

IAS

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**International Association
of Sedimentologists**

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<http://www.sedimentologists.org/network/correspondents>

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EDITORIAL

Newsletter 236 is mainly dedicated to 28th IAS Meeting held in Zaragoza the past July. The meeting was extremely successful both in term of participants and science. About 600 people attended the meeting and several one-day (or more) long session involved many researchers. Ice breaker party and social dinner are now the must events for socializing and meet people. Moreover, four k-notes updated the knowledge of participants on most of the actual sedimentological topics. Field trips were superb as well.

At the conference *Sediment dispersal and quantitative stratigraphic architecture across an ancient shelf*, by GARY J. HAMPSON was awarded as best paper in Sedimentology for the year 2010.

Finally, a special thanks is for Jesus who made easy some complicate situations.

The central part of the Newsletter is totally dedicated to the mid-Cretaceous

Iberian Desert System of the Iberian Basin, that was visited during a post conference field trip.

In the second part of the Newsletter it has been inserted, for the first time, one of the reports send to IAS Bureau from granted students. It is my personal opinion that these reports have to be widely advertised throughout the sedimentological community.

In the Noticeboard session some info on IAS activity are presented as well. Suggestion and ideas to better develop this part of the Newsletter are kindly welcome.

A book review is insert for the first time at the end of the Newsletter.

Please have a look of the Announcements and remember that those with * are fully or partially sponsored by IAS.

Vincenzo Pascucci
(General Secretary)

REPORT

The 28th IAS Meeting of Sedimentology, Zaragoza July 2011

The IAS meetings organized so far in Spain follow a 13-year cycle: Lleida (1985), Alicante (1998) and, on 2011, the 28th IAS Meeting of Sedimentology of Zaragoza. The organizing committee of the Zaragoza 2011 conference included staff of three Spanish universities: Zaragoza (Marcos Aurell,

Concha Arenas, Beatriz Bádenas, Arsenio Muñoz and Alfonso Meléndez), Balearic Islands (Luis Pomar) and Complutense de Madrid (Ana Alonso). The other institution co-organizing this sedimentological event was the Spanish Sedimentological Group of the Geological Society of Spain.



During the icebreaker party at the Boston Hotel there was a play of «jotas», the traditional dancing of Aragón.



There were five parallel rooms for oral presentations; the image corresponds to the end of the talk by Rui Pena in the Sedimentation in rift basins session.

For the success of the meeting, the help and dedication of many people

was critical. The 44 members of the scientific committee were in charge of



Discussions during the mid-day poster sessions were very alive. Free beers were served during these sessions.



Previous to the plenary session there was a guided visit to the monumental Patio de la Infanta renacentist palace.

the 21 scientific sessions programed. Very important was the assistance provided by the 15 master and undergraduate students of the university of Zaragoza. I want also have a special mention to our two conference assistants (Paz and Sara) and the two key persons of the Boston Hotel (Begoña and Jesus), the venue of the meeting. And of course, we kindly thank the work done by the IAS Bureau, with special mention to the work done by Nina Smeyers, dealing with all the registration process and Steven de Vriese, the Webmaster.

Financial support was fundamental for the development of the congress. Shell, Petrobras, Repsol and Total were the oil companies involved in the meeting. Other public institutions

collaborating with the meeting were the Spanish and Aragon governments, the city council of Zaragoza and the Geological institute of Spain.

Almost 600 participants from 5 continents and 42 countries were attending the Zaragoza conference. From them, 180 participants came from Spain. The second country represented (70 participants) was Italy. The third place was for China, with 50 people, showing how the interest by the IAS organized events is having a dramatic increase on this big country. The sedimentologists of the U.K. (42), France (40), Germany (30) and U.S.A. (25) were also well represented. Switzerland, Brazil and Portugal follow the ranking, with more than 10 participants. Other well-represented



The first lecture of the plenary session was given by André Strasser, on the Speed and synchronicity of environmental changes on carbonate platforms

countries (5 to 10 participants) were Poland, Romania, Netherlands, India, Canada, Belgium, Croatia, Russia, Austria, Denmark, Australia and Argentina. Represented by up to 5 participants were Turkey, Japan, Hungary, South Korea, Czech Republic, Azerbaijan, Slovenia, U.A.E., Morocco, Indonesia, Ireland, Colombia, Trinidad, South Africa, Nigeria, Norway, Finland, Israel, Greece and Norway.

Abstracts accepted were 550 and 253 were scheduled as talks and the others as posters. The pdf file with the abstract volume was available in the meeting Webpage 2 weeks before the celebration of the meeting and was also delivered to the participants in a pen drive. Three poster sessions were programmed in the central hours of the day, from 12:00 to 13:30. To help socializing, beers were served during these poster sessions. The oral sessions were run in five rooms working in parallel. Each oral session was divided in 15 minutes slots. Ten of these

sessions were introduced by a keynote presentation of 30 minutes of duration covering different topics. The keynote speakers were N. Waldman (*Sedimentation in the Dead Sea*), A.J. Hartley (*Fluvial sedimentation*), A.T. Brasier (*Non-marine carbonates*), N.P. Mountney (*Eolian stratigraphic record*), W. Schlager (*Carbonate platforms*), C. Puigdefabregas (*Turbidite sedimentation*), A.A. Ekdale (*Ichonologic data in paleoclimatic studies*), R. Riding (*Stromatolites and thrombolites*), J. García-Senz (*Continental rifting of Iberia*) and J. Peckmann (*Ancient seep deposits*).

In the afternoon of the second day (July 7th), there was the plenary session in a building located close to the venue of the conference. After a short opening ceremony, there were four lectures of 45 minutes of duration. The topics of these lectures covered the four main themes of the conference: marine sedimentation, continental sedimentation, sedimentary processes



At the end of Gala Dinner there was an opera play given by a local group of 12 singers that were hidden between the attendants. Sitting in the closest table are Blas Valero, Daniel Ariztegui, Luis Pomar and wife (Angeles) and Ana Alonso.

and applied sedimentology. The four invited speakers were: Andre Strasser (*Speed and synchronicity of environmental changes on carbonate platforms*), Blas L. Valero-Garces (*Lakes and climate: lessons from the past for a changing world*), Luis Pomar (*Internal waves, a yet unexplored type of turbulence events*) and Stuart Haszeldine (*Long timescale CO₂ storage: a new challenge for sedimentological prediction*). Near 400 attendants followed all the programmed lectures.

The Gala Dinner was attended by 265 participants. It was served in the restaurant of the Boston Hotel (the venue of the conference) and included a special surprise with a play given by a local group of 12 singers at the end of the dinner. Afterwards, many participants stay there for a long-time dancing...

Eight fieldtrips of two or three day of duration were eventually running before and after the conference. These trips covered a wide spectrum of topics and were visiting outcrops around the Iberian Ranges (*Late Jurassic and Aptian carbonate platforms, mid-Cretaceous Desert systems and Quaternary and present-day tufa systems*), Pyrenees (*Paleocene carbonate platforms and the Eocene Ainsa Basin*), Eastern Ebro Valley (*Eocene-Early Miocene*) and Basque-Cantabrian mountains (*hydrothermal dolomitization, Albian*). More than 150 people participated in the trips. Among the people participating in the field trips, there were 36 IAS-member students that only had to pay the half of the price of the field trip. The content of these eight field trips -along with that of other six programmed trips that were not run- was compiled into



All the participants and leaders of the B2 post-meeting fieldtrip (except Michele Morsilli, the photographer) stand over the Upper Kimmeridgian reefal unit at Arroyo Cerezo.

two volumes of the Geo-Guías series (n. 7 and 8) published by the Spanish Geological Society. All conference attendees received these two volumes.

A key aspect of the IAS meetings is the participation of the students, and Zaragoza has certainly followed this tradition. Back in 1987, my PhD supervisor (Alfonso Meléndez) ask me to go with him to my first international meeting. It was a great personal and professional experience in Tunisia, in occasion of the 8th regional meeting on Sedimentology. Afterwards, I have had

the chance to join 14 IAS Regional or International meetings, including the attendance to more of 20 field trips... so, now, after being involved in the organization of the Zaragoza meeting, I really appreciate the work done by all the colleagues that were behind the organization of these IAS meetings and fieldtrips.

*Marcos Aurell
Chairman of the 28th IAS Meeting of
Sedimentology*

SUPER SEDIMENTOLOGICAL OUTCROPS

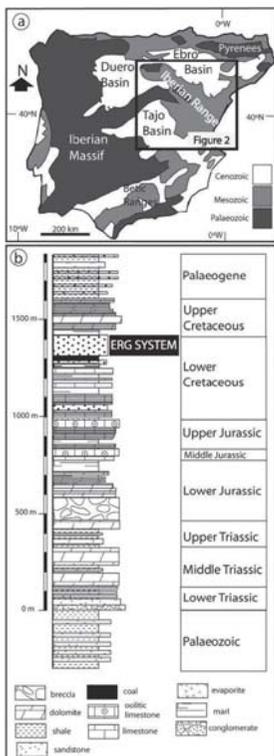
From back-erg to fore-erg: the mid-Cretaceous Iberian Desert System (Iberian Basin)

The post 27th IAS Zaragoza Meeting B5 focuses on a transect through the back-erg, central erg and fore-erg of the Iberian Mid-Cretaceous Desert System. I have participated at this excursion and I

am indebted with the organizers for the wonderful geology they have shown us. Therefore, I have decided to place a summary of it in the Newsletter, just to give a brief overview of it the all



Field trip participants.

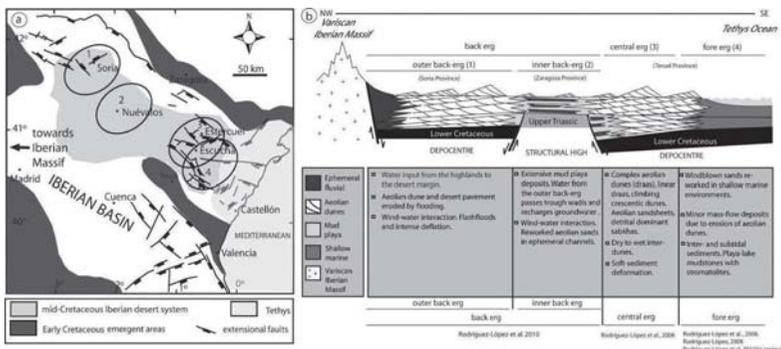


sedimentology community of these super sedimentological outcrops (Vincenzo Pascucci, IAS General Secretary).

Location: Iberian Range (Eastern Spain), in the Provinces of Soria (41° 45,976'N - 0° 28,008'W, Zaragoza (41° 39,171'N - 0° 52,606'W) and Teruel (40° 20,661'N - 1° 6,363'W)

The back-erg, close to the more than 3 km high Variscan Iberian Massif, was characterized by the interaction of wind and water, and shows a variety of aeolian dune deposits, deflation features (desert pavements, deflation lags, aeolian sand sheets with venti facts, aeolian bimodal deposits) and water-laid (debris flow, hyperconcentrated flow, cobble-sand and pebble-sand sheet flood, cobble-sand and pebble-sand bedload stream) deposits.

(a) Geological map of the Iberian Peninsula showing the location of the Iberian Range. (b) Regional stratigraphic section of the sedimentary units in the study area.



(a) Palaeogeographic map showing the spatial distribution of the mid-Cretaceous Desert and (b) Simplified cross-section from the Variscan Iberian Massif to the Tethys Ocean showing the spatial compartmentalization (backerg, central-erg and fore-erg) of the desert system between. Numbers 1 - 4 in Fig. 2a refer to erg spatial zonation. See location in Fig. 2b.



Back-erg deposits at Ocenilla Village.

The central-erg area exhibits thick accumulations of aeolian deposits (climbing crescentic dunes, linear draas,

other complex aeolian dunes, aeolian sand sheets, and exceptionally preserved desert roses), water-reworked aeolian



Central-erg. Exceptionally preserved desert roses developed in aeolian dune sands.



Fore-erg. Stacked crossbedded sets (Poppe for scale).

sandstones (mass flows), wet and dry interdune deposits. The fore-erg area is characterized by the complex interaction

between the erg system and the western Tethyan coastal system where aeolian tongues (aeolian dunes) and intertongues



Juan-Pe and Nieves indicating the fore-erg deposits at La Orden Hill.



Fore-erg. Large-scale aeolian dune foreset.

(restricted marine deposits, tidal creeks, siliciclastic sabkhas, and minor coal deposits in coastal marshes with mangrove vegetation) were deposited

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GRANT REPORT

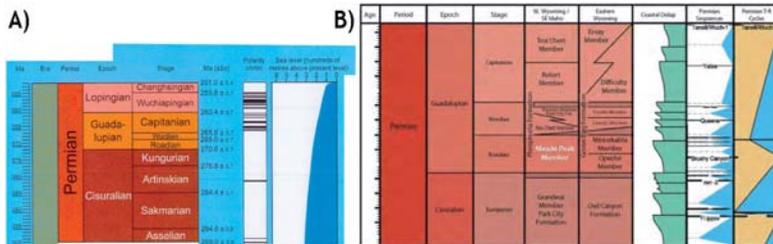
Detailed sedimentological and stratigraphic analyses of organic rich successions within the Permian Phosphoria Formation of Idaho and Wyoming, USA

The late Permian Phosphoria Formation (late Leonardian to Guadalupian) in the northwestern United States is comprised of marine sedimentary units of significant economic and scientific importance due to the presence of the world's largest known sedimentary phosphate deposit. Deposition occurred along a westward-deepening carbonate ramp within the Phosphoria Sea, an epicontinental marine embayment along the northwestern margin of Pangea (~ 20°N paleolatitude). Throughout most of the

basin the Phosphoria Formation is composed of the Meade Peak and Retort Members, two mixed carbonate-phosphorite-siltstone-chert sequences. Deposition of these two members has been attributed to marine upwelling based on the presence of abundant phosphate, organic matter, and silt, coupled with modeled basin hydrography and wind patterns. Traditionally, the occurrence of phosphorite alone is often used as the basis for identifying upwelling systems as most modern phosphate deposits



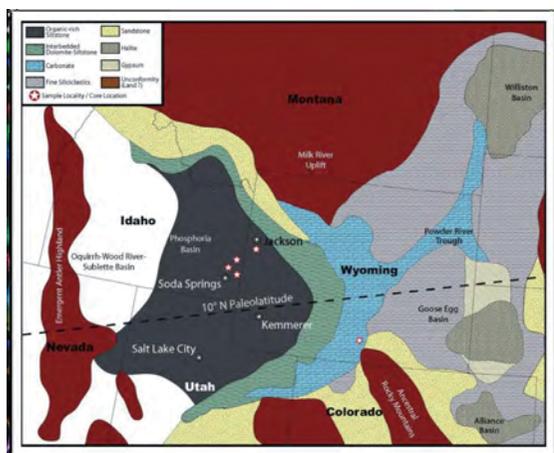
Phosphoria Meade Peak Member outcrop, Hoback Junction, Wyoming.



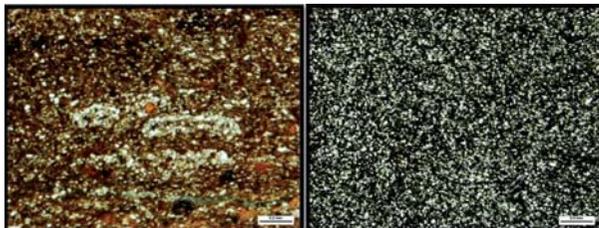
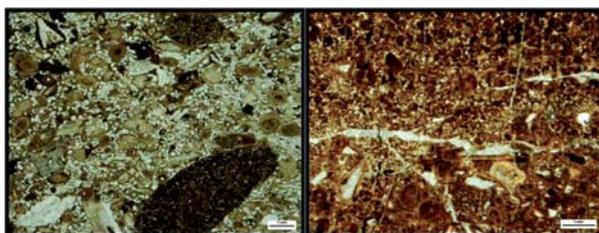
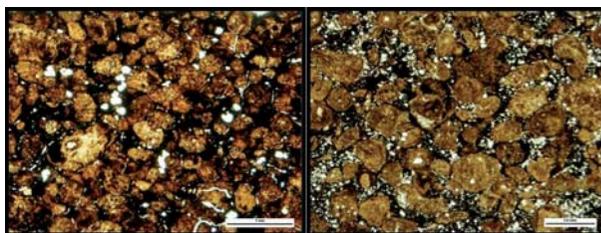
a) Permian time scale and b) correlation chart for southeast Idaho and eastern Wyoming. (Modified from Maughan, 1994, and Piper & Link, 2002). 3

involve this process. However, there are no modern analogs for the Phosphoria Sea or sedimentary systems comparable to the Phosphoria Formation. In contrast to previous, mostly geochemical and basin modeling approaches to characterize the Phosphoria Formation, this study focused on fine-scale stratigraphic relationships and microfacies analysis within the Meade Peak member in order to better understand controls on deposition and the mechanisms responsible for phosphorite accumulation. Our results show that the silt-sized quartz, previously attributed to eolian input into the basin, was

more likely transported by marine processes as it shows traction structures such as ripples and intense marine bioturbation. Associated phosphate deposits are often coarse-grained and characterized by significant reworking, indicating sedimentation in a relatively shallow-water, high-energy regime. It therefore seems difficult to apply the traditional upwelling model to these Permian sediments, as it relies on a tranquil oxygen minimum zone to accumulate significant amounts of phosphate. Upwelling as the prime cause of phosphate deposition for the Phosphoria Formation seems also unlikely due to the position of the



Lithofacies of Meade Peak and equivalent rocks during the middle Permian. Sample localities for this study are highlighted with a star (Modified from Maughan, 1994). 4

*Siltstone**Phosphatic
intraclastic
Packstone to
Grainstone.**Mixed phosphatic
Packstone to
Grainstone.*

basin on the continent surrounded by land on three sides, and semi-detached from the open ocean to the west by an island arc system. 2

Problem

The origins of the Phosphoria Formation have long been subject to controversy. Most previous investigations focused on geochemical and basin modeling approaches to characterize the processes of formation, commonly concluding that phosphate deposition resulted from marine upwelling, requiring a tranquil oxygen minimum zone. The upwelling model has been based simply on the presence of abundant phosphates, organic matter, and silt, coupled with modeled basin hydrography and wind patterns.

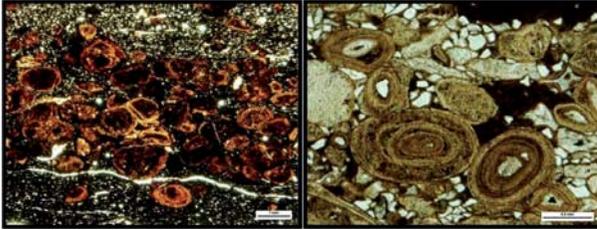
This study focuses on fine-scale stratigraphic relationships and microfacies analysis within the Meade Peak member in order to better understand controls on deposition and the physical processes responsible for phosphorite accumulation.

Facies Types

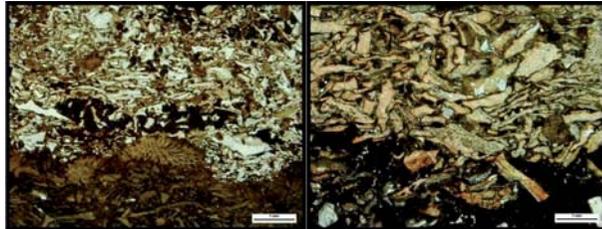
The seven following facies types were identified within the Meade Peak Member of the Phosphoria Formation reflecting the energy of deposition along the ramp profile:

Siltstone

- ◆ 40–60% well sorted, angular to subrounded quartz silt.
- ◆ 5–30% (< 0.5 mm) rounded phosphate clasts occurring in



Phosphatic ooid grainstone



Fish bone Packstone

mm scale bands parallel to bedding.

- ◆ Textures are predominately massive due to extensive bioturbation; horizontal bedding is present in some samples.

Phosphatic Intraclastic Packstone to Grainstone

- ◆ Nearly all grains are phosphatic clasts composed of grain aggregates & smaller individual clasts, with intergranular and intragranular quartz silt.
- ◆ Superficial phosphatic ooids are rarely present and are generally composed of a single collophane rim surrounding a phosphatic intraclast core.

Mixed Phosphatic Packstone to Grainstone

- ◆ Grains consist of rounded clasts of phosphate, phosphatic ooids, 30-60% fish bone and scale fossils, and quartz silt.
- ◆ Commonly occurs as thin (mm scale) bands parallel to bedding

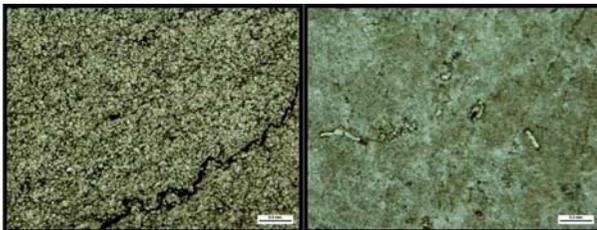
and bounded to the top and bottom by siltstones & phosphatic packstones.

Phosphatic Ooid Grainstone

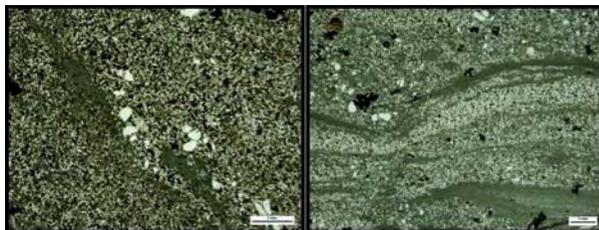
- Grains consist of predominately phosphatic ooids with minor amounts of phosphatic intraclasts, fish bone fragments, and quartz silt.
- ◆ Ooid morphologies range from simple superficial ooids composed of a phosphate clast or quartz grain nucleus coated by a single collophane laminae, to well developed ooids with multiple laminae.

Fish Bone Packstone

- ◆ Up to 60% fish bone and scale fossils surrounded by micritic to collophane matrix, and predominately aligned parallel to bedding.
- ◆ The top contact of this facies is commonly an erosive, uneven, undulating surface, which is often phosphatized, resembling



*Mudstone to
Wackestones*



Silty dolomite

hardground surfaces.
RR-08:02B TCC-08:02B

diagenetic pyrite growth are
common throughout.

Carbonate Mudstone to Wackestone

- ◆ Fossil content is mainly comprised of fish bone and scale fragments and rare brachiopod fragments floating within a micritic matrix.
- ◆ Bioturbation in the form of clean quartz silt filled burrows.
- ◆ Minor amounts of small phosphatic ooids (~0.5 mm in diameter) and rounded phosphate intraclasts.

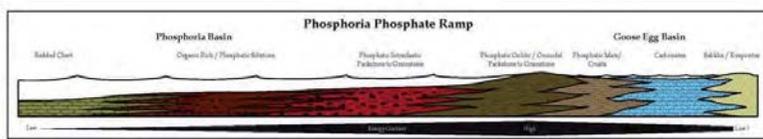
HJ-08:16 DC-08:01 7

Silty Dolomite

- ◆ Grains consist of up to 50% quartz silt, rip up clasts of phosphatic laminae, rare phosphatic ooids, and lags of sand sized quartz grains and lithic fragments.
- ◆ Soft sediment deformation, and slump features are common.
- ◆ Abundant organics and

Discussion

The seven identified facies types reflect an energy gradient of deposition along a low inclination carbonate ramp system in shallow water (10s of meters). The ramp system switched between a carbonate dominated system and a phosphate dominated system during incursions of organic material. During times of phosphate production the ramp in essence was a phosphate ramp. The phosphate ramp system displays the same variety of facies chances along the profile with respect to the energy of deposition. The coarsest facies (intraclastic and oolitic packstones to grainstones) reflect the highest energy, shallowest depositional environment. The more basinward areas of the ramp become finer grained and lower energy. These facies consist of many transitional facies including interbeds of finer and coarser facies between the seven identified primary facies types. Further down the ramp organic rich siltstone which are often heavily



Depositional model of the Phosphoria Phosphate Ramp, highlighting the facies change from most proximal to more basinward areas of deposition.

bioturbated reflecting the periodicity of sediment and organic matter influx as well as the shallow depth of the water column. The most distal facies (which was not the focus of this study) are bedded and nodular cherts. 8

Conclusions

Phosphates represent coarse-grained, high energy, shallow marine environments.

- ♦ Bedded cherts represent the deepest, quietest portion of the basin.
- ♦ Massive siltstones are the result of bioturbation.
- ♦ Evidence of bedload transport within the siltstones.
- ♦ Oxygen Minimum zone is unlikely due to presence of extensive bioturbation, bedload transport, relief of ramp.
- ♦ Upwelling is unlikely to have been the mechanism for phosphate accumulation. 9

References

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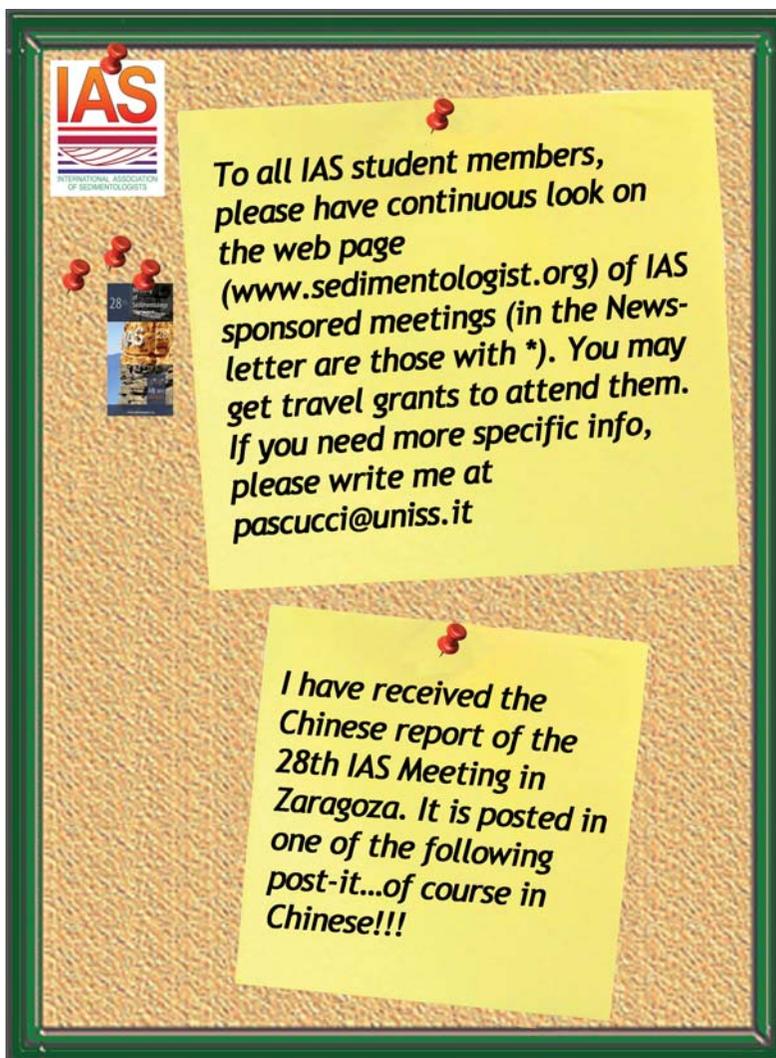
Budget

All funds provided by the IAS were used to conduct geological field work during the summer of 2008 in Idaho and Wyoming, USA. During this field excursion several outcrops were measured and sampled to prepare thin sections for this research.

Field work (travel to localities to measure sections and collect samples): 1,000

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IAS Grant II session 2009*

NOTICE BOARD



BOOK REVIEW

Sedimentology and Sedimentary Basins

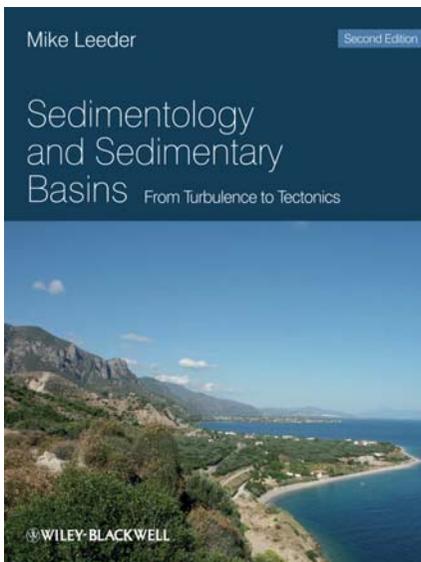
The sedimentary record on Earth stretches back more than 4.3 billion years and is present in more abbreviated forms on companion planets of the Solar System, like Mars and Venus, and doubtless elsewhere. Reading such planetary archives correctly requires intimate knowledge of modern sedimentary processes acting within the framework provided by tectonics, climate and sea or lake level variations. The subject of

t h u s
o r i g i n s ,
deposition of
on planetary

The author
principles of the
viewpoint of
p r o c e s s e s ,
general science
approach in the
q u a n t i t a t i v e
derived in
appendices. The
an innovative
with how
c u r r e n t l y
variety of
disciplines, from
extent tectonic
variations in
Each chapter
detailed guide

reading leading to a large bibliography of over 2500 entries. The book is designed to reach an audience of senior undergraduate and graduate students and interested academic and industry professionals. Further details on this book can be found at: <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1405177837.html>

Publication date: January 2011



sedimentology
encompasses the
transport and
mineral sediment
surfaces.

addresses the
subject from the
modern
emphasising a
narrative
main text, with
background
enabling 'cookie'
book ends with
chapter dealing
sedimentology is
informing a
cognate
the timing and
uplift to
palaeoclimate.
concludes with a
to key further

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)

LIST OF STUDENT MEMBERS WHO GOT GRANTS IN THE PAST SESSION

<u>NAME</u>	<u>FINANCIAL SUPPORT</u>
Noelle Van Ee	1.000 Euros
Michael Salter	951 Euros
Eleonora Dall'Olio	1.000 Euros
Jiaguang Li	1.000 Euros
Isabel Emma Quijada	990 Euros
Cara Harwood	1.000 Euros
Diana Ortega-Ariza	1.000 Euros
Lina Marie Stolze	1.000 Euros
Rachel Brackenridge	990 Euros
Dario Harazim	1.000 Euros

CALENDAR

7th International Conference on Asian Marine Geology (ICAMG-7)

11th-14th October
2011
National Institute of
Oceanography (CSIR), Goa
India

V. Ramaswamy
rams@nio.org
<http://icamg7.nio.org>

Application of magnetic susceptibility on Palaeozoic sedimentary rocks

12th-18th October
2011
Pargue
Czech Republic

Leona Koptikova
koptikova@gli.cas.cz
<http://home.gli.cas.cz/hladil/Krs2011/>

THE FOURTH INTERNATIONAL MEETING ON ALLUVIAL FANS *

25th November-1st
December
2011
Ras Al-Khaimah (RAK),
United Arabian
Emirates

Anne Mather
University of Plymouth
amather@plymouth.ac.uk
www.alluvialfans2011.net

**IAVCEI - 4th International Maar Conference: A Multidisciplinary
Congress on Monogenetic Volcanism 2012 ***

*20th-24th February
2012
Auckland
New Zealand*

Karoly Nemeth
Volcanic Risk Solutions,
CS-INR, Massey University, Palmerston North,
New Zealand
k.nemeth@massey.ac.nz

DEEP SEA CORALS (ISDSC5) - 2012 *

*2nd-7th April
2012
Amsterdam
The Netherlands.*

Tjeerd Van Weering
NIOZ, the Royal Netherlands Institute for Sea
Research
tjeerd.van.weering@nioz.nl
www.deepseacoral.nl

**Course On Seagrass Carbonate Production: from modern to fossil
environment**

*30th April - 4th May
2012
Mallorca
Spain*

Marco Brandano
marco.brandano@uniroma1.it
Guillem Mateu-Vicens
www.musecienciasnaturals.org



29th IAS MEETING OF SEDIMENTOLOGY *

*10th-13th September
2012
Schladming
Austria*

Hans-Jürgen Gawlick
University of Leoben
IAS2012@unileoben.ac.at
www.sedimentologists.org/ims-2012

**AT THE EDGE OF THE SEA: SEDIMENTS, SEA LEVEL, TECTONICS, AND
STRATIGRAPHY AS MAIN ELEMENTS OF A MULTIDISCIPLINARY
APPROACH AND CORRELATION IN STUDYING QUATERNARY CHANGES ***

*24th-29th September
2012
Alghero
Italy*

Mauro Coltorti
Università di Siena
mauro.coltorti@unisi.it

3RD CONFERENCE TERRESTRIAL MARS ANALOGUES*

2013
Marrakech
Ibn Battuta Centre
Morocco

Gian Gabriele Ori
ggori@irsps.unich.it
www.ibnbattutacentre.org

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