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# IAS

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April 2013

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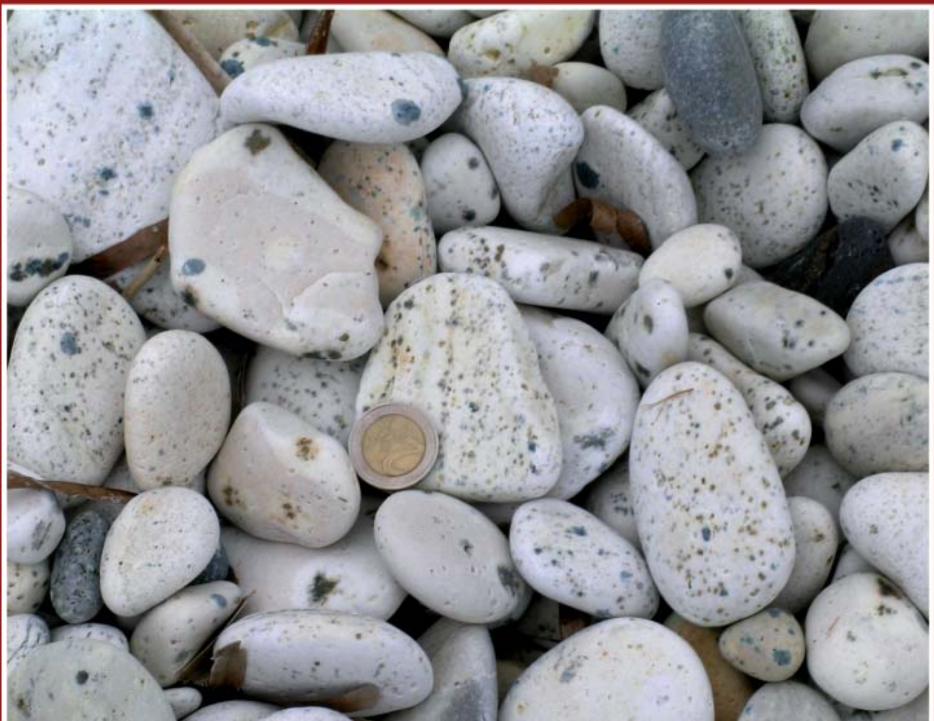

International Association of Sedimentologists

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Link to **IAS National Correspondents**:
http://www.sedimentologists.org/network/correspondents

# CONTENTS

# EDITORIAL

Newsletter 245 reports in the student corner session work carried out by Santos and Jazinger thanks to IAS student grant.

In the central part is reported an important agreement between IAS and the Geological Society of London. Check on both web pages for more details.

Memorandum of Understanding is ongoing with the American Geophysics Union. AGU offered IAS the possibility to run two sessions during the next meeting (December 2013, San Francisco - USA). Each session, however, has to be composed of at least 20 communications (abstracts). Deadline is April 2013. Proposal on this item are welcome.

Financial report 2012 and allocated grants (2nd session 2012), are at the end of the Newsletter.

IAS Bureau thanks Peter Swart and Paul Carling for the work they did as editors of Sedimentology and Series Editor of the Special Publication. Tracy Frank from Lincoln University, Nebraska (USA) is the new editor of Sedimentology.

I would like to remember that the next IAS Regional Meeting will be held in 2013 in Manchester (UK) for details, please check: www.sedimentologists.org/ims-2013.

Electronic Newsletter (ENIAS) started in November 2011continues to bring short information to members. For info on ENIAS contact Nina Smeyers at nina.smeyers@ugent.be.

Check the new Announcements and Calendar remembering that Meetings and events in **CAPITAL** and/or with * are fully or partially sponsored by IAS. For all these meetings, IAS Student Members travel grants are available. Students can apply through the IAS web site remembering, however, that to receive the travel grant potential candidates have to present the abstract of the sedimentological research they will present at the attending conference. More info@ www.sedimentologists.org

*Vincenzo Pascucci*
*(IAS General Secretary)*

# CALL FOR NOMINATION

During the next International Sedimentological Conference, Geneva 18-25 August 2014 three scientists will be awarded respectively with:

1) **Sorby Medal**, the highest award of the International Association of Sedimentologists, addressed to people «distinct in Sedimentology»

Previous Sorby medallist are:

- 1978 R.A. Bagnold, F.P. Shepard (Sedimentology 26, 157-165)
- 1982 F.J. Pettijohn (Sedimentology 30, 149-151)
- 1986 R.G.C. Bathurst (Sedimentology 34, 177-186)
- 1990 R.L. Folk (Sedimentology 38, 191-195)
- 1994 J.R.L. Allen (Sedimentology 42, 191-192)
- 1998 R.N. Ginsburg (Sedimentology 46, 201-203)
- 2002 R. Walker (Sedimentology 50, 113-118)
- 2006 C. Schreiber (Sedimentology 54, 1449-1452)
- 2010 J. Bridge (IAS Newsletter, 232, 5-7)

2) **Johannes Whalter Award** for mid career geologists;

Previous Award was

- 2012 G. Eberli (IAS Newsletter, 243, 6-9)

3) **The Young Scientist Award**

Previous Award was

- 2012 S. Andreucci (IAS Newsletter, 243, 10-12)

# ABOUT Henry Clifton Sorby

*(10 MAY 1826 - 9 MARCH 1908)*

**H.C.**Sorby was born at Woodbourne near Sheffield in Yorkshire (UK) on 1826, and attended Sheffield Collegiate School. He early developed an interest in natural science, and one of his first papers related to the excavation of valleys in Yorkshire. In 1847 when he was 21 his father died leaving him a comfortable private income. He immediately established a scientific laboratory and workshop at his home. He subsequently dealt with the physical geography of former geological periods, with the wave-structure in certain stratified rocks, and the origin of slaty cleavage.

He took up the study of rocks and minerals under the microscope, and published an important memoir «On the Microscopical Structure of Crystals» in 1858 (Quart. Journ. Geol. Soc.). In England he was one of the pioneers in petrography; he was awarded the Wollaston medal by the Geological Society of London in 1869, and became its President. In his presidential addresses he gave the results of original researches on the structure and origin of limestones, and of the non-calcareous stratified rocks (1879–1880).

In 1863 he used etching with acid to study the microscopical structure of iron and steel. Using this technique, he was the first in England to understand that a small but precise quantity of carbon gave steel its strength. This paved the way for Henry Bessemer and Robert Forester Mushet to develop the method for mass-producing steel.

His interests were wide. He published essays on the construction and use of the micro-spectroscope in the study of animal and vegetable colouring matter and on the temperature of the water in estuaries. He also applied his skill in making preparations of invertebrate animals for lantern-slides.

He was president of the Royal Microscopical Society. In 1882, he was elected president of Firth College, Sheffield after the death of founder Mark Firth. Sorby also worked hard for the establishment of the University of Sheffield which was eventually founded in 1905. A university hall of residence, Sorby Hall, which was built in the 1960s and demolished in August 2006 was named after him.

He died in Sheffield and was buried in Ecclesall churchyard.

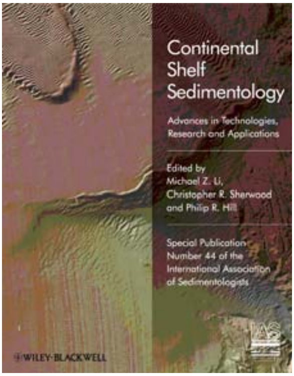
(after Wikipedia)

# ANNOUNCEMENT

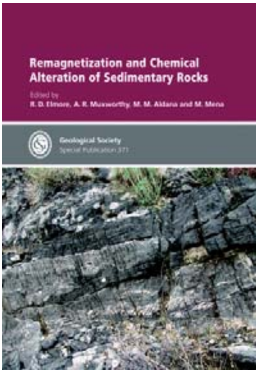
## IAS and GSL agreement

The Geological Society of London and the International Association of Sedimentologists have an agreement to offer books of both societies to their mutual members at a special rate; that is, 30% discount for GSL members on IAS books, and 40% discount for IAS members on GSL.

Please visit the websites:
www.sedimentologists.it
www.geolsoc.org.u/lyellcollection




*Cover of the IAS Specail Publication N. 44.*
*Multibeam bathymetry image of a drowned delta that prograded over a glacial surface of iceberg scours and pits of northern British Columbia, Canada.*
*Acquisition by Geological Survey of Canada.*




*Cover of the last volume of the GSL*
*An outcrop of zebra dolomite in the Alamo Breccia from the Devonian Guilmette Formation, Nevada. US quarter (2.4 cm diameter) for scale.*
*Photographer: Shannon Dulin*

# STUDENT CORNER

## Sedimentology of the Bermejo River (Argentina)

*IAS POSTGRADUATE GRANT SCHEME REPORT, 1ST SESSION 2012*

The original proposed work involved using the suction core method to characterize the sedimentology of oxbow lake fills on a fine-grained meandering river. Attempts to recover core from these fills failed due to the sediment being too dry to insert the pipe or the sediment being consisting solely of liquefied mud, which just gets pushed out of the way by the pipe after an initial plug of sediment enters the pipe. We therefore decided to attempt to


*Figure 1. Studied area*

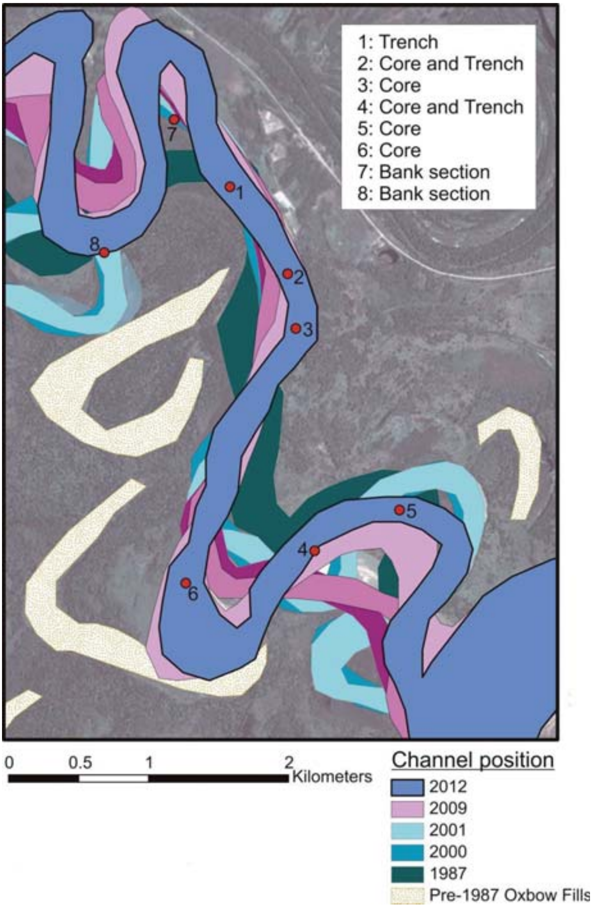



*Figure 2. Locations of cores, trenches and bank sections overlain on a map of historical channel positions digitized in ArcMapTM from USGS Landsat images. Base image is from Google Earth (aquistion date: Oct 28, 2007).*

extract core from the edges of exposed bars within the active river channel, which was far more successful. The selcetd river is The Bermejo River. It is a South America river that flows from Bolivia to the Paraguay River in Argentina (Fig. 1). Five cores were extracted, ranging from ~3 m to ~5 m in length, and four trenches were dug nearby the cores to characterize the sub aerially-exposed portions of the bars (labelled in Fig 2). The cores were split, logged (Figure 3) and photographed in the field and sampled for laser grain size analysis at the University of Birmingham. Two bank sections, a section cutting across what we interpret to be a slumped channel bank (labelled 7 in Fig 2) and a section cutting across an oxbow fill (labeled 8 in Fig 1), were also cleaned and photographed. A major finding of this field campaign is that the in-channel deposits of the lower Bermejo River are comprised mainly of very fine to medium grained sand (see graphical logs, Figure 3). This is in direct opposition to previous reports, which suggest that the lower Bermejo River

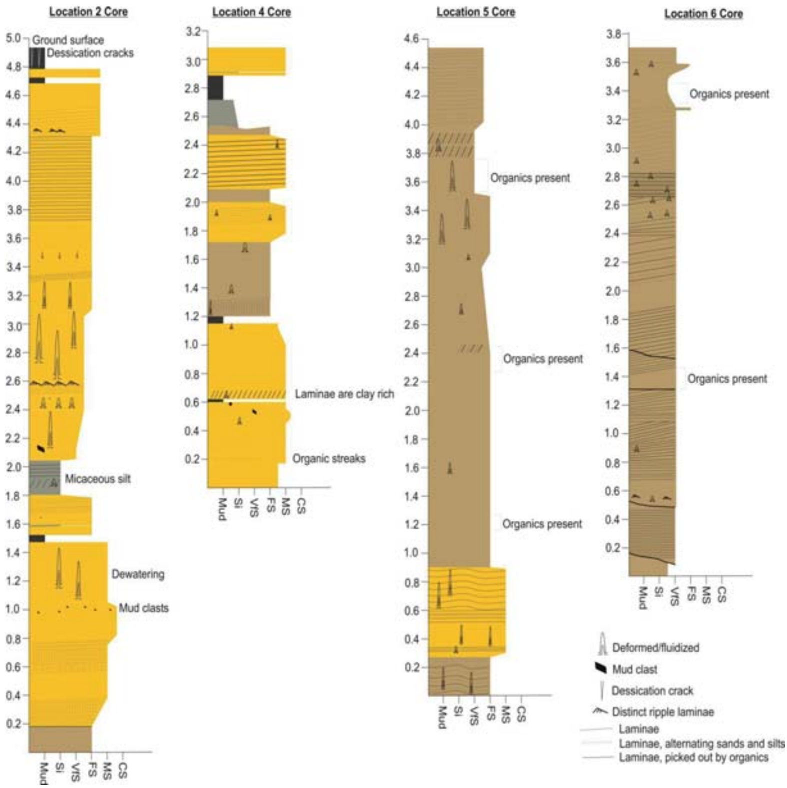



*Figure 3. Graphical logs for cores taken at locations 2, 4, 5 and 6 (core from location 3 was photographed and sampled, but not logged as it consisted of 1.4 m of silty very fine sand). Core 2 was taken near the subaerially-exposed edge of a bar. Cores 4, 5 and 6 were taken on the edges of bars in ankle-deep water (as in the case of location 2, the subaerial portion of these bars was covered with a mud layer with deep mud cracks).*

transports very little sand compared to mud and silt sized sediment.

The cores also provide insight into the sedimentary structures preserved in these bars (Figure 4). The core from location 2 (Core 2) was extracted on the upstream end of a point bar on a low amplitude, low sinuosity bend. Core 2 consists of two sand packages, each capped by a layer of mud. The sand packages are mostly medium sand and are characterized by inclined laminae, fluidization features, and several mud clasts, ranging from ~1 mm to 4 cm in diameter. The upper sand package also contains a layer of micaceous silt with steeply inclined and subhorizontal laminae that are picked out by organics. Core 3 was extracted from the same bar as core 2 and was located further downstream. Unfortunately, recovery of core 3 was poor compared to the other


*Figure 4. Upper panel is photograph of bank section at location 7; upstream end is right hand side of photograph. Lower panel highlights interpreted features.*

cores and only 1.4 m of sediment was extracted. This sediment consisted uniformly of silty very fine sand with scattered streaks of organic material. Core 4 was extracted from the upstream limb of an elongated compound bend, located just upstream of the confluence with the Paraguay River. Core 4 consists of four sand packages separated by three discrete mud layers. The two bottommost and the uppermost sand packages consist mainly of medium sand, showing some deformation. The sediments between 1.2 m and 2.72 m are more variable and include fine sands and silts. Core 5 was taken on the same bend as core 4, but further downstream. Core 5 is mainly composed of fine to very fine sands; though a layer of medium sand is present between 0.3 m and 0.9 m. Subhorizontal, steeply inclined and deformed laminae are concentrated at the base and top of core 5, the middle portion is fluidized in some locations and largely structureless. Core 6 represents a different depositional environment than cores 2 – 5 as it was extracted from the edge of a concave bank bench rather than a point bar. Core 6 consists mainly of laminated very fine sand. Four erosive surfaces are also present in the lower half of the core.

## Future Work

The results from this project will be integrated with historical satellite imagery and data

from previous field work in which we used a Parametric Echosounder to image the internal sedimentary structure of the channel bed. The laser grain size data from the core samples will also be included in our analysis of the sedimentology. A facies model based on this data is currently in development and a paper documenting the results is in preparation. The results will

also be presented at the International Conference on Fluvial Sedimentology in July 2013.

*Jessica Zinger*
*Dept. of Geography and Geographic Information Systems*
*University of Illinois, Urbana-Champaign*
*zinger1@illinois.edu*

# Middle-Silurian to Early-Carboniferous Sedimentation and the impact of early land plants: The Lower and Upper Old Red Sandstone in the Midland Valley (Scotland, UK)

*IAS POSTGRADUATE GRANT SCHEME REPORT, 1ST SESSION 2012*

This research report relates to work undertaken through the award of a 2012 IAS Postgraduate Research Grant to Santos. The work undertaken for this project has been supervised by Dr. Nigel P. Mountney (University of Leeds, UK) and Prof. Adrian J. Hartley (University of Aberdeen, UK). Results from this study form a contribution to an ongoing Ph.D. dissertation thesis undertaken by Maurício G.M. Santos, who is based both at the University of Leeds (UK) and the University of São Paulo (Brazil).

## Introduction

Prior to the Silurian, the absence of land plants meant that there were no significant biogenic agents capable of controlling and moderating run-off or serving to aid bank stabilization, to retain fine-grained sediments, and to

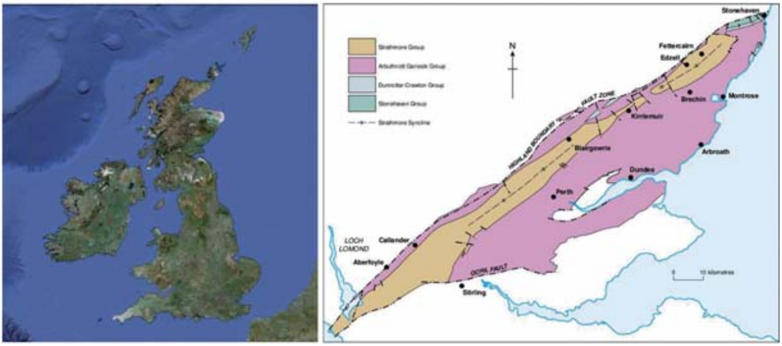



*Figure 1. Distribution of the Upper Silurian and Lower Devonian groups of the Old Red Sand- stone in the Northern Midland Valley of Scotland (Browne et al., 2002).*


*Figure 2. Sedimentary facies of the Silurian LORS: A. mudstone alternating with lenses of laminated, fine-grained sandstone; B. laminated and rippled siltstone; C. general view of the outcrop in Cowie Harbour.*

promote rates of chemical weathering. As such, the response of such fluvial systems to climate differed from those predicted by models based on studies of modern rivers and post-Silurian preserved successions. This research has channel-style (e.g. Cotter, 1978), whereas few studies have to-date explored the floodplain deposits (e.g. Fralick & Zaniewski, 2012). The geological time encompassed between Silurian and Devonian records the


*Figure 3. Sedimentary facies of the Devonian LORS near Arbroath: A. rippled, fine-grained sandstone; B. intraformational mudstone clasts with re-worked calcrete nodules; C. calcrete at the top of overbank deposits.*

investigated the extent to which current models are effective in accounting for the role played by vegetation in governing sedimentation process. Most publications on pre-vegetation and early-vegetation fluvial systems focus on «greening of the continents» (Davies & Gibling, 2010). This research addresses the initial impact that early land plants exerted on floodplain sedimentation during the greening of the continents. The aim on this research is to test


*Figure 4. Sedimentary facies of the Carboniferous UORS near Montrose: A. rootlets in coset of fine-grained, cross-stratified sandstone; B. calcrete nodules in set of planar cross-stratified, fine-grained sandstone; C. hardpan.*

through detailed study to which level the assertions proposed by many workers (e.g. Schumm, 1968; Cotter, 1978; Davies & Gibling, 2010) that vegetation caused a worldwide major impact over fluvial sedimentation from the Devonian onwards (e.g. increasing occurrence of meandering rivers, of thick heterolithic succession, and of pedogenic calcrete horizons, as well as greater abundance of mudrock). Fieldwork study has been undertaken in NE Scotland to investigate the Silurian-to-Early Carboniferous Old Red Sandstone in the Midland Valley, where the most complete record of early sedimentation from the ORS crops out, allowing access to a relatively continuous and thick succession, which is one of the most appropriate in the world with which to develop an understanding of the interplay between early land plants and fluvial sedimentation. Most previous studies of the ORS have focused on channel-fill elements (Davidson & Hartley, 2010), whereas few works have explored the depositional architecture of floodplain elements. The increasing occurrence of calcrete horizons throughout the ORS can be linked to changes in types of vegetation cover and styles of biogenic weathering by lower plants and microbes (Wright et al., 1993), thus representing one of the first records of the interplay between life, climate and continental sedimentation in the rock record. The research presented here investigates how floodplain intervals preserved in this succession vary from the earlier Silurian part – prior to the evolution of higher land plants – to the Early Carboniferous part.

The results contribute to a better understanding of the main controls on landscape evolution during the early phases of land colonization by vegetation, a key question in my PhD thesis. In this way, this study will improve our ability to recognize sedimentary re- sponse to climate variation in pre-vegetation environments, through the understanding of the progressive impact of vegetation over continental sedimentation, from the very prim- itive forms of land plants in the Silurian through the evolved Carboniferous vegetation. Finally, the understanding of such impacts, or their absence, can be used to better un- derstand and predict possible variations in reservoir geometry of Precambrian and Early Palaeozoic sequences.

## Methods

The following methods were employed: (1) documentation of fluvial depositional architecture in floodplain successions through the construction of a series of architectural panels for the study of fluvial facies and element trends; (2) measurement of detailed vertical profiles across the region to investigate facies distributions in preserved floodplain elements, thereby identifying the relationship of palaeosols and rooted horizons to primary lithofacies and element geometries; (3) collation of palaeocurrent data and examination of its relationship to depositional architecture; (4) analysis and mapping of plant fossils (diversity, abundance and style of presentation) and preserved palaeosol horizons.

## Preliminary Results

The IAS Research Grant money supported accommodation and car rental in the study area for the student and a field assistant during 11 days of fieldwork, between the 18th and 28th of September 2012. Data collection was undertaken at a series of coastal sections of the Midland Valley, Scotland. More than 400 m of vertical section were

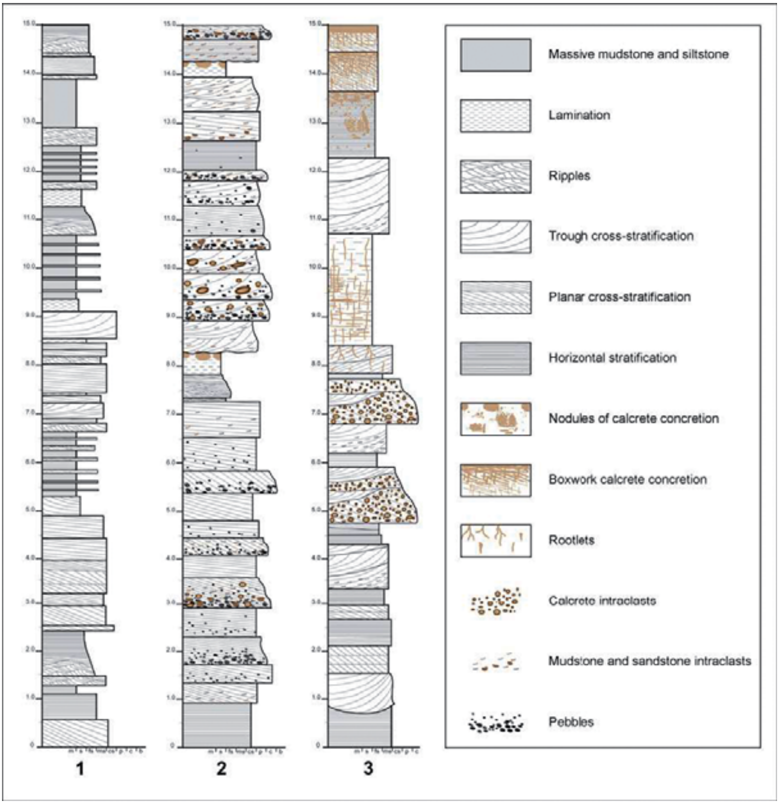



*Figure 5. Sedimentary logs: 1) Silurian LORS; 2) Devonian LORS; 3) Carboniferous UORS.*

recorded as graphic logs with detailed sedimentary facies analysis undertaken in both the Lower and the Upper Old Red Sandstone. A series of 29 photographic panels and sketches were acquired to characterize the depositional architecture of the Upper Old Red Sandstone. A total number of 353 palaeocurrent data were recorded, together with data relating to the attitude of fluvial bounding surface of various types in all studied outcrops: these data provide important information for stratigraphical correlation and palaeogeographic reconstruction.

## Lower Old Red Sandstone

The Middle to Upper Silurian of the Lower Old Red Sandstone (LORS) deposits from the Stonehaven Group exposed around the town of Stonehaven record the interrelationship of fluvial sedimentation and volcanic activity. They are characterized by trough- and planar-cross stratified, fine- to coarse sandstone, cross-stratified conglomerate, rippled and laminated siltstone, and laminated mudstone. Trough-cross stratified sandstones commonly have liquidization structures within them, including non-harmonic folds and recumbent-folded cross-stratification; heterolithic facies associations of lami- nated fine-sandstone and siltstone commonly record loading structures, including pil-lows and disrupted layers. Lava flows are 0.5 to 2 m thick and overlying sediments are commonly characterized by very-well cemented sandstone and conglomerate, with abun- dant evidence of re-working of clasts from the underlying volcanic beds having occurred. Overbank fines are characterized by horizontally-extensive, tabular bodies, each up to 2 m-think; lateral-extent of these bodies is difficult to determine due to the presence of numerous, vertical faults that displace the stratigraphy. Channels are characterized by sandy bedforms and laminated sandstone sheets.

The Early Devonian deposits of the Arbroath Sandstone Member (Scone Sandstone

Formation, Arbuthnott-Garvock Group) are typically characterized by planar and trough cross-stratified sandstone and pebbly sandstone, low-angle and horizontally bedded sand-stone, rippled cross-laminated sandstone and siltstone, and laminated siltstone and mud- stone. Depositional architecture is mainly characterized by sandy bedforms with asso- ciated laminated sandsheets forming multi-storey channel elements; abandoned-channels are lenticular (5 to 15 m wide) and filled by up to 0.5 m-thick deposits of silty mud- stone. Overbank fines are characterized by tabular bodies up to 2 m think and 5 to 20 m wide; these are commonly truncated laterally and upward by upper cosets from the sandy

bedforms. Calcrete nodules are present at the top of overbank deposits and abandoned channels, whereas intraformational mudstone chips and sandstone clasts are common, with abundant examples of re-worked calcrete concretions.

## Upper Old Red Sandstone

The Early Carboniferous deposits from the Kinnesswood Formation of the Upper Old Red Sandstone (UORS) are less deformed than those of the older studied succession, allowing a more thoroughly understanding of the depositional environments to be deter-mined. Typical lithofacies of this formation are low-angle inclined and horizontal sand- stone, trough and planar cross-stratified sandstone, intraformational conglomerate with re-worked clasts of calcrete concretion, laminated siltstone, and laminated mudstone. Finning-upward cycles are common and many such cycles are capped by a calcrete hard- pan with preserved rootlets at their top. Rootlets are up to 50 mm in diameter and up to 1 m-long; they are found in both muddy and sandy deposits, and are clearly related to the calcrete horizons; the occurrence of the latter is related to semi-arid to arid-climatic conditions (Wright & Marriott, 2007).

Channel environments were characterized by sandy, bed-load dominated streams, and preserved elements of such features form sequences of single-storey sandy bedforms; intraformational mud chips and sandstone clasts such as pebbles and cobbles of mudstone are common at some levels within deposits of these elements. Floodplain environments were characterized by laminated fines, and small-scale lateral-accretion channels. Preserved floodplain channels are 30 to 80 cm thick cosets of trough and planar cross- stratification commonly characterized by clast-supported conglomerates of re-worked calcrete concretions (indicating

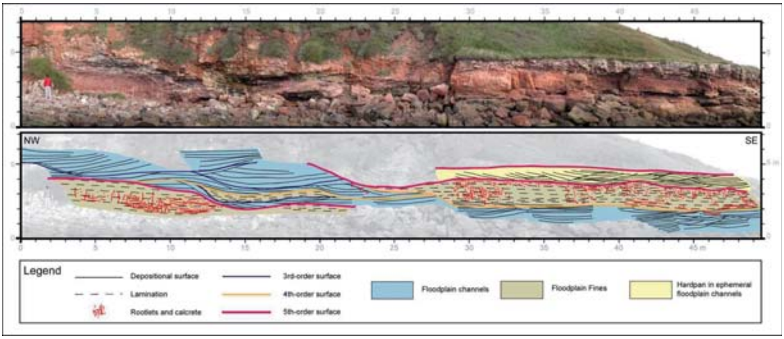



*Figure 6. Typical depositional architecture of the Early Carboniferous UORS near Montrose.*

common floodplain re-working), and typically presenting fining-upwards successions with rooted horizons at the top. Some preserved abandoned floodplain channel elements are characterized by box work-like calcrete accumulations at the base of preserved cosets of strata, whereas the upper parts of cosets are characterized by hardpans.

## Preliminary Discussion

Preliminary results show an increasing incidence of occurrence of calcretes in both the numbers of instances and thickness (in this research, no examples in the Middle Silurian, few examples in the Middle Devonian, and prolific examples in the Early Carboniferous), from the LORS to the UORS, reflects not only an increasing biological activity (e.g. Wright et al. (1993)) activity on the continental environment throughout the geological time, reflected in the direct relationship of calcretes horizons and rootlets, but also records the establishment of semi-arid climatic settings in the region of the Midland Valley, and also an obvious increasing occurrence of rootlets (macroscopically, this research encountered examples of vegetation only in the Early Carboniferous). Indeed, there is a sudden appearance in the Carboniferous UORS of 0.5 to 1.5 m-thick rooted horizons: this seems to be related to the appropriate environment of floodplains which were abandoned for long periods of time (as recorded by the thick calcrete horizons), allowing biological activityto develop.

Although vegetation was present in the LORS, the increasing colonization of land plants was not followed by an increasing occurrence of mudstone in the Midland Valley, as would be expected from the probable enhanced rates of chemical weathering as a consequence of such colonization. Indeed, there are more preserved muddy deposits in the Middle-Silurian LORS than in the Middle Devonian LORS, and this was probably a consequence of environmental conditions, such as the interaction between fluvial systems, nearby presence of volcanic activity, and climate.

The interplay between climatic conditions and land plant colonization is recorded in the successions of the Midland Valley: Middle-Silurian deposits show no examples of calcrete nodules, the Middle Devonian deposits show localized examples of concretions in overbank deposits as well as re-worked clasts of calcareous mudstone clasts, and the Early Carboniferous ones show clear examples of not only thick calcrete horizons and hardpans, but also prolific occurrences of rootlets in the fluvial realm, clearly recording the enhanced biological activity in the land.

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*Maurício G.M. Santos*
*mauriciogmsantos@gmail.com*

# IAS Financial Report

**INTERNATIONAL ASSOCIATION OF SEDIMENTOLOGISTS (IAS)**

**Financial statements - June 30, 2012**

1. BALANCE SHEET

| | | As at June 30, 2012 | | As at June 30, 2011 | |
|---|---|---|---|---|---|
| ASSETS | Note | EUR | EUR | EUR | EUR |
| NON-CURRENT ASSETS | | | | | |
| Property, plant and equipment | 4 | | 6.032,74 | | 3.683,29 |
| CURRENT ASSETS | | | | | |
| Inventories | 5 | | 40.456,38 | | 52.733,54 |
| Receivables | 6 | | | | |
| Prepayments | | 2.970,00 | | 2.970,00 | |
| Other receivables | | 20.924,82 | | 22.786,42 | |
| | | | 23.894,82 | | 25.756,42 |
| Cash and cash equivalents | 7 | | 3.271.016,61 | | 2.828.637,00 |
| TOTAL ASSETS | | | 3.341.400,55 | | 2.910.810,25 |

| | | As at June 30, 2012 | | As at June 30, 2011 | |
|---|---|---|---|---|---|
| | | EUR | EUR | EUR | EUR |
| EQUITY | | | | | |
| Reserves | | 2.895.464,61 | | 2.801.654,48 | |
| Surplus for the year | | 149.010,60 | | 93.810,13 | |
| | | | 3.044.475,21 | | 2.895.464,61 |
| CURRENT LIABILITIES | | | | | |
| Other debts and prepayments received | 8 | | 296.925,34 | | 15.345,64 |
| TOTAL EQUITY AND LIABILITIES | | | 3.341.400,55 | | 2.910.810,25 |

# Special IAS Grants or 'Institutional IAS Grants'

Special IAS Grants or Institutional IAS Grants are meant for capacity building in 3rd world countries. There exists a list of 'Least Developed Countries' (LDC) by the UN. This list categorizes countries according to income per capita and is yearly updated.

Grants are allocated to allow Geology Departments in LDC to acquire durable sedimentological equipment for teaching and research (like sieves, calcimeters, auger drilling tools, etc.) or tools that can be used by all geology students (like general geology/sedimentology textbooks, IAS Special Publications (SP), memory sticks with back issues of Sedimentology or SP, etc). Therefore the grant application should clearly demonstrate to increase the recipient's capacity to teach sedimentology at the undergraduate level (Bachelor) in a durable way. It should also indicate in what way it would enable to support sedimentological research at the graduate level (Master).

Applicants should have a permanent position at their University and should be IAS members. Applications should provide the following information (not exhaustive list):

- the mission statement of the University/Geology Department
- the approval of the University Authorities to accept the grant
- a list of permanent teaching and technical staff members of the Geology Department (with indication of their area of research)
- the structure of the geology undergraduate and graduate courses (Bachelor/Master programme with indication of courses and theoretical and practical lecture hours)
- the number of geology students
- the actual facilities for geology/sedimentology students
- a motivation of application
- a budget with justification
- the CV of the applicant, including a sedimentology research plan

The institutional grant scheme consists each year of 2 sessions of 1 grant of 10.000 Euro. Applications run in parallel with the PhD research grant scheme (same deadline for application and recipient notification). The IAS Grant Committee will seek recommendations from relevant National Correspondents and Council Members (eventually including visitation) before advising the IAS Bureau for final decision. Additional funds made available by the recipient's University are considered as a plus.

Items listed in the application will be bought through the Office of the IAS Treasurer and shipped to the successful applicant. By no means will money be transferred to the grant recipient.

# IAS STUDENT GRANT APPLICATION GUIDELINES

## Application

The application should be concise and informative, and contains the following information (limit your application to 1250 words max.):

- Research proposal (including Introduction, Proposal, Motivation and Methods, Facilities) – max. 750 words
- Bibliography – max. 125 words
- Budget – max. 125 words
- Curriculum Vitae – max. 250 words

Your research proposal must be submitted via the Postgraduate Grant Scheme application form on the IAS website before the application deadline. The form contains additional assistance details for completing the request. Please read carefully all instructions before completing and submitting your application. Prepare your application in 'Word' and use 'Word count' before pasting your application in the appropriate fields.

Recommendation letter (by e-mail) from the PhD supervisor supporting the applicant is mandatory, as well as recommendation letter (by e-mail also) from the Head of Department/ Laboratory of guest institution in case of laboratory visit.

Please make sure to adequately answer all questions.

## Deadlines and notifications

Application deadlines:
1st session: March, 31
2nd session: September, 30
Recipient notification:
Before June, 30
Before December, 31

## Guidelines for letter from supervisor

The letter from the supervisor should provide an evaluation of the capability of the student to carry out the proposed research, the significance and necessity of the research, and reasonableness of the budget request. The letter must be sent directly to the Treasurer of the IAS by e-mail before the application deadline.

## Application Form

Research Proposal (max. 750 words)
Title: .......
Introduction (max. 250 words): .....

Introduce briefly the subject of your PhD and provide relevant background information; summarise previous work by you or others (provide max. 5 relevant references, to be detailed in the 'Bibliography' field). Provide the context for your PhD study in terms of geography, geology, and/or scientific discipline.

Proposal (max. 250 words): ...
Describe clearly your research

proposal and indicate in what way your proposal will contribute to the successful achievement of your PhD. Your application should have a clearly written hypothesis or a well-explained research problem of geologic significance. It should explain why it is important. Simply collecting data without an objective is not considered wise use of resources.

Methods (max. 125 words): .......

Outline the research strategy (methods) that you plan to use to solve the problem in the field and/or in the laboratory. Please include information on data collection, data analyses, and data interpretation. Justify why you need to undertake this research.

Facilities (max. 125 words): ........

Briefly list research and study facilities available to you, such as field and laboratory equipment, computers, library.

Bibliography (max. 125 words)

Provide a list of 5 key publications that are relevant to your proposed research, listed in your 'Introduction'. The list should show that you have done adequate background research on your project and are assured that your methodology is solid and the project has not been done already. Limit your bibliography to the essential references. Each publication should be preceded by a '*'-character (e.g. *Surlyk et al., Sedimentology 42, 323-354, 1995).

Budget (max. 125 words)

Provide a brief summary of the total cost of the research. Clearly indicate the amount (in Euro) being requested. State specifically what the IAS grant funds will be used for. Please list only expenses to be covered by the IAS grant.

The IAS will support field activities (to collect data and samples, etc.) and laboratory activities/analyses. Laboratory activities/analyses that consist of training by performing the activities/analyses yourself will be considered a plus for your application as they will contribute to your formation and to the capacity building of your home institution. In this case, the agreement of the Head of your Guest Department/Laboratory will be solicited by automated e-mail.

Curriculum Vitae (max. 250 words)

Name, postal address, e-mail address, university education (degrees & dates), work experience, awards and scholarships (max. 5, considered to be representative), independent research projects, citations of your abstracts and publications (max. 5, considered to be representative).

Advise of Supervisor and Head of Guest Department/Laboratory

When you apply for a grant, your PhD supervisor will receive an automated e-mail with a request to send the IAS a letter of recommendation by e-mail. You should, however, check with your supervisor everything is carried out the way it should be. It will be considered as a plus for your application if your PhD supervisor is also a member of IAS.

Supervisor's name: .......

Supervisor's e-mail: .......

If you apply for laboratory analyses/activities, please carefully check analysis prices and compare charges of various academic and private laboratories as prices per unit might differ considerably. Please first check whether analyses can be performed within your own University. If your University is not in a position to provide you with the adequate analysis tools, visiting another lab to conduct the analyses yourself strengthens your application considerably as it contributes to your formation and to capacity building of your home University. Please check with the Head of Department/Laboratory of your guest lab to assure its assistance during your visit. You should fill in his/her name and e-mail address to solicit his/her advise about your visit.

Name of Head of guest Department/Laboratory: .......

E-mail address of Head of Guest Department/Laboratory: .......

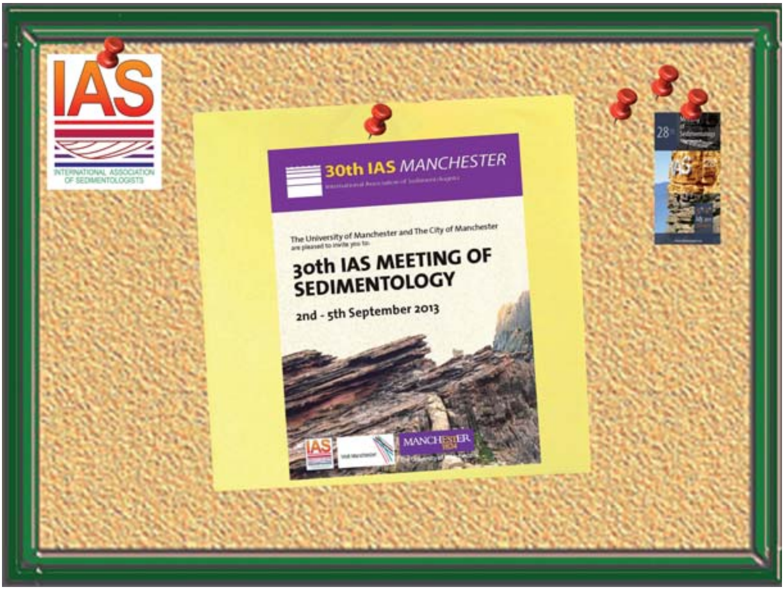
Finally, before submitting your application, you will be asked to answer a few informative questions by ticking the appropriate boxes.

- is your supervisor a member of IAS
- was this application your own initiative
- did you discuss your application with your Supervisor
- did you already had contact in the past with the Head of the Guest Department/Laboratory (if appropriate)

## MEMBERS WHO GOT A GRANT IN THE PAST SESSION

| NAME | FINANCIAL SUPPORT |
|---|---|
| Hiranya Sahoo | 1.000 Euros |
| Luca Barale | 1.000 Euros |
| Rocio Navarrete | 955 Euros |
| Jose Margotta | 1.000 Euros |
| Jone Mendicoa | 984 Euros |
| xuelian YOU | 1.000 Euros |
| Elena Blinova | 990 Euros |
| Maria Lechler | 1.000 Euros |
| Arnoud Slootman | 1.000 Euros |
| Will Evans | 980 Euros |

# STUDENT BOARD



# CALENDAR

## EGU – GENERAL ASSEMBLY*

*7th–12th April 2013*
*Vienna*
*Austria*

http://www.egu2013.eu/home.html

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## 1st School of Heavy Mineral Analysis*

*7th -10th May 2013*
*Milan*
*Italy,*

sergio.ando@unimib.it
luca.caracciolo@unical.it
http://www.ighg.it/SedPetr/SEDPETR/welcome.html

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## 1st International Congress on Stratigraphy - STRATI2013

*1st-7th July 2013*
*Lisbon*
*Portugal*

http://www.strati2013.org

## The 10th International Conference on Fluvial Sedimentology (ICF)*

*14th - 19rd July*
*2013*
*Leeds*
*United Kingdom*

Dan Parson
d.parsons@hull.ac.uk
http://www.icfs10.co.uk/

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## Summer School on Speleothem Science*

*28th July-2nd August*
*2013*
*Heidelberg*

*Michael Deininger*
*michael.deininger@iup.uni-heidelberg.de*
*www.speleothem2013.uni-hd.de*

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## 9th International Symposium on the Cretaceous System*

*1st-5th September*
*2013*
*Ankara*
*Turkey*

*www.cretaceous2013.org*

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## 30th IAS MEETING OF SEDIMENTOLOGY*

*2nd-5th September*
*2013*
*Manchester,*
*United Kingdom*

Merren Jones
merren.jones@manchester.ac.uk
www.ias2013.com

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## 7th European Symposium on Fossil Algae

*9th-11th September*
*2013*
*Schladming*
*Austria*

Hans-Juergen Gawlick
ifaa2013@unileoben.ac.at
http://web.ku.edu/~ifaa/home.html

## 11$^{th}$ Workshop on Alpine Geological Studies

*9$^{th}$-12$^{th}$ September 2013*
*Schladming, Austria*

Walter Kurz
alpine-workshop2013@uni-graz.at
http://alpine-workshop2013.uni-graz.at/

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## Second Latin American Symposium on Ichnology - Slic 2013*

*13$^{th}$-22$^{nd}$ September 2013*
*Santa Rosa*
*Argentina*

*Ricardo Néstor Melchor*
*slic2013@gmail.com*
*http://slic2013.wordpress.com*

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## 5$^{th}$ Chinese Congress of Sedimentology*

*16$^{th}$ -20$^{th}$ October 2013*
*Hangzhou*
*China*

Dr. Rukai Zhu
Research Institute of Petroleum E & D, PetroChina
zrk@petrochina.com.cn

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*** THESE EVENTS HAVE FULL OR PARTIAL IAS SPONSORSHIP**

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**Contributions to be sent to:**

Vincenzo Pascucci
IAS General Secretary
Dip. to Scienze della Natura
e del Territorio
Università di Sassari
Via Piandanna, 4
07100 Sassari, Italy
Tel.: +39 079228685
pascucci@uniss.it

INTERNATIONAL ASSOCIATION OF SEDIMENTOLOGISTS

www.sedimentologists.org