



A.A.S.P. NEWSLETTER

Published Quarterly by the American Association of Stratigraphic Palynologists Inc.

March 2006
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A.A.S.P.

American Association of Stratigraphic Palynologists Inc.

The American Association of Stratigraphic Palynologists, Inc. - AASP - was established in 1967 by a group of 31 founding members to promote the science of palynology. Today AASP has a world-wide membership of about 800 and is run by an executive comprising an elected Board of Directors and subsidiary boards and committees. AASP welcomes new members.

The AASP Foundation publishes the journal *Palynology* (annually), the AASP Newsletter (quarterly), and the AASP Contributions Series (mostly monographs, issued irregularly), as well as several books and miscellaneous items. AASP organises an Annual Meeting which usually includes a field trip, a business luncheon, social events, and technical sessions where research results are presented on all aspects of palynology.

AASP Scientific Medal recipients

Professor William R. Evitt (awarded 1982)
Professor William G. Chaloner (awarded 1984)
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Dr. Graham Lee Williams (awarded 1996)
Dr. Hans Gocht (awarded 1996)
Professor Svein B. Manum (awarded 2002)
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Dr. David Wall (awarded 2004)
Dr. Robin Helby (awarded 2005)

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Dr. William S. Hoffmeister (elected 1975)
Professor Leonard R. Wilson (elected 1975)
Professor Knut Faegri (elected 1977)
Professor Charles Downie (elected 1982)
Professor William R. Evitt (elected 1989)
Professor Lucy M. Cranwell (elected 1989)
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AASP Board of Directors Award recipient

Dr. Robert T. Clarke (awarded 1994)

Teaching medal recipients

Professor Aural T. Cross (awarded 1999)
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AASP Distinguished Service Award recipients

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Dr. David T. Pocknall (awarded 2005)
Dr. David K. Goodman (awarded 2005)
Prof. Owen K. Davis (awarded 2005)

AASP Student Scholarships are awarded annually to support studies in palynology. These comprise two scholarships each for **\$1500**, and a third award of **\$1500** may be given as The Cranwell Award. Ordinarily, the scholarships will be offered to beginning graduate students, but advanced undergraduates may also apply. The qualification of the student, the originality and imagination evident in the proposed project, and the likelihood of significant contribution to the science of palynology are factors that will be weighed in the selection of award winners. Previous winners of this award are eligible only if they are pursuing a different degree than the one they were pursuing when they received the previous award. AASP Scholarships are available to all students of palynology in all countries and these students need not be members of AASP. Application forms are available from the Chairman of the AASP Awards Committee (Paul Strother: strother@bc.edu), or can be downloaded from our website at <http://www.palynology.org/content/scholar.html>. Scholarship applications must be postmarked no later than **March 31**. **Awards** at each Annual Meeting: Best Student Paper Award, and Best Poster Award.

AASP Membership categories and dues (in US\$ per year) are as follows:

Individual (\$45.00), **Student** (\$30.00), **Retired** (\$15.00), and **Institutional** (\$70.00). Dues may be paid up to three years in advance by using credit card (MasterCard, Visa, American Express), check or money order (made payable to AASP Inc.), and must be sent to the Secretary-Treasurer. All members receive the AASP Newsletter (mailed quarterly by hard copy or via email), Membership Directory (mailed annually), and (with the exception of Retired members) the journal *Palynology* that is published annually. Overseas members can receive their Newsletter and *Palynology* by airmail, rather than book rate surface mail; an additional surcharge is required in the amount of US\$12.00 for Europe & South America, and US\$15.00 for Africa, Asia & the Pacific region (includes Australia and New Zealand).



A.A.S.P. NEWSLETTER

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Carlos Jaramillo, Editor

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The AASP Newsletter is published four times annually. Members are encouraged to submit articles, "letters to the editor", technical notes, meetings reports, information about "members in the news", new websites and information about job openings in the industry. Every effort will be made to publish all information received from our membership. Contributions which include photographs should be submitted a week before the deadline. Deadline for next issues of the newsletter is JUNE 1, 2006. All information should be sent by email. If possible, please illustrate your contribution with art, line drawings, eye-catching logos, black & white photos, colour photos, etc. We **DO** look forward to contributions from our membership.

PRESIDENT'S PAGE

By Robert Cushman

As many of you know, the 2006 AASP Annual Meeting will be held in conjunction with the Geological Society of America Annual Meeting in Philadelphia, Pennsylvania on 22-25 October 2006. Meeting with GSA presents us with a great opportunity to demonstrate the value of palynology. It is a time when we as palynologists can interact with professional colleagues in other areas of geology and paleontology and remind them of the contributions our discipline makes to the larger scientific community. Take the opportunity to invite your professional colleagues to visit one of the four topical sessions sponsored by AASP at the Philadelphia meeting. Owen Davis is convening a session entitled, Holocene Sequences of Environmental Disasters - The Terrestrial and Marine Palynological Records. Thomas Demchuk is convening a session, co-sponsored with the Coal Division of GSA, entitled, Ice House/Hot House – An Analysis of Late Paleozoic Floras and their Response to Global Climate Change. Chris Hunt is convening a session entitled, Scales of Instability in Tropical Environments. Doug Nichols and I are convening a session entitled, Stratigraphic Palynology – Applications to Geologic Problems. Each of these sessions is described in more detail later in this newsletter. AASP will also be holding the normal board meetings and business luncheon at the Philadelphia meeting. Details for the meeting will be posted on the AASP website (<http://www.palynology.org>) as they become available. It promises to be a great meeting and I look forward to seeing each of you there.

In the immediate future, the AASP Board of Directors will be in Philadelphia for our mid-year board meeting on 22 April 2006. An agenda for the meeting will be posted on the AASP website in the next couple of weeks. Please feel free to contact me by email (bcushman@llu.edu) if you know of an item that should be discussed at the mid-year board meeting. As with all AASP board meetings, any AASP member is welcome to attend.

It is that time of year again when we start thinking about officers for next year. Sharma Gaponoff kindly agreed to chair our AASP Nominating Committee this year. Please contact Sharma at SLGaponoff@chevronontexaco.com if you know of an AASP member who would like to serve as an officer or director-at-large. A brief biography and photograph of each candidate will be included in the June newsletter.

Bob Cushman
Loma Linda, CA

CALL FOR PAPERS, 2006 AASP ANNUAL MEETING, PHILADELPHIA, OCTOBER 22-25 (JOINTLY WITH GSA)

AASP will be meeting jointly with the Geological Society of America this year in Philadelphia, October 22-25. In an effort to promote and generate exposure for the society, we are co-sponsoring four different topical sessions. Sessions will include invited speakers but will consist largely of volunteered papers. We would like to encourage members whose research falls within the topical session areas to consider submitting abstracts earmarked for these sessions.

The deadline for abstract submission is midnight, Pacific Time, July 12, 2006. Abstracts will be submitted through GSA; submission instructions will be available in April. **JULY 12 IS A FIRM DEADLINE** - unlike the typical annual AASP meetings, the GSA organizers will not be so forgiving of late abstracts. Additional information about deadlines, and the GSA meeting in general, can be found at <http://www.geosociety.org/meetings/2006/index.htm>.

AASP will also hold at least one social event in Philadelphia, possibly co-hosted with other micropaleontological societies. GSA is securing housing in a number of hotels near the Pennsylvania Convention Center in Center City, Philadelphia. More information will be included in forthcoming AASP newsletters.

The AASP-sponsored topical sessions are:

1. Topical Session 127. Scales of Instability in Tropical Environments

This session deals with the geological evidence for the changeability and dynamism of tropical environments, for a variety of timescales, periodicities, intensities, during all geological periods up to and including the present day.

(Convener: Chris Hunt, c.hunt@qub.ac.uk).

2. "Ice House" / "Hothouse" – An analysis of Late Paleozoic floras and their response to global climate change. Cosponsored by the Coal Geology Division of GSA, The Paleontological Society, and SEPM.

The Earth has experienced only two major intervals of globally cold climate since the establishment of vascular land plants in the Silurian and Devonian Periods. The earliest of these occurred during the Carboniferous and Early Permian and was by far the longest and most complex, lasting more than 50 million years. The second, and one in which we currently live, is the Neogene/Quaternary during which there have been several periods of colder climate (glacials) alternating with warmer intervals (interglacials), only the last of which has been studied ecologically in great detail.

The composition and dynamics of terrestrial vegetation during the Permian-Carboniferous ice age have received considerably less attention than those of the Neogene/Quaternary, and thus have played less of a role in our understanding of the long-term vegetational response to climate change. Permian-Carboniferous patterns suggest that there may be short intervals of large-scale biotic turnover embedded within longer time intervals of smaller-scale turnover. This pattern is very similar to what is seen in the Quaternary. Our proposed session hopes to explore this topic with both invited and volunteered papers from an international audience (Poland, Czech Republic, Ukraine, China, Brazil, France, Germany).

(Co-conveners: Cortland Eble, Kentucky Geological Survey, Thomas Demchuk, ConocoPhillips, Inc., Hermann Pfefferkorn, University of Pennsylvania)



3. *Topical Session 21. Holocene sequences of environmental disasters: The terrestrial and marine palynological record*

Natural disasters have occurred throughout recorded time and before. The geologic record of fires, droughts, earthquakes, tsunami and hurricanes has improved in the last decade through improved dating techniques and close-interval sampling. This topical session will include earthquakes, storms, fires, pest and pathogen outbreaks (including humans!). The emphasis will be on high-resolution well-dated records that might be used to calculate recurrence intervals of these events. It also could include comparisons of the consequences of two catastrophes, such as Neolithic impact vs. 20th century human impact.

(Convener: Owen Davis, palynolo@geo.arizona.edu).

4. *Topical Session 108: Stratigraphic Palynology: Applications to Geologic Problems*

This session is intended to highlight recent applications of palynological data to solving problems in stratigraphy, basin analysis, and other geological problems. The intention of this session is to showcase applied palynology in geological settings, so we welcome a broad range of applied studies and research.

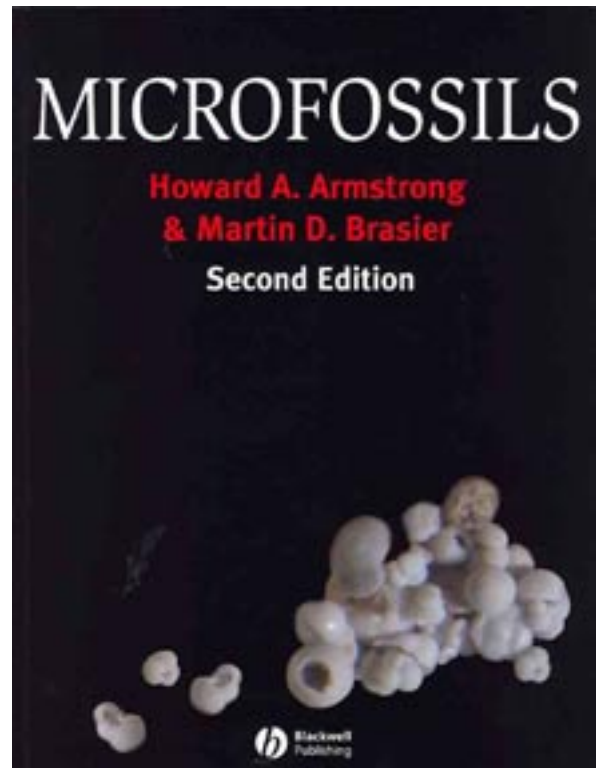
(Co-conveners: Doug Nichols and Bob Cushman, Jr.)

BOOK REVIEW: "MICROFOSSILS, 2ND EDITION"

Microfossils, 2nd edition by Howard A. Armstrong and Martin D. Brasier. ©2005. Blackwell Publishing, 350 Main Street, Malden, Massachusetts 02148-5020. 296 pages. \$69.95. ISBN 0632052791

It has been 25 years since the first edition of *Microfossils* was published. Many changes in the field of micropaleontology have taken place during that time, including new classifications, new techniques, new uses of different microfossil groups for solving geologic problems, and even the biological affinities of some of the groups covered in this book. As we all know, microfossils are very important in biostratigraphic and paleoecologic studies, as well as evolutionary, biogeochemical, and isotopic studies relating to climate change. In addition, microfossils are increasingly playing an important role in many environmental studies.

As stated in the Preface, the authors have not changed the main motivation or focus of this second edition, "which is to provide a manual for somebody with little micropalaeontological background working at the microscope." Morphology and classification are again at the core of the book, with supplementary information on geologic history, paleoecology, applications, and for the individual groups covered, a final section on hints for collection and study.



The book is divided into four parts, reflecting the areas of applied micropaleontology, the rise of the biosphere, organic-walled microfossils, and inorganic-walled microfossils. An Appendix discussing the different methods of preparation for the microfossil groups covered follows, with an emphasis on "techniques that are simple, safe and possible with a minimum of sophisticated equipment." A Systematic Index and General Index round out this book.

Just as in the first edition, illustrations are black and white line drawings, and supplemented in this edition with selected light and SEM photographs, a welcome addition, although I think there could have been more equal coverage throughout the book for the photographs. Classification of the microfossil groups generally follows the schemes published in the *Fossil Record II*, edited by M. Renton ©1993 (Chapman & Hall, London).

I found this edition to be an excellent overview of microfossils and, to a certain extent, paleontology

in general. The references, for the most part, are current, with most from the 1990s, many from 2000-2003, and even at least one from 2004. Having said that, the book is not without mistakes, some of which should have been caught by more careful editing, and others, that are just minor annoyances. More on those criticisms later.

Part 1 covers the general field of applied micropaleontology and is an excellent introduction to those aspects of micropaleontology. Chapter 1 is an introduction to what microfossils are, why they should be studied, something about unicellular organisms, and the classification of life. Chapter 2 looks at evolution and biodiversity and provides a clear and succinct overview of evolution, the mechanism of speciation, classification, and cladistics. Chapter 3 covers microfossils in stratigraphy, and includes a nice review of sequence stratigraphy.

My one complaint about chapter 3 is the stratigraphic column reproduced in Figure 3.1. There is no date for the base of the Cambrian (which is abbreviated and should have been spelled out). The last date given is the base of the Menevian Stage at 545 Ma, and below it is the Solvan Stage with no date for the base of the Cambrian. This is followed by the Precambrian in the next column, and the age of the top of the Precambrian (Neoproterozoic III) is shown as 540 Ma. You can't have a younger unit below an older unit. This should have been caught in the editing. Chapter 4 is an excellent review of stable isotopes, paleosalinity, and a history of ocean-atmosphere interactions. Chapter 5 is a brief review of microfossils as thermal metamorphic indicators.

With the exception of Figure 3.1, I found Part 1 to be a very good synopsis of many of the topics one would cover in an introductory course in prehistoric life, historical geology, or invertebrate paleontology. The topics covered are just what a student in those courses, or someone interested in paleontology (with an emphasis on microfossils) needs to understand before embarking onto the individual microfossil groups. The authors are to be commended for presenting this material in a very understandable fashion as well as providing a reasonably comprehensive and current reading list for the topics covered.

Part 2 is another excellent overview on the origin of life and the early biosphere (chapter 6), the emergence of eukaryotes to the Cambrian explosion (chapter 7), and bacterial ecosystems and microbial sediments (chapter 8). Again, this section provides a good overview of these topics, and I found myself taking notes from these chapters to use in my own

paleontology-related courses. It should be noted that the authors use a slightly different geologic time scale in Figure 7.7 from the one presented in Figure 3.1. In the time scale in Figure 7.7, the Neoproterozoic III is replaced by the more correct Ediacaran Period, which unfortunately, is misspelled (Ediocaran).

Part 3 covers the organic-walled microfossil groups. Chapter 9 (acritarchs and prasinophytes) is one of the chapters I thought could have been improved by more careful editing. Of course, each reviewer of this book will find some fault in the coverage of their own particular fossil group, and it is important to keep in mind that this is a general text, not intended for the specialist, but for someone wanting to learn the basics about the different microfossil groups. In general, this chapter covers the major points about acritarchs and prasinophytes, but has some serious mistakes. For example, Figure 9.1 shows various acritarch genera redrawn from several sources. Unfortunately, Figure 9.1h is not Ammonidium as indicated, Figure 9.1i looks more like Dictyotidium than Cymatiosphaera, and Figure 9.1t is misspelled. It should be Polydryxium, not Polyodryxium. Furthermore, it would have made it easier for the reader if call-outs were employed illustrating some of the features talked about in the text for this figure. For example, it is not clear where the excystment structure is on the illustration that is being referred to in the text. It also would have been helpful to have referred to the chapters on acritarchs by Paul Strother and Stewart Molyneux et al. in the 1996 AASP volume *Palynology: Principles and Applications* edited by Jan Jansonius and Colin McGregor, and the AASP Contribution Series No. 41 ©2003 by Geoffrey Playford on acritarchs and prasinophytes. The reference section, disregarding the omission of the previous two references, did include a nice selection of current papers on various aspects of acritarch and prasinophyte research.

Chapters 10 and 13, covering dinoflagellates and ebridians, and spores and pollen, respectively, did a reasonable job considering the amount of material available for these groups. Chapter 11 on chitinozoans was a bit brief, in my opinion, and could have covered more in the applications section. The same can be said about chapter 12 on scolecodonts.

Part 4 covers the inorganic-walled microfossil groups. I thought chapters 14 and 15 covering the calcareous nannoplankton and foraminifera were particularly up to date and summarized not only their traditional uses, but also many of the ways these two major groups are being used in current research. For someone not familiar with either of these groups, this book will bring you up to date very quickly. Chapters 16, 17,

and 18 cover the Radiozoa, Heliozoa, diatoms, and silicoflagellates and chrysophytes respectively. The Ciliophora, ostracodes, and conodonts complete this part of the book, being covered in chapters 19, 20, and 21. Not being an expert in these groups, I did think the coverage was adequate and I learned a few new things about each group. I was disappointed to see the authors talking about an Upper Ordovician age and Lower Silurian age on page 249 in the Conodont chapter instead of the correct Late Ordovician and Early Silurian age, but that is a minor complaint.

Overall, I found the second edition of *Microfossils* to be an excellent book and one I highly recommend. As I mentioned at the beginning of this review, there were minor typos and mistakes in the book that should have been caught by more careful editing. However, they don't detract from the fact this book gives a very good overview of paleontology, with an obvious emphasis on microfossils, and a generally complete overview of the major microfossil groups one is likely to work with or study. At \$69.95 it is very good value, and will make an excellent text for an introductory course in micropaleontology, or as a supplement to an invertebrate paleontology course.

Reviewed by:
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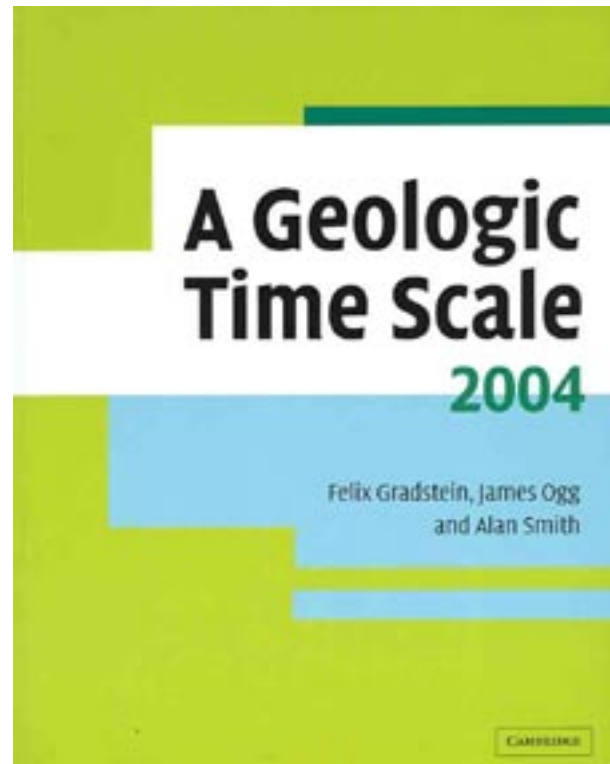
BOOK REVIEW: "A GEOLOGIC TIME SCALE 2004"

A Geologic Time Scale 2004 by Felix Gradstein, James Ogg, and Alan Smith (Editors). ©2005. Cambridge University Press, 40 West 20th Street, New York, New York 10011-4211. 589 pages. \$140.00 Hardback ISBN 0521781426; \$70.00 Paperback ISBN 0521786738.

A Geologic Time Scale 2004 is a complete rewrite of *Geologic Time Scale 1989* published in 1990 by W. B. Harland et al. Drawing on the expertise of 40 stratigraphic experts, many of which are actively involved in the International Commission of Stratigraphy, this volume provides the most up-to-date international stratigraphic framework for the Precambrian and Phanerozoic. It begins with an introduction to the theory and methodology used in the construction of the new time scale, and subsequent chapters detail each of the geologic periods. In addition to a color

page devoted to each of the Phanerozoic Periods, a wall chart summarizing the entire time scale as well as paleogeographic reconstructions for most of the Phanerozoic periods are included with the book.

The book is divided into four parts. Part I is the Introduction and contains two chapters, the first, appropriately named 'Introduction' in which the development of the Geologic Time Scale 2004 (GTS2004) is covered and a discussion of how the book is arranged. This is followed by the conventions and standards used in the book and then a historical overview of Geologic Time Scales beginning with Arthur Holmes (1890-1965), and followed by a short history for the Paleozoic, Mesozoic, and Cenozoic time scales.



Chapter 2 covers chronostratigraphy: linking time and rock and discusses the standardization of the chronostratigraphic scale, in particular the precise reference point for each stage boundary, known as the Global Stratotype Section and Point (GSSP). The GSSP is the point in time where that part of the rock succession begins, and the global chronostratigraphic scale is ultimately defined by a sequence of GSSPs. This chapter also gives a brief history of the major subdivisions of the Geologic Time Scale, i.e., the three eons: the Archean, Proterozoic, and Phanerozoic, and the three eras of the Phanerozoic: the Paleozoic, Mesozoic, and Cenozoic.

Part II encompasses concepts and methods and is divided into six chapters. Each chapter in this sec-

tion deals with a particular method of determining geochronology. Chapter 3 covers biostratigraphy: time scales from graphic and quantitative methods and includes discussions on graphic correlation, constrained optimization, and ranking and scaling. Chapter 4 discusses Earth's orbital parameters and cycle stratigraphy and concludes with remarks on the expected precision and accuracy of orbitally calibrated cycle stratigraphy. The more familiar geomagnetic polarity time scale is covered in Chapter 5, followed by a discussion on radiogenic isotope geochronology (chapter 6), strontium isotope stratigraphy (chapter 7), and geomathematics in chapter 8. I found each of these chapters well-written, easy to follow, and filled with interesting historical information, some of which I wasn't aware of.

Part III is the 'meat' of the book, with each of the 14 chapters devoted to the individual geologic periods as well as the Archean and Proterozoic eons and the Pleistocene and Holocene epochs. Chapters 9 and 10 cover the Archean and Proterozoic eons. Unlike the Phanerozoic, the Archean and Proterozoic time scales are currently defined chronometrically with subdivisions of eras and periods being assigned round number of years before present. Because of the still somewhat incomplete state of knowledge concerning the Precambrian, it is considered to be the most appropriate solution for defining the Precambrian time scale. Discussion of the advances made in isotopic and paleobiological Precambrian stratigraphy during the past decade are covered as well as a very interesting overview of the progress made toward a "natural" Precambrian time scale.

Chapters 11-21 cover the individual periods of the Phanerozoic and follow the same format. Each chapter starts off with a paleogeographic map of the period in which the geographic distribution of the GSSPs for that period are shown. A history and subdivision for that period is given, followed by the period's stratigraphy and concluding with the period's time scale. Each of these chapters is interesting in its own right, and I suspect each reader will be most familiar with or most interested in the period or periods he or she most commonly works. As would be expected, there is a wealth of data for each of the periods, and includes almost everything you would want to know about that period from a chronostratigraphic and chronometric viewpoint.

Chapter 22 focuses on the major subdivisions and events in the terrestrial sequences of the Pleistocene and Holocene epochs, and correlates them to the marine record. Discussion of the Holocene and its formalization and boundary is also covered.

Part IV is the Summary of the GTS2004 and contains only one chapter. Here, the key features of the new time scale are outlined, a short discussion summarizing how the GTS2004 was constructed, and how it can be improved are given. Three appendices - recommended color coding of stages, orbital tuning calibrations and conversions for the Neogene Period, and the mathematics of the methods used for final straight-line fitting round out this volume. These appendices are followed by an extensive bibliography, stratigraphic index, and general index.

This is not an easy book to review in the normal sense, because of the wealth of information of a very detailed nature that is found in nearly every chapter. However, it is a very interesting tome, and should be required "reading" for anyone interested in our current state of knowledge concerning the Geologic Time Scale. After all, this is the calendar from which we all operate, and the more precise it is, the better for all of us. As stated on the front page of this volume, "the time scale will be an invaluable reference source for academic and professional researchers and students." At \$70.00 for the paperback version, this is well worth the price for anyone involved in any aspect of Earth history research.

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**THE DONALD W. ENGELHARDT LIBRARY AND
PALYNOLOGY SLIDE COLLECTION NOW AT
FLMNH**

By David Jarzen (dmj@flmnh.ufl.edu)

James Canright emailed me a few months ago, and among other things noted that when he retired, he donated many of his reprints and other library materials to Don Engelhardt at The University of South Carolina, Columbia, SC. Don was a graduate student of Canright's, and I suspect from the number of times, and through the fine tales Jim related, Don held a special place in Jim's life.

Well sometimes fate turns its head, and things happen to our colleagues that make little sense and leave us asking important questions. Such was the case surrounding the death of Donald Engelhardt who, on February 13, 2000, after a brief battle with cancer, passed away. David Wall wrote a very fine tribute to

Don, which may be read on the AASP website, and in Volume 25 of the AASP journal *Palynology*.

Jim Canright suggested to me that I contact the Director of Earth Sciences and Resources Institute at the University of South Carolina, where Don taught until just before his death. In the past five years, things have changed at USC, however. I eventually contacted Dr. John Shafer, Director of the Institute and asked about the fate of the Don Engelhardt collection of library materials and slides or other materials Don may have left behind. Through a series of several emails, it was decided that if I made the trip to Columbia, SC, and took an inventory of the materials available and agreed to pack and arrange for transport of the collection, then the USC would make a donation of Don's complete library and other materials to the FLMNH.



Don Engelhardt and David Jarzen at the 1999 AASP Meeting in Savannah, Georgia. @ S.A. Jarzen.

Over the 2005 US Thanksgiving break, Susan and I drove a Museum van to Columbia where John Shafer met with us early in the morning on the day after Thanksgiving, along with several members of his family, who gathered to make the chore of packing and loading the collection a little easier. The van was loaded as fully as we dared. Even so, the body drooped and sagged making for a slow trip back home to Gainesville. The entire collection could not be transferred via one van full in one trip, so on January 20th of this year Susan and I returned to Columbia to complete the transfer. The Don Engelhardt Collection is now located at the Florida Museum of Natural History, University of Florida.

The collection is substantial and will require many months of sorting, cataloguing and finding the appropriate space to properly house the collection. Many sets of slides from several outcrops and subsurface samples that Don worked on are represented in the collection. These slides are documented through several reports and some published papers which Don provided while at Amoco Production Company in Houston, Denver and Tulsa. Hundreds of reprints covering a wide range of geological, botanical and paleobotanical and palynological topics are included in the collection.

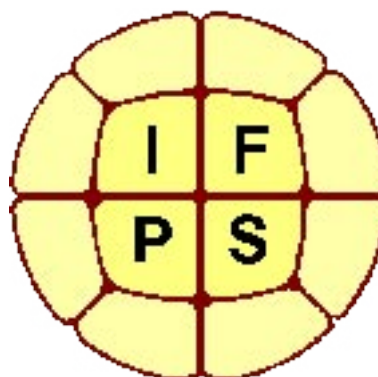
I met Don while I was a summer employee at the Tulsa Research Center in the 1960's. Don was always eager and willing to help me as a newcomer to palynology understand the corporate role in oil exploration. Dr. Shafer spoke very highly of Don and his work. He spoke of the smiling face and energy that Don brought to the department each and every day while he was at USC. Don is indeed missed by his colleagues at USC and those of us in AASP who had the good fortune to call Don a friend.

The Don Engelhardt Collection along with the already existing collections received from John F. Grayson, Dan Beju, Alfred Loeblich, Stanley Pocock, Paul and Hazel Delcourt, as well as collections received as exchanges from Gretchen Jones and Vaughn Bryant, Jr. have helped to make the Palynology Collections at the FLMNH one of the finest and most complete in stratigraphic and geographic coverage in North America.

PALYNOS 28(2)-DECEMBER 2005 IS OUT

Charles Wellman, the editor of *Palynos*, has informed us that the most recent issue of *Palynos* has been posted on the IFPS website:

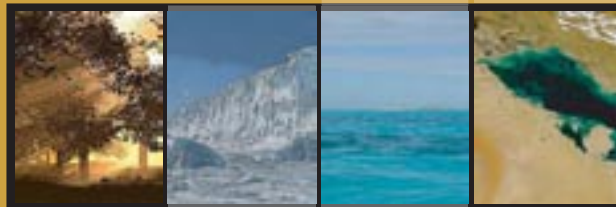
<http://www.geo.arizona.edu/palynology/ifps.html>



The **Urbino Summer School in Paleoclimatology** and the **Darwin Center for Biogeology** present

Dynamics and Evolution of Cenozoic Climate

advanced course in paleoclimatology
co-sponsored by the **Institute for Marine and Atmospheric research Utrecht (IMAU)** and the **Netherlands Research School of Sedimentary Geology**



USSP
2006

July 19-August 2, 2006
University of Urbino

The 3rd Summerschool of the USSP consortium will be focused on major climate changes during the Cenozoic Era. Experts will give lectures in the areas of stratigraphy, (bio)geochemistry, models and integration of results. This will be achieved by interactive discussions of case-studies (e.g. Early Paleogene hyperthermal events and the Eocene-Oligocene transition) in classes and practicals, providing the participants advanced knowledge on various types of paleobiological and geochemical proxy data and their use in paleoclimate reconstructions and modelling. For more detailed information visit www.uniurb.it/ussp and www.darwincenter.nl or send an e-mail to ussp@uniurb.it.

Deadline for pre-registration

March 15th, 2006

Registration Fee

Students: 450 Euros - Academic / industrial staff: 750 Euros

USSP Instructors

Henk Brinkhuis Utrecht University
Ken Caldeira Carnegie Institution
Margaret Collinson Royal Holloway University
Giuseppe Cortese Alfred Wegener Institute
Robert DeConto Massachusetts University
Gerald Dickens Rice University
Anna von der Heydt IMAU Utrecht
Simone Galeotti University of Urbino
Matthew Huber Purdue University

Paul Koch UC Santa Cruz
Luca Lanci University of Urbino
Lucas Lourens Utrecht University
Mark Pagani Yale University
Heiko Pälike University of Southampton
Paul Pearson Cardiff University
Isabella Premoli-Silva University of Milan
Isabella Raffi University of Chieti
Michael Rampino New York University

Gert-Jan Reichert Utrecht University
Stephen Schellenberg San Diego State Univ.
Appy Sluijs Utrecht University
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Catherine Stickley Norwegian Polar Institute
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Roderik van de Wal
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Università di Urbino



USSP Consortium

SHORT-COURSE ANNOUNCEMENT

ADVANCED COURSE IN JURASSIC – CRETACEOUS – CENOZOIC ORGANIC-WALLED DINOFLAGELLATE CYSTS: MORPHOLOGY, STRATIGRAPHY & PALEOECOLOGY

URBINO, ITALY, JULY 13-17, 2006
REGISTRATION DEADLINE, May 1, 2006

Henk Brinkhuis (Utrecht University, NL)
Martin J. Head (Brock University, Canada)
Daniel Michoux (Total, France)
Martin A. Pearce (Statoil, Norway)
Jörg Pross (Frankfurt University, Germany)
James B. Riding (BGS, UK)
With contributions by Rob A. Fensome and Graham L. Williams (GSC Atlantic, Halifax, Canada)
Local coordinator: Simone Galeotti

Set in the beautiful and historic city of Urbino whose centre is a UNESCO World Heritage site, this is an AASP-sponsored general course on various aspects of Jurassic, Cretaceous and Cenozoic organic-walled dinoflagellate cyst morphology, stratigraphy and (paleo)ecology. It will be held at the University of Urbino Carlo Bo. Detailed information on the morphology, taxonomy and stratigraphic ranges of index species will be provided, in addition to applications in paleoenvironmental analysis. Participants will be provided with a detailed manual and a CD-ROM with

illustrations of key taxa. A mid-course excursion will visit stunning outcrops along the Contessa valley (e.g., Jurassic-Pliocene). There is a maximum limit of 40 participants, so please register early to avoid disappointment.

Information and Registration: Henk Brinkhuis, Laboratory of Palaeobotany & Palynology, Utrecht University, Budapestlaan 4, 3584 CD Utrecht, The Netherlands. Tel. +31-30-2537691, Fax. +31-302535096, email H.Brinkhuis@bio.uu.nl; Alternative contact: Mrs. Marjolein Mullen, LPP secretary, at M.Mullen@bio.uu.nl

Costs: Fees include the course manual, CD-ROM, coffee/tea breaks, on-campus lunch during the course, and excursion, transportation, and field guide, and the social dinner, and are set at (euros/dollars): Undergraduate and graduate students: € 250/ US\$ 325, Academic/Survey Staff: € 500/ US\$ 650, Industry Staff: € 750/ US\$ 975. Lodging is at the participants' expense. Participants may arrange their own off-campus housing at a wide variety of hotels via the web, or contact Simone Galeotti (email: s.galeotti@bib.uniurb.it).

For further information, provisional program, and registration (including methods of payment): see the course website at: http://www.bio.uu.nl/~palaeo/Congressen/Dino2006/Intro_Dino2006.htm



ADVANCED COURSE in Jurassic – Cretaceous – Cenozoic ORGANIC-WALLED DINOFLAGELLATE CYSTS

Morphology, Paleoecology & Stratigraphy

URBINO, ITALY, JULY 13-17, 2006

APPLICATION DEADLINE 1st MAY, 2006



presented by

Henk Brinkhuis (Utrecht University NL)
Martin J. Head (Brock University, Canada)
Daniel Michoux (Total France)
Martin A. Pearce (StatOil Norway)
Jörg Pross (Frankfurt University, Germany)
James B. Riding (BGS UK)

with contributions by Rob Pansome, Graham L. Williams (GSC Atlantic, Halifax, Canada),
and Roel Vermeulen (TNO Utrecht NL)

Local coordinator:
Simona Galeotti
s.galeotti@geo.uniurb.it

Venue address:

Istituto di Geologia
Università di Urbino Carlo Bo
Campus Scientifico - Località Crociocchia
61029 Urbino, Italy

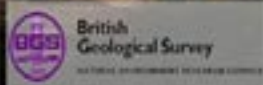
A general course on aspects of Jurassic, Cretaceous and Cenozoic organic-walled dinoflagellate cyst morphology, paleoecology and stratigraphy will be held at the premises of the University of Urbino Carlo Bo, Italy, July 13-17, 2006. Detailed information on the morphology, taxonomy and stratigraphic ranges of index species will be provided, in addition to applications in paleoenvironmental analysis. Participants will be provided with a detailed manual and a CD-ROM with illustrations of key taxa. A mid-course excursion is planned to stunning outcrops e.g. along the Contessa valley (Jurassic-Cenozoic).

Fees include the course manual, CD-ROM, coffee/tea breaks, on-campus lunch during the course, and excursion, transportation, and field guide, and are set at (euros/dollars): (BSc, MSc, PhD) Students: € 250/ US\$ 325, Academic/Survey Staff: € 500/ US\$ 650, Industry: € 750/ US\$ 975

Information and Registration

http://www.bio.uu.nl/~palaeo/Congressen/Dino2006/Intro_Dino2006.htm

Henk Brinkhuis, Laboratory of Palaeobotany & Palynology, Utrecht University, Budapestlaan 4, 3584 CD Utrecht, The Netherlands.
Tel. +31-30-2537691, Fax: +31-302535096, email H.Brinkhuis@bio.uu.nl;
Alternative contact: Mrs. Marjolien Mullen, LPP secretary, at M.Mullen@bio.uu.nl



STUDENT TRAVEL GRANTS TO URBINO

AASP periodically awards travel grants to students to enable them to attend the AASP annual meeting and AASP sponsored short courses. We are pleased to announce that student travel to the "Advanced Course in Jurassic - Cretaceous - Cenozoic Organic-Walled Dinoflagellate Cysts" to take place in Urbino Italy, July 13 - 17, 2006, will be supported by AASP.

Procedures for Travel Grant Application:

Amount of travel award is variable based on need. Awards can be up to 1000 USD but we anticipated giving out 2 grants in the range of 500 USD each. Applicants are required to submit:

- 1) A brief (on the order of one paragraph), *justification* for the request.
- 2) A simple *budget* outlining the requested amount and how the funds are intended to be allocated. It is recommended that the AASP award be used to offset the cost of airfare to the meeting.

Travel Grant Applications are due May 13, 2006 which is two months before the meeting date of July 13.

Travel Grant Applications should be submitted to the chair of the awards committee who will make recommendations after consultation with the committee members. Submission can be made electronically, via email, but in all cases, hardcopy should be sent as well so that we have an accurate record of submission. The current address for submission is,

Paul Strother
Palaeobotany Laboratory
Weston Observatory of Boston College
381 Concord Road,
Weston MA 02493 US
strother@bc.edu

iSPECIES DATABASE

iSpecies is a new search engine designed by systematist Roderic Page of the University of Glasgow. It is a test of E. O. Wilson's idea of a web page for each species. It compiles a profile of an organism by linking to molecular, taxonomic, ecological and other information related to the species. Enter "lion" for example, and iSpecies will return images of lions, its genomic data, a list of abstracts from recent papers, and a classification synopsis from the Integrated Taxonomic Information System.

<http://www.ispecies.org>

XV INTERNATIONAL APLE SYMPOSIUM OF PALYNOLOGY, BENALMADENA, SOUTHERN SPAIN, 18-21 SEPTEMBER 2006

The XV International APLE Symposium of Palynology, which will be held in Benalmadena, southern Spain, 18th – 21st, September 2006.



The Symposium will be held at the Hotel Alay (****), that is one of the more prestigious and known in the locality. Hotel Alay is situated in Alay Avenue, in a wonderful site between the beach and "Puerto Marina", which is considered as the more beautiful sporting yacht in the Mediterranean. Benalmadena is a very important tourist resort situated by the sea in the very centre of the Costa del Sol, just 16 km from Malaga, the capital of the province, and 12 km from the international airport Pablo Ruiz Picasso (AGP).

For full information on the meeting, please, go to: <http://www.15aple.uma.es>

Yours sincerely,
M. Mar Trigo,
Chairwoman of the Organising Committee



CHRONOS INTERNSHIP OPPORTUNITIES SUMMER 2006

The CHRONOS program seeks applications from U.S. graduate and advanced undergraduate students interested in Earth history, paleobiology, stratigraphy and paleoceanography for one-month paid internships in Summer 2006 at Iowa State University. CHRONOS is a team of geoscientists and information technology specialists creating a cyberinfrastructure that delivers open access to a global federation of Earth history databases, tools, and services to geosciences researchers, and a source of Earth history data and visualization tools for educators and students. Interns will have the opportunity to utilize CHRONOS data sets and services in their own research or work with CHRONOS scientists and programmers on programs that are already in progress. For more information see: <http://www.chronos.org>

For further information about internships, contact Cinzia Cervato (cinzia@iastate.edu). Interested applicants should submit a brief cover letter (including the outline of a proposed project that specifically involves the use of data or tools accessible through CHRONOS), resume, and the name and e-mail address of their research advisor to: Timothy J. Bralower (Department of Geosciences, Pennsylvania State University, University Park, PA 16802; bralower@geosc.psu.edu). Application deadline: March 15, 2006. We strongly encourage applications from female and minority students.

PALEOBOT/PALYNOLOGY POSITION OPEN AT UW

By Estella Leopold

Hi- I write to remind you all that a new position for a Paleobotanist/Palynologist is open at the University of Washintgon Seattle, and the deadline for applying is coming up fast.

It is half time curator at the Burke Museum, and half time in a department of the candidate's choosing. Cenozoic workers preferred, as we have a huge leaf collection at the Burke from Tertiary floras -- mostly western USA and Canada.

TSOP 2006 ANNUAL MEETING, BEIJING, CHINA

The Society for Organic Petrology (TSOP), 23rd Annual Meeting, September 15-22, 2006, Beijing, China. Information: Prof. Kuili Jin, Key Laboratory of Coal Resources, China University of Mining and Technology (Beijing), D-11, Xueyuan Road, Beijing, China, 100083, Phone: 86-10-62331854-8001; Fax 86-10-62318122;

E-mail: tsop2006@mail.edu.cn

Further details: <http://www.cumtb.edu.cn/frameset/tsop/index.htm>.

Abstracts due 4/30/06. Oral and poster sessions September 17-19. Conference themes include organic petrology and geochemistry of non-marine source rocks; coal-derived hydrocarbons: exploration and development; coal petrology, coal-measure sedimentology, and hazardous elements in coal related to the environment and human health; organic petrology in coal mine safety and coal utilization; new techniques in organic petrology/geochemistry.

Special technical session on dispersed organic matter. Short course (Sept. 16) on petrology and geochemistry of coal and nonmarine source rocks. Field trips on geology of Western Beijing Jurassic and Permo-Carboniferous Coal Basin (Sept. 15) and Shanxi area: Datong natural and historic sites and the Permo-Carboniferous Antaibao surface coal mine (Sept. 20-22).

TSOP 2006 STUDENT GRANT PROGRAM, THE SPACKMAN AWARD

The Society for Organic Petrology (TSOP) invites applications for graduate student research grants, the Spackman Award. The purpose of the grants is to foster research in organic petrology (which includes coal petrology, kerogen petrology, organic geochemistry and related disciplines) by providing support to graduate students from around the world, who demonstrate the application of organic petrology concepts to research problems.

Size of the Spackman Award: Monetary awards up to a maximum of \$1,000 US will be granted. TSOP will also provide Merit Awards, in the form of certificates redeemable for TSOP publications, to top-ranking applicants not receiving grants. The program awards a maximum of two grants each year. All applicants are invited to enjoy a year's free student membership in TSOP.

Use of the Spackman Award: Grants are to be applied to expenses directly related to the student's thesis work, such as summer fieldwork, laboratory analyses, etc. A portion (not to exceed 25%) of the funds may be used to attend TSOP Annual Meetings. Funds should not be used to purchase capital equipment, to pay salaries, tuition, room, or board during the school year. Funds must be spent within 18 months of receipt of the award.

Application Deadline: TSOP Spackman Award application deadline is **May 1, 2006**. Grants will be awarded in September, 2006. Detailed information and an application form is on the TSOP web site <http://www.tsop.org/grants.htm> or applications may be obtained from S. J. Russell, Shell UK Exploration and Production, 1 Altens Farm Rd., Nigg, Aberdeen AB12 3FY, United Kingdom; fax: +44(0)1224 88 3689; e-mail: suzanne.j.russell@shell.com

4TH EUROPEAN MEETING ON PALAEOLOGY AND STRATIGRAPHY OF LATIN AMERICA

September 12-14-2007, Madrid, Spain

Organized by Instituto Geológico y Minero de España, Enrique Díaz Martínez (e.diaz@igme.es)

Distribution of First Circular: 31st March 2006, Abstract submission: 30th April 2007

The European Meeting on the Palaeontology and Stratigraphy of Latin America aims to provide a forum for palaeontologists and stratigraphers to present and discuss recent progress in the knowledge of the fossil and sedimentary records, evolutionary processes, biostratigraphy, chronology and geological history of Latin America. We particularly encourage contributions dealing with new fossil discoveries, integrated stratigraphy, and correlations between Latin America and other parts of the world.

Successful meetings were previously held in Lyon (France, 1992), Heidelberg (Germany, 1997) and Toulouse (France, 2002). Prominent features of past meetings have been: (a) a wide international attendance, with scientists from more than 20 countries having regularly met; (b) an interdisciplinary scope, which includes presentations on palaeobiogeography, palaeoecology, sedimentology and stratigraphy, and on a wide range of geodynamic settings and sedimentary environments; and (c) a single-session format. These features have proved to be an efficient way to promote cooperation and expertise exchange among different specialists, to the mutual benefit of all.

AGENDA

2006

April 2-6, 7th Simpósio do Cretáceo/Brazil - 1th Simpósio do Terciário do Brasil in Serra Negra, Brazil.

<http://www.rc.unesp.br/igce/simpcret/simpcretaceo.html>

April 10-13, Palaeogeography and Palaeobiogeography: Biodiversity in Space and Time at the University of Cambridge

<http://www.biogeography.org>

June 17-20, Climate and Biota of the Early Paleogene, Bilbao

<http://www.ehu.es/cbep2006/general.html>

July 13-17, Urbino Dinoflagellate Course

http://www.bio.uu.nl/~palaeo/Congressen/Dino2006/Intro_Dino2006.htm

July 19-Aug 2 Urbino Paleoclimatology Course

<http://www.uniorb.it/ussp>

September 7-12, European Paleobotanical Palynological Conference, Prague

<http://www.conference.cz/eppc2006/>

September 15-22, TSOP Annual Meeting, Beijing, China

<http://www.cumtb.edu.cn/frameset/tsop/index.htm>

September 18-21, 15 APLE Symposium, Benalmadena, Spain

<http://www.15aple.uma.es>

October 22-25, AASP 39th Annual Meeting, Philadelphia

<http://www.geosociety.org/meetings/2006/>