

IAS



INTERNATIONAL ASSOCIATION
OF SEDIMENTOLOGISTS

NEWSLETTER

N°178 February 2002



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IAS-Homepage:

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



FIFTY YEARS OF THE IAS AND *Sedimentology*...

The year 2002 marks the 50th birthday of the International Association of Sedimentologists. The IAS was founded on 11th September 1952 in Algiers with much of the impetus for such a society coming from soft-rock geologists in the Netherlands. The journal *Sedimentology* was first published 40 years ago in March 1962 and in the early years there were 320 pages per volume. This compares to the 1400 pages of last year. The subscription then was just over one Euro (US\$ 1.15); now it is 30 Euros! *Sedimentology* published papers in French and German, as well as English, in the early volumes; it is difficult to think of an international journal that does that nowadays! Reading the Preface in the first issue of *Sedimentology* by the then President, Francis Shepard, is instructive. He wrote that there were then several primary purposes in sedimentological studies: to examine recent sediments to help interpret the ancient, to understand the origin of sedimentary structures, to investigate the use of geochemistry of sediments, and to determine the rates of sedimentation. Much sedimentological research today follows these lines of enquiry, but of course there are many others too. *Sedimentology* continues to lead the field in soft-rock research with a regular high SCI rating.

There are some 2120 members of the IAS and nearly 900 institutes and organisations take the journal *Sedimentology*. The IAS Friendship scheme is very successful indeed – with some 163 individuals and 36 libraries benefiting from it by receiving the journal.

The IAS has held sedimentological congresses regularly in different places throughout the world – Brazil, Canada, Australia, Israel and many places in Europe. We now look forward to the 16th in South Africa in July 2002. Do come – it will be a great conference. Smaller thematic meetings were started in 1973 in Zurich with Pelagic Sediments on Land and under the Sea, and this led to the first IAS Special Publication in 1974. We are now up to Special Publication Number 32, with Flood and Megaflood Processes and Deposits being published in early 2002. The IAS has just published its first field-guide (to Almeria, Spain) and others should follow. The IAS is also involved in the journal *Basin Research*, a joint venture with EAGE (European Association of Geoscientists and Engineers) and Blackwell Science, the publisher of *Sedimentology* of course. *Basin Research* is now a very well respected journal, publishing a range of articles, often interdisciplinary, from rates of uplift and erosion to cyclostratigraphy to 3-D seismic and basin models.



The IAS has also been instrumental in promoting annual meetings and so far these have been held in Europe and North Africa. They began in Bochum, Germany, in 1980 and the 21st meeting was held in Davos, Switzerland, in September 2001, attended by 467 people from 52 countries. Our subject area is very much alive and well.

The IAS has recently initiated a series of workshops on environmental sedimentology, in collaboration with the Society of Sedimentary Geology (SEPM), to raise awareness of the contributions of sedimentologists to environmental problems. The meetings aim to bring together sedimentologists with engineers, hydrologists, modellers, chemists and others, to discuss problems of mutual interest, such as coastal protection, ground-water flow and pollution. Meetings have been held in Venice, Italy (1997), New Mexico, U.S.A. (2000) and Hong Kong (2002) and others are planned in South Carolina, U.S.A., on aquifer heterogeneities (March 2002) and at Leuven, Belgium, on pollution in sediments (September 2003).

The IAS tries very hard to encourage postgraduate members in their studies of sedimentology and we provide grants for attendance at IAS conferences. We have also just started a bursary scheme to provide grants for PhD students to help with their studies, for example in the costs of fieldwork or visits to laboratories for analyses. Details of all aspects of IAS and forthcoming meetings are announced on our website of course, and in the regular newsletter put out by the IAS General Secretary.

The IAS has achieved many things in the 50 years of its existence and I am sure that just as much will be accomplished in the next 50. I would like to thank everyone who has been involved with the IAS over the years – members of the Bureau and Council, the referees of manuscripts, the authors of papers, the members of the Association and the libraries taking our publications, for their wonderful support.

*Maurice Tucker
IAS President
Durham, England*



ARGENTINEAN AND MERCOSUR MEETING OF ICHOLOGY, SAN MIGUEL DE TUCUMÁN, ARGENTINA

Conference Report

The Fourth Argentinean Meeting of Ichnology and the Second Ichnologic Meeting of the Mercosur was held in the city of San Miguel de Tucumán from September 24 to 28, 2001. The conference was convened by Luis Buatois and Gabriela Mángano (Conicet-Insugeo) and was attended by 80 academic staff, personnel from oil companies, and students. Argentina has a strong tradition in ichnology and very active working groups, so it was no surprise to find such a high degree of attendance. Participants included not only Argentinean ichnologists, but also researchers from Brazil, Chile, Denmark, Italy, Paraguay, Poland, Spain, the United States, Uruguay, and Venezuela. Although San Miguel de Tucumán is located in the northwest corner of the country, Argentinean participants covered a wide geographic range, including researchers from the World's southernmost city, Ushuaia (Tierra del Fuego). The meeting was really enjoyable and I am very glad to say that the IAS was instrumental in ensuring a highly successful conference by providing a grant scheme that allowed students to participate in the meeting.

Keynote talks were some of the highlights of the meeting. Keynote

speakers included Florencio Aceñolaza (Universidad Nacional de Tucumán, "History of Ichnology"), Richard Bromley (University of Copenhagen, "Trackways of goat-like animals in aeolian dunes, Pleistocene, Mallorca: Microichnotectonics in damp sand"), Jorge Genise (Museo Paleontológico Egidio Feruglio, "Insect trace fossils in palaeosols"), Jordi de Gibert (Universitat de Barcelona, "Trace fossils and behavioral convergence"), Conrad Labandeira (Smithsonian Institution, "Multiple approaches toward understanding the relationships among organisms, their environment, and other organisms: the centrality of ichnodata"), Jaime Powell (Universidad Nacional de Tucumán, "Dinosaurs: nesting patterns and reproductive behavior"), and Alfred Uchman (Jagiellonian University, "Deep-sea trace fossils: on the edge of the terra incognita"). Keynotes were placed either to round up or to start sessions. In most cases, they were followed by intense debate. Talks and posters occupied four days and covered a wide variety of topics, such as ichnology of palaeosols and fluviolacustrine environments, bioerosion, trilobite, insect and crustacean trace fossils, ichnology of glacially influenced Gondwana environments, tiering of shallow-marine

communities, and carbonate ichnology. A total of 59 contributions were presented. Abstracts of talks, posters and keynotes are published in a 79-page abstract-book. At present, a Special Issue of the Argentinean Palaeontological Society, containing some of the full-length manuscripts, is being produced.

Two additional activities were organized during the congress. A field workshop on arthropod – plant interactions ("Ichnology in the jungle") took place on Wednesday in the rainforest that extends across the mountain range west of the city of San Miguel de Tucumán. This workshop was coordinated by Conrad Labandeira and Rubén Gianini. It was outstanding and provided the participants with an excellent picture of how to recognize arthropod-produced structures in plants and how far into the fossil record we can track the different types of interactions. The very same day, the Instituto Superior de Correlación Geológica opened its doors for the participants to examine its trace fossil collections. Over a hundred selected specimens were on display, and we were able to browse through the cabinets containing specimens from different stratigraphic units of northwestern Argentina and other areas.

A post-conference field trip to visit ichnologic localities in the mountain areas of Salta and Jujuy provinces in northwestern Argentina was a major attraction. The field-trip party included scientists from different countries and gave them the opportunity to examine excellent outcrops of the Precambrian-Cambrian Puncoviscana Formation, the Cambrian Mesón Group, the Upper Cambrian-Tremadoc Santa Rosita Formation, and the Cretaceous-Tertiary Salta Group. A 78-page fieldguide including overview papers and descriptions of the stops was provided.

The meeting was particularly useful to promote the multidisciplinary nature of ichnology by uniting both geologists and biologists, which unfortunately still is infrequent in a field that has been historically dominated by geologists. What next? The answer is Ichnia 2004, the First International Congress on Ichnology, which will be held in the city of Trelew, in Argentinean Patagonia. We will see you there.

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Report on the

IAS/SEPM ENVIRONMENTAL SEDIMENTOLOGY WORKSHOP ON CONTINENTAL SHELVES: PROCESSES, RECORD, UTILIZATION AND MANAGEMENT

Hong Kong SAR, January 7-10, 2002

This was the third in the series of IAS/SEPM Environmental Sedimentology workshops, following Venice, Italy, in October 1997, and Santa Fe, U.S.A., in September 2000. Although there were only about 50 participants, the topics were wide-ranging and interdisciplinary in nature. Funds for supporting the attendance of some of the participants were provided by the IAS, the Croucher Foundation, and the International Geological Correlation Project No. 464 "Continental shelves during the last glacial cycle".

Research results from many projects were presented in 10 keynote addresses, 13 oral presentations, and 21 poster presentations. The program was made up of three full days of scientific sessions, including half a day devoted entirely to posters, two dinner functions, and a full-day field excursion to Lantau Island to study coastal deposits. Both overseas and local participants have gained a much better appreciation of continental shelves in places less familiar to them, which should be

beneficial to their future research endeavours.

Some important conclusions of this Workshop are:

- Researchers should tap into the cable-route survey information and samples collected from the different continental shelves of the world for mapping and identifying former submerged shorelines;
- Vast amounts of information including offshore boreholes are available from the inner continental shelves of the world where major coastal infrastructures are being developed;
- Corals are excellent archives of environmental change;
- Subaerially exposed muddy continental shelves may have an important role in the global carbon cycle through acid-sulphate soil development, resulting in the natural release of carbon dioxide into the atmosphere through



chemical reaction with carbonates;

- Karstification of subaerially exposed coral reefs during glacial periods is another important natural source of carbon dioxide released into the atmosphere;
- Gases such as methane released from the seabed of continental shelves need to be taken into account in global carbon-budget studies.

The abstract volume of the Workshop is available on request. Plans are made to publish a collection of the papers either as an IAS Special Publication or a special issue of a journal.

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IAS GRANT RECIPIENT

Report

During a research expedition to Antarctica, an Upper Quaternary, current-lain drift deposit over 30 m in thickness has been discovered on the continental shelf in a deep glacial trough (George-V Basin) off George-V Land. This discovery is important because oceanographers consider this basin as a key area of Antarctic Bottom Water production. The drift records the effects of the varying bottom-water ventilation during the Late Pleistocene - Holocene. Four sediment cores have been analysed in terms of textural and geochemical parameters. Together with ^{14}C AMS radiocarbon dates, they allow to constrain the geochronology and stratigraphy of the drift.

Core samples demonstrate that the drift is made of four sedimentary units. The basal Unit 1 is a grey, sandy to muddy diamicton deposited before 14 kyr BP. It likely represents a water-lain diamicton, followed by a thin, ice-proximal, meltwater-related sandy interval. Unit 2 is a bioturbated, siliceous, sandy mud rich in ice-rafted debris deposited after 14 - 10 kyr BP, with accumulation rates of about 10 cm/kyr. It represents an open-marine setting of a retreating ice shelf, in which episodic gravitational processes and

strong bottom currents were frequent. Unit 3 is a laminated, strongly anoxic siliceous mud and diatom ooze with reduced terrigenous content, deposited between 5 and 3 kyr BP. It corresponds to a period of rapid deposition of the drift (averaging 290 cm/kyr) and is contemporaneous to mid-Holocene "warmer" marine conditions and less sea-ice production in the Antarctic. Unit 3 is the thickest unit recovered and is probably related to a phase of increased organic productivity, with a more stable water column and slower circulation of the bottom water on the shelf. Ripple cross-lamination indicates episodes of slightly stronger bottom currents (up to 5 cm/s). Unit 4 is a massive siliceous sandy mud, up to 50 cm thick, deposited under a strong bottom-current regime after about 3000 yr BP, with slower depositional rates than in Unit 3. This is probably due to a strong flow of high-salinity shelf water (HSSW), causing intense winnowing. Presently, the George-V Basin is under the influence of vast Antarctic polynyas, generating a large volume of HSSW.

For my PhD research, I have studied the diatomaceous ooze deposits of the Antarctic continental shelf in terms of palaeoenvironment



and palaeocurrents. Thanks to the support of the IAS, I have been able to cover some laboratory costs of geochemical analyses (organic carbon, nitrogen, biogenic silica), which otherwise would not have been possible. Also, the IAS Grant allowed me to participate in the Symposium of the Scientific Committee for Antarctic Research (Erice, Italy, September 8-14, 2001), and in the ESF Conference on Climate Predictability (Castelvecchio Pascoli, Italy, November 10-15, 2001). Two posters

were presented, and a manuscript is submitted to Deep Sea Research II. My PhD thesis was submitted on November 30, 2001.

I wish to thank the IAS for awarding me a Grant to carry out part of my PhD research that otherwise I would not have been able to complete.

*Massimo Presti
Trieste, Italy*



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.

An application form is on 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).

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

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



IAS INTERNET DIRECTORY OF SEDIMENTOLOGISTS

This Internet database aims to support the cooperation between sedimentologists. If you are working on any sedimentology-related topic, you can add your own record. If you are looking for a colleague working on a certain topic, you can search the database.

The **search page** allows you to look for persons by selecting a name from a fly-out field. In the same way you can search for people working in a certain town or country. If you are looking for people working on certain topics or chronostratigraphic units, you mark check boxes in the list of keywords.

If you want to **add your record**, you have to fill in a template with your name and address, and select the appropriate check boxes to indicate your fields of research. There is a legal disclaimer on privacy policy.

Do not hesitate and check out this new database immediately:

<http://paleoweb.net/ias/>

*Michael Rasser
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CALENDAR
**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)

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**ANCIENT AND MODERN COASTAL
PLAIN DEPOSITIONAL
ENVIRONMENTS**
**Aquifer heterogeneity and environ-
mental 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 ARGENTINEAN MEETING
OF SEDIMENTOLOGY**

May 21-24, 2002

ARGENTINA (Córdoba)

Contact: Ricardo A. Astini,

Estratigrafía y Geología Histórica,

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.eduWeb-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-](http://sediment2002.geologie.uni-frankfurt.de)[frankfurt.de](http://sediment2002.geologie.uni-frankfurt.de)


**16TH INTERNATIONAL
SEDIMENTOLOGICAL CONGRESS**

July 7-12, 2002

SOUTH AFRICA (Auckland Park, Gauteng)

Contact: Bruce Cairncross,

Department of Geology,

 Rand Afrikaans 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>

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**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>
**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

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**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

* * *

**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,

Department of Geosciences,

University of Arizona,

Tucson, AZ, U.S.A.

Tel: +1 520 621 46 91

Fax: +1 520 621 26 72

E-mail: acohen@geo.arizona.edu**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/>

Boxed announcements have
full or partial IAS sponsorship