Frontier and Muddy Sandstone formations. An optional one-day field trip to the Shannon will be offered immediately following the conference for an additional $80.

A limited number of subsidized places have been reserved for students who are working on topics directly related to the themes of the conference. The conveners are especially interested in hearing, at an

early date, from students who are interested in attending.

Abstracts (250-word limit) should be submitted by e-mail, no later than March 1, 2002, to Judy Tarpley at SEPM with copies to each of the conveners. Notification of acceptance will be sent prior to April 15, 2002. It is anticipated that there will be significant interest in the conference, so abstracts addressing the topics listed above will be given preference.

Expressions of interest in attending the conference or questions regarding student applications or conference themes should be directed to *rodtillman@worldnet.att.net*.

Questions regarding registration, lodging or other logistical matters should be directed to Judy Tarpley at SEPM:

Judy Tarpley
1741 East 71st Street
Tulsa, Oklahoma
74136-5108, USA

Tel:
North America: (800) 865-9765
Worldwide (918) 493-3361
Fax: (918) 493-2093
Email: *jtarpley@sepm.org*

The cost of the conference is $925.00, which includes transportation (4-wheel drive), lodging (6 nights), guidebooks and abstract volumes, at least one dinner and three lunches, plus refreshments during oral and poster sessions. The fee does not include airfare. All registration fees must be received by SEPM prior to June 1, 2002.

Rod Tillman
(rodtillman@worldnet.att.net)
Bob Dalrymple
(dalrymple@geol.queensu.ca)
Dag Nummedal
(nummedal@uwyo.edu)
Dale Leckie
(leckied@home.com)

CALENDAR

IAS/SEPM ENVIRONMENTAL SEDIMENTOLOGY WORKSHOP: CONTINENTAL SHELVES - PROCESSES, RECORD, UTILIZATION AND MANAGEMENT
January 7-10, 2002
HONG KONG
Contact: Dr. Wyss Yim,
Department of Earth Sciences,
The University of Hong Kong, Hong Kong.
E-mail: wwsyim@hku.hk

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SWISSED / COL MEETING
The Swiss Contribution to Scientific Ocean Drilling: Past, Present & Future
January 26, 2002
SWITZERLAND (Fribourg)
Contact: Flavio Anselmetti
Geological Institute, ETH-Z,
8092 Zurich, Switzerland.
Tel: +41 1 632 65 69
E-mail: flavio@erdw.ethz.ch
Web-page:
http://www.col.ch/col/symposium.html

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ECONOMIC APPLICATIONS OF SEDIMENTOLOGY
February 28 - March 1, 2002
U.K. (London)
Geological Society, Burlington House
Contact: Jon Noad (jon.noad@gec.shell.com)
or Richard Teeuw (r.m.teeuw@herts.ac.uk)

ANCIENT AND MODERN COASTAL PLAIN DEPOSITIONAL ENVIRONMENTS
Aquifer heterogeneity and environmental implications
SEPM/IAS Research Conference
March 24-27, 2002
U.S.A. (Charleston, South Carolina)
Contact: Mary K. Harris,
Westinghouse Savannah,
River Company, P.O. Box 616,
Aiken, SC 29808, U.S.A.
Tel: +1 803 725 41 84
E-mail: mary.harris@srs.gov

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AAPG HEDBERG RESEARCH CONFERENCE
Deformation, Fluid Flow and Reservoir Appraisal in Foreland Fold and Thrust Belts
May 14-18, 2002
ITALY (Palermo-Mondello)
Contact: François Roure, Rudy Swennen
IFP, France.
E-mail: francois.roure@ifp.fr,
rudy.swennen@ifp.fr

NINTH ARGENTINIAN MEETING OF SEDIMENTOLOGY
May 21-24, 2002
ARGENTINA (Córdoba)
Contact: Ricardo A. Astini,
Estratigrafía y Geología Historica,
Universidad Nacional de Córdoba,
Av. Vélez Sarsfield 299,
5000 Córdoba, Argentina.
Tel: +54 351 433 21 14 (int. 20)
Fax: +54 351 433 20 97
E-mail: IXRAS2002@com.uncor.edu
Web-page: www.sedimentologia.org.ar

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SEDIMENT 2002
May 29-31, 2002
GERMANY (Darmstadt)
Contact: Rainer Petschick,
Institute of Geology and Palaeontology,
J.W. Goethe University of Frankfurt,
Senckenberganlage 32-34,
60054 Frankfurt a.M., Germany.
Tel: +49 (0)69 798 22 694
Fax: +49 (0)69 798 22 958
E-mail: petschick@em.uni-frankfurt.de,
Web-page: http://sediment2002.geologie.uni-frankfurt.de

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16TH INTERNATIONAL SEDIMENTOLOGICAL CONGRESS
July 7-12, 2002
SOUTH AFRICA (Auckland Park, Gauteng)
Contact: Bruce Cairncross,
Department of Geology, Rand Africaans University, P.O. Box 524,
Auckland Park, 2006, South Africa.
Tel: +27 11 489 23 13
Fax: +27 11 489 23 09
E-mail: bc@na.rau.ac.za
Web-page:
http://general.rau.ac.za/geology/IAS2002

THIRD FRENCH SYMPOSIUM ON STRATIGRAPHY
July 8-10, 2002
FRANCE (Lyon)
Contact: Christian Gaillard, Pierre Hantzpergue,
Université Claude Bernard Lyon 1,
UFR Sciences de la Terre,
Géode – 2, rue Raphaël Dubois,
69622 Villeurbanne cedex, France.
Fax: +33 (0) 472 44 58 70
E-mail: strati2002@univ-lyon1.fr
Web-page: http://www.univ-lyon1.fr/strati2002

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SEPM RESEARCH CONFERENCE
Incised Valleys: Images and Processes
August 18-23, 2002
U.S.A. (Casper, Wyoming)
Contact: Rod Tillman
E-mail: rodtillman@worldnet.att.net
Web-page: http://sepm.org

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6TH INTERNATIONAL SYMPOSIUM ON THE JURASSIC SYSTEM
A meeting of the IUGS International Subcommission on Jurassic Stratigraphy
September 12-22, 2002
ITALY (Palermo)
Contact: Luca Martire
Dipartimento di Scienze della Terra
Via Accademia delle Scienze 5
10123 Torino, Italy
Fax: +39 011 54 17 55
E-mail: martire@dst.unito.it
Web-page: www.dst.unito.it/6thISJS

6TH INTERNATIONAL CONGRESS ON RUDISTS
September 16-18, 2002
CROATIA (Pula - Istria)
Contact: Mrs. Alisa Martek and Dr. Ivo Velic,
Institute of Geology,
Sachsova 2, P.O.Box 268,
HR-10000 Zagreb, Croatia.
Tel: +385 1 616 07 86, 616 08 11
Fax: +385 1 614 47 18
E-mail: amartek@igi.hr

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6TH INTERNATIONAL CONFERENCE LITTORAL 2002
September 22-26, 2002
PORTUGAL (Porto)
Contact: G. Soares de Carvalho,
Instituto de Hidraulica e Recursos Hidricos,
University of Porto, 4200-464 Porto, Portugal
Tel: +351 22 508 19 07
Fax: +351 22 508 19 52
E-mail: fpinto@fe.up.pt

THIRD INTERNATIONAL LIMNOGEOLOGY CONGRESS
March 29 – April 2, 2003
U.S.A. (Tucson, Arizona)
Contact: Andrew Cohen, Dept. of Geosciences,
University of Arizona, Tucson, AZ, U.S.A..
Tel: +1 520 621 46 91
Fax: +152062126 72
E-mail: acohen@geo.arizona.edu

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12TH BATHURST MEETING OF CARBONATE SEDIMENTOLOGISTS
July 8-10, 2003
U.K. (Durham)
Contact: Maurice Tucker or Moyra Wilson,
Department of Geological Sciences,
University of Durham,
Durham DH1 3LE, U.K.
Tel: +44 191 374 25 24 / 25 01
E-mail: M.E.Tucker@durham.ac.uk,
Moyra.Wilson@durham.ac.uk
Web-page:
http://www.dur.ac.uk/bathurst.2003/

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