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A.A.S.P.
The Palynological Society

The American Association of Stratigraphic Palynologists, Inc. - AASP-The Palynological Society - 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 (biannually), 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)
Dr. Lewis E. Stover (awarded 1988)
Dr. Graham Lee Williams (awarded 1996)
Dr. Hans Gocht (awarded 1996)
Professor Svein B. Manum (awarded 2002)
Professor Barrie Dale (awarded 2004)
Dr. David Wall (awarded 2004)
Dr. Robin Helby (awarded 2005)
Dr. Satish K. Srivastava (awarded 2006)

AASP Board of Directors Award recipient
Dr. Robert T. Clarke (awarded 1994)

Teaching medal recipients
Professor Aureal T. Cross (awarded 1999)
Professor Alfred Traverse (awarded 2001)
Professor Bill Evitt (awarded 2006)

AASP Distinguished Service Award recipients
Dr. Robert T. Clarke (awarded 1978)
Dr. Norman J. Norton (awarded 1978)
Dr. Jack D. Burgess (awarded 1982)
Dr. Richard W. Hedlund (awarded 1982)
Dr. John A. Clendenning (awarded 1987)
Dr. Kenneth M. Piel (awarded 1990)
Dr. Gordon D. Wood (awarded 1993)
Dr. Jan Jansonius (awarded 1995)
Dr. D. Colin McGregor (awarded 1995)
Professor John H. Wrenn (awarded 1998)
Professor Vaughn M. Bryant (awarded 1999)
Professor Donald W. Engelhardt (awarded 2000)
Dr. David T. Pocknall (awarded 2005)
Dr. David K. Goodman (awarded 2005)
Professor Owen K. Davis (awarded 2005)
Dr. Thomas Demchuk (awarded 2009)

AASP Honorary Members
Professor Dr. Alfred Eisenack (elected 1975)
Dr. William S. Hofmeister (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)
Dr. Tamara F. Vozzhennikova (elected 1990)
Professor Aureal T. Cross (elected 1991)
Dr. Robert T. Clarke (awarded 2002)
Professor Vaughn Bryant (awarded 2005)
Professor Alfred Traverse (awarded 2005)
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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 two weeks before the deadline. Deadline for submission for the next issue of the newsletter is May 15. 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.
It’s hard to believe it’s already March and spring in the northern hemisphere as I write my second column as President of AASP-TPS. With spring comes the Midyear Meeting of the AASP Board, which will be held April 13-14 in Lexington, Kentucky. This is the venue of the 45th AASP annual meeting in July 21-25, which will be held jointly with the CIMP (Commission Internationale de la Microflore du Paléozoïque). Jen O’Keefe (Moreland State University) and Cortland Eble (Kentucky Geological Survey) will host the meeting and have planned a symposium on Devonian-Carboniferous palynology in honor of Geoff Clayton and Ken Higgs, field trips and several technical sessions.

My last column highlighted some strategies that could help AASP-TPS reverse its declining membership. This trend has continued so far with many outstanding 2012 membership dues. If you have not yet renewed your membership, please do so and help our association promote its membership. Director-at-Large Rebecca Tedford created a Facebook page for the association in January (https://www.facebook.com/pages/AASP-The-Palynological-Society/214864185270269). There are currently about 40 “likes” and we’d like to spread the word about the page. Still on web-related matters, I am pleased to announce that a newly designed website will be online by April. The website will be much easier to navigate and should please members and visitors alike.

Maintaining a future in Biostratigraphy – that is the title of a document Iain Prince, an AASP-TPS member and Shell Houston employee, emailed to more than 60 paleontologists in academia, petroleum industry and consultancies in December 2011. This document is based on discussions with representatives from operating companies, consulting companies, and academia. It discusses steps that can help reverse the effect of the dwindling numbers of paleontologists in the workforce and significant decline in the numbers of academic institutions training paleontologists. In order for this plan to succeed a buy-in from all constituencies must be in place. It calls for raising awareness at the undergraduate degree level, providing specialized training at the M.S. and Ph.D. degree levels, and ad-hoc sponsorship of students within countries that have restrictive sample export policies. Although the present document (reprinted in its entirety in this newsletter) focuses on the needs of the European contractor market, a second document is planned to address U.S. needs. Many professionals I know share Iain’s sentiments, especially as this decline appears to be global. I applaud him for taking a lead on this initiative to get operating companies to commit financial resources to academia to help train the next generation of biostratigraphers. In his words, “if nothing is done, ironically (as we study fossils) we face near extinction in 5-10 years.”

Paleontology was a required course when I took it as an undergraduate nearly 30 years ago, but is now offered as an elective in the few colleges and universities that teach it today. Contributing to this trend is the fact as paleontology faculty members have retired their positions have either been eliminated or replaced by younger professors in other subdisciplines. Undergraduates in my program at Missouri University of Science and Technology are introduced to palynology in the systematic paleontology course I teach every fall semester. More than 20 of them have worked on palynology projects for undergraduate research credit and a handful continued their graduate studies in palynology. One of these students contacted me when he was a sophomore in high school because he was interested in dinosaurs, and wanted to know if paleontology was part of our curriculum. He is now pursuing a Ph.D. degree in palynology. We can inspire a new generation of paleontologists to consider a career in palynology by telling them what we do.
Palynology Volume 35, Part 2 was published in December 2011. It comprised five technical articles and completed volume 35, running from pages 155 to 300. A full listing of these papers is given below. All members should have received their copies of Volume 35, Part 2 prior to Christmas 2011.

I am currently finalising the content for Palynology Volume 36 part 1 which will be published in June 2012. It will be approximately 150 pages, which is half the annual page budget of 300. Typeset articles which are currently published online and those past the proof stage will be included in this part ordered by the date of formal acceptance. I have already allocated six articles, which will take up 108 pages to this part (see below). At the time of writing, however, the running order of these papers and the remaining 42 pages have not been finalised. The front cover will be a ‘very nice’ shade of light blue, with a SEM photomicrograph of the acritarch genus Stelliferidium sp. from the Tremadocian (Early Ordovician) of the North Saharan Platform, Algeria. The photomicrograph was kindly supplied by Marco Vecoli and Thomas Servais of the University of Lille, France. It seems only right that we use a spore or a chitinozoan for the front cover of Volume 37! Any submissions of suitable photomicrographs will be very welcome.

We are producing a Supplement to Volume 36. This is a special part of Palynology in honour of the late Doug Nichols. The guest editors are David Pocknall and Thomas Demchuk. This part will contain papers on topics closely related to the research interests of Doug. The part will be included in the mailing of Volume 36 part 1 at no extra cost to members or libraries. The authors are contributing to the production costs, with the remainder paid for by the society.

Manuscript submission rates continue to be extremely good and we have a correspondingly healthy number of papers which are currently in various stages of review and production. We should comfortably have enough copy for Palynology Volume 36 part 2 based on what is currently in the system. In my last report, I stated that we are expanding the page budget for the journal from 300 to 350 pages from 2012 in order to cope with the increasing popularity of Palynology. However, this can only start from 2013 because of the forward planning processes undertaken by Taylor and Francis.

As I reported in the last Newsletter, Taylor and Francis are now publishing completed manuscripts online as soon as they are finalised via their iFirst system. As soon as an article is published online, the corresponding author receives an email with a weblink. Furthermore, a link in this email gives information on access to iFirst for all non-corresponding authors. All members and subscribers with library electronic access to the journal can also access iFirst articles. Taylor and Francis are also putting Palynology onto their ‘Accepted Manuscript Online’ (AMO) workflow system. Here the final, accepted, unedited and uncorrected manuscript is posted online in HTML form immediately after receipt but prior to copyediting and typesetting. This extremely rapid
final publication via AMO and iFirst maximises the impact and visibility of your articles. If you have any questions regarding the status of your manuscript, please contact me for clarification.

This year, the AASP Foundation should be publishing two Contributions Series numbers. The two manuscripts are currently in review, but are both on track to be published in 2012. Judi Lentin (judith.lentin@thementors.com) is the editor of this series.

Finally, if you have any questions regarding our online manuscript submission system for Palynology, please address them to Daniel Jones at Taylor and Francis (email: Daniel.Jones@tandf.co.uk), copying me in. If you need to speak to Daniel direct, his office telephone number is +44 (0)20 337 73602.

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February 2012

Papers published in Palynology Volume 35, Part 2 (December 2011)

5. Peyrot, D. Late Cretaceous (Late Cenomanian–Early Turonian) dinoflagellate cysts from the Castilian Platform, northern Spain, p. 267-300.
Papers to be published in *Palynology* Volume 36, Part 1 (June 2012) (note that another 42 pages have yet to be assigned)

1. de las Mercedes Sosa, M., Panseri, A.F. and Salgado, C.R. Pollen morphology of eight species of *Stemodia* (Plantaginaceae) from South America, 9 p.

Papers to be published in *Palynology* Supplement to Volume 36 (June 2012)

*A Special Issue in Honor of Douglas J. Nichols*

5. Oboh-Ikuenobe, F., Spencer, M., Campbell, C. and Haselwander, R. A portrait of Late Maastrichtian and Paleocene palynoflora and paleoenvironment in the northern Mississippi Embayment, southeastern Missouri.
1) AASP Student Scholarship
Applications Due March 31, 2012

AASP Student Scholarships are awarded annually to support studies in palynology. These comprise two scholarships for US$1500 each. 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 can be downloaded from our website at http://www.palynology.org/content/scholar.html

Application materials should be sent by email to the Chair of the AASP Awards Committee:

Martin Farley
mbfarley@sigmaxi.net
Geology, Old Main 213
University of North Carolina at Pembroke

Scholarship applications must be arrive by email no later than March 31.

2) Student Awards For Travel to the Lexington Annual Meeting

AASP will support travel for students presenting at the Lexington Annual Meeting.

Procedure for Travel Grant Application: Amount of travel award is variable based on need. The committee has been allotted $1500 to divide among successful applicants.

The application should include the following:
1) one paragraph justification for the request plus a description of the research to be presented (plus the abstract submitted for the presentation, if available)
2) outline of the requested amount and how the funds would be used;
3) applicant’s email address;
4) all of these to be forwarded by the applicant’s advisor who includes a brief explanation of how attendance at the Annual Meeting will benefit the student.

Then the applicant’s advisor should send these items with a brief explanation of how attendance at the short course will benefit the student’s studies.

Travel Grant Applications are due on April 30, 2012.

Travel Grant Applications should be submitted to the chair of the awards committee who will make recommendations after consultation with the committee. Submission should be made via email to:

Martin B. Farley
mbfarley@sigmaxi.net
Geology, Old Main 213
University of North Carolina at Pembroke
Pembroke, NC 28372

Congratulations to Joanne Mackey, Caroline Jepson, and Kate Griener. These three graduate students will receive an AASP travel award to present their palynological research at the AAPG meetings in Singapore and in Long Beach.
Dr. Thomas D. Demchuk

What else can I tell you that I’ve not mentioned over the past 14 years? I am happy to continue serving the AASP-TPS membership in my role as Secretary-Treasurer. Over the past few years my job has become easier with the website payment system (PayPal) and the ability for me to process credit cards over the internet. Now if I can only find some easy way for the membership spreadsheet to update itself automatically! I am also very proud that I have performed my duties in an honest and ethical manner, and have done my best to keep the AASP-TPS investments safe and sound.

I am currently celebrating my 15 year anniversary with ConocoPhillips, and 20 years in Houston away from the snow and cold of northern Alberta. My current title is Principal Biostratigrapher within the Subsurface Technology Group, and I am responsible for coordinating the biostratigraphic activities for some of ConocoPhillips significant exploration activities including the Norwegian Barents Sea, Alaska North Slope and Beaufort-Mackenzie, and the Alberta Athabasca Oil Sands properties. I also get to dabble in other regions of the world including Southeast Asia and West Africa. My other duties include oversight of bio- and chronostratigraphic research of interest to ConocoPhillips including timescale development, calibration and integration, and the construction of paleoenvironmental/paleoclimate proxies and models.

As most of you know, I am a proud Canadian and Edmontonian (Go Oilers!). I received my Bachelors and Masters degrees from the University of Alberta in Edmonton. My M.Sc. focused on Paleocene palynostratigraphy of the Alberta Plains, and was supervised by Dr. Chaitanya Singh at the Alberta Research Council. My Ph.D. followed at the University of Calgary under the supervision of Dr. Len Hills, and concentrated on palynology and organic petrology of Paleocene coals from Alberta. I had the great pleasure of working closely with Dr. Alex Cameron (Geological Survey of Canada) who was a co-supervisor on my dissertation. In August of 1992 I joined Amoco in Houston and began my industry career. I am blessed to have had the opportunity to learn from many excellent palynologists over these many years.

I have truly enjoyed all my time with AASP-TPS and look forward to another great year of collaborating with my palynological colleagues and meeting everyone in Lexington and/or Tokyo. During my spare time I enjoy a great glass of wine (or two), travel and spending as much time as possible with my four grandchildren in Italy and Argentina: tough duty but someone has to do it! I also continue to appreciate the patience of my wonderful and lovely wife Marta who puts up with my nocturnal AASP-TPS home activities. I am excited about another great year for AASP-TPS.

Dr. Mohamed Zobaa

Mohamed K Zobaa was born in Benha, Egypt. He received his Bachelor’s degree in Geology in 2000 from the Geology Department, Benha University, Egypt. In 2006, he received his Master’s degree in Geology (emphasis: Palynology) from the same department. Mohamed received his PhD degree in Geology and Geophysics (emphasis: Palynology) in 2011 from the Department of Geological Sciences and Engineering, Missouri University of Science and Technology, Rolla, Missouri, USA. Mohamed’s professional appointments include: Research Assistant, Department of Radioactive Sedimentary Deposits, Nuclear Materials Authority of Egypt (2001–2002), Teaching Assistant, Geology Department, Benha University (2002–2006), Senior Teaching Assistant, Geology Department, Benha University (2006–Present), Research Associate, Department of Biological Sciences, East Tennessee State University (2006–2008), and Teaching Assistant, Department of Geological Sciences and Engineering, Missouri University of Science and Technology (2008–2011). He also worked as a Geoscience Intern with ConocoPhillips-USA on the deep-water Gulf of Mexico. Mohamed’s expertise is mainly focused on Applied Palynology (Palynofacies Analysis, Organic Thermal Maturation, Source Rock Evaluation, Palaeoenvironmental Reconstruction, Detecting Past Catastrophic Climatic Events), beside Systematic Palynology and Mesozoic and Cenozoic Palynostratigraphy. Mohamed received several awards throughout his career including the Best Student Poster Award from the AASP in 2009, and the Outstanding Graduate Scholar Award from Missouri University of Science & Technology. Mohamed has excellent computer skills with experience in several paleontologic utilities, remote sensing and GIS programs, major graphic designing software, and web developing.
Dr. James B. Riding

James B. Riding is a palynologist/stratigrapher with the British Geological Survey based in Nottingham, England. He has over 25 years experience in Mesozoic-Cenozoic palynology. In the 1980s he worked mainly on the the Mesozoic palynology of onshore and offshore UK, principally the North Sea. His current interests presently include the palynology of Europe, Australasia, Antarctica, west Africa, the Americas, Russia and the Middle East, together with palynomorph provincialism, forensic palynology, paleoenvironmental palynology, palynomorph preparation techniques and the morphology, systematics and taxonomy of dinoflagellate cysts. Jim studied geology at the University of Leicester, before pursuing palynology by studying the famous MSc course at the University of Sheffield. He left Sheffield for BGS, where he received a PhD from the University of Sheffield in 1986 for a thesis on the Jurassic dinoflagellate cyst floras of northern and eastern England.

The British Antarctic Survey have used Jim as a consultant palynologist and he has visited the Antarctic Peninsula for fieldwork tours during the Austral summers of 1989 and 2006. The most recent field season was spent on Seymour Island. He undertook a secondment to Geoscience Australia in Canberra, Australia in 1999-2000, where he worked on the taxonomy of Australian Jurassic dinoflagellate cysts with Robin Helby and Clinton Foster. The work emanating from this was published in 2001 as Memoir 24 of the Association of Australasian Palaeontologists. Jim was awarded a DSc by the University of Leicester in 2003. He served as a Director-at-Large of AASP between 1999 and 2001, was President in 2003, and became Managing Editor in 2004.

Dr. Sophie Warny

Sophie Warny is an Assistant Professor of Palynology with CENEX in the department of Geology and Geophysics & at the Museum of Natural Science at Louisiana State University in Baton Rouge. She moved to the U.S. from her native Belgium, in 1997.

She has a long history with AASP as she won the AASP Student Award in 1996. She received her Ph.D. from the Université Catholique de Louvain, in Belgium working with Dr. Jean-Pierre Suc. Her doctoral dissertation focused on the Messinian Salinity Crisis.

Since graduating, she has been working on Antarctic sediments acquired by the RV/IB N. B. Palmer, and more recently, by the ANDRILL SMS and the SHALDRIL programs. She just received a five-year CAREER award from NSF to support her palynological research in Antarctica. In addition to her research, she teaches Historical Geology, Paleobotany, and Micropaleontology. She also manages the education and outreach programs for the Museum. She has a vibrant research group that is composed of three master students and three PhD students. Since being hired on tenure-track at LSU, she graduated four students, all are working in the oil industry. One is a biostratigrapher at BP, the other three were recently hired by DEVON, EOG, and BP respectively. She recently remodeled the CENEX facility in Baton Rouge, Louisiana, where she serves as the interim director until a new chair is hired.

She has been a member of AASP since approximately 1993 and was elected to serve on the board as Director-at-Large in 2006-2007. She has served as the AASP Newsletter editor for the past seven years, since 2006 (AASP NL 39.4).

She has two daughters, Zoe who is 12 and Manon who is 14. She would be glad to keep serving AASP as newsletter editor if elected.
My first introduction to palynology was in 1960 when I met the late Dr. Ronald O. Kapp, PhD, who later in 1969 wrote the book *How to Know Pollen and Spores* (now updated as *Ronald O. Kapp’s Pollen and Spores*, 2nd edition). It is really all Kapp’s fault that I still think palynology is fun. At the time, Dr. Kapp was doing pollen analysis of a core from a glacial bog located at the edge of my family’s farm in central Michigan. I was excited to watch the progress of Dr. Kapp’s research and from this early experience while still in high school gained an appreciation for the value of palynology as a tool to make paleoenvironmental reconstructions. And, thus began my lifelong interest and obsession with palynology.

I have been a member of AASP since 1973 (nearly 40 years?! How time flies when you’re having fun!), and my enthusiastic support of AASP has never waned. I attended my first AASP meeting that year in Anaheim, California (the 6th Annual Meeting) and have attended nearly half the annual meetings since, plus several IPCs. I have previously served the organization as AASP representative to the organizing committee for North American Paleontological Convention IV in 1986 and also served as a judge for Best Student Paper/Poster awards at numerous meetings. I organized a one-day symposium entitled “Palynology of Tertiary Floras of Western North America” to honor pioneering paleobotanist and palynologist Dr. Harry D. MacGinitie at AASP’s 16th annual meeting in San Francisco in 1983 and a symposium to honor Dr. Kapp at the 2009 AASP annual meeting (the 42nd) in Tennessee. I currently serve on the AASP-TPS Board as a Director-at-Large and also co-chair the Organizing Committee for the joint AASP-TPS/Dino 10/NAMS/CAP meeting planned for San Francisco in 2013 (AASP’s 46th annual meeting).

I am an alumnus of Central Michigan University, Andrews University, and Michigan State University and received a PhD from Loma Linda University for a dissertation on palynology of the Eocene “Fossil Forest” of Yellowstone National Park. After completing my PhD, I returned to Michigan State University to do post-doctoral research with Dr. Aureal Cross in paleopalynology, petroleum source rock analysis, and coal petrography and take additional coursework in geology.

I am currently the CEO and Chief Paleontologist of a small but successful consulting company I co-founded with my former graduate students 30 years ago in 1982. In addition to administration, my primary responsibilities are age and paleoenvironmental reconstructions of palynological assemblages. Prior to devoting full time to consulting, I taught for seven years at Walla Walla University, for ten years and chaired the Department of Geological Sciences at Loma Linda University, and for nine years as an adjunct professor of both geology and biology at American River College in Sacramento, California. In addition to being a palynologist, I consider myself a paleobiologist, paleoecologist, and geologist and am a licensed Professional Geologist (PG) in both California and Oregon.

My palynological interests and experience are broad, crossing the divide between palaeopalynology (Mississippian to Quaternary, but with primary emphasis on the Paleogene) and actuopalynology (e.g., taphonomy of terrestrial pollen and spores in near-shore marine sediments and pollen analysis of stomach contents and feces to determine foraging habits of nectar-feeding birds). I have published several peer-reviewed scientific papers and lots of abstracts, and have authored or co-authored a host of unpublished reports, primarily to US government agencies.

My current research includes Jurassic palynomorphs of the Solnhofen Limestone (as lead researcher of an international team) and palynostratigraphy of Paleocene sediments of the Pacific Northwest. One of these days, I am going to slow down and start publishing the results of my research, but not yet, not now; I am still having too much fun doing the research!

I am highly honored to be nominated as one of the candidates for President Elect. After more than 39 years of benefitting from AASP-TPS, I feel that it is about time to give something back to the Society that has given so much to me. And, I finally have the time and company financial support to do so. I have been inspired by the dedication to this organization shown by officers who have served AASP in the past and would enjoy the opportunity to emulate their dedication. Like them, I will work tirelessly to ensure the continuing success of AASP -- *The* Palynological Society.
Dr. STEPHEN LOUWYE
Born and raised in Flanders (Belgium), I started studying Geology at Ghent University and received my BSc degree in 1982 and a Masters Degree in 1984. My first steps into the field of palynology were under the guidance of Jacques Verniers who supervised the research for my MSc degree. Jacques took me to the deep time of the Silurian world to study Chitinozoans and basin architecture. After finishing my Masters degree, I climbed up the stratigraphic ladder for my PhD research where Upper Cretaceous dinoflagellates and acritarchs became my new research subjects. After years of analyzing (very...) abundant and diverse Cretaceous dinocyst assemblages under the guidance of Jan De Coninck, I was awarded a PhD from Ghent University in 1989.

My postdoctoral work between 1990 and 2000 focussed on several topics: Quaternary sea level variations as recorded in the southern North Sea Basin, mapping of late Quaternary deposits, Cenozoic dinoflagellate cyst taxonomy, and Neogene dinoflagellate cyst biostratigraphy and paleoecology of the North Sea Basin and the North Atlantic realm. The emphasis I laid on these varied research areas resulted from my belief in integrated geological and paleobiological studies based on a multidisciplinary approach, in which palynology plays a key role.

I was appointed professor at Ghent University in 2001 and I’m now responsible for the micropaleontology/palynology and paleobotany courses at undergraduate and graduate levels. Palynology and paleobotany are fascinating and captivating research subjects and I always try to pass on my enthusiasm for the discipline to my students.

My current interests are integrated Neogene and Quaternary studies relying on dinocyst stratigraphy, sedimentology and biogeochemistry. Currently at the Paleontology Research Unit, three PhD students are working under my supervision on topics as diverse as marine and terrestrial palynomorphs from the Neogene Tjørnøs beds in Iceland, late Quaternary dinocysts from off southern Chile, and Miocene dinocysts and pollen from the Atlantic realm. At national level, palynology is doing well in Belgium with some ten ongoing PhD research projects, and several master projects (keep in mind that Belgium is a very, very small country...).

As a member of the Geologica Belgica board (the Belgian Geological Society) I organised the 3rd international Geologica Belgica symposium in 2009 and I’m serving as editor of Miscellanea Geologica. As a member of several palaeontological and palynological societies, I served on the board of AASP as Director-at-Large during 2009-2010, which was both an interesting and stimulating experience.

Dr. PI SUHR WILLUMSEN
Pi specialized in global correlation of terrestrial and marine palynomorphs, palynofacies, integrated biostratigraphy, dinoflagellate cyst paleoecology and taxonomy. Lately, she studied the Holocene palynology in the brackish-water Baltic Sea cores. She gained her M.Sc. in Geology (1997) from Aarhus University, studying palynology of the marine Eocene Mo-clay Formation supervised by Prof. K. Rausgaard-Pedersen. Her Ph.D. Thesis carried out at Victoria University of Wellington (1998-2003) dealt with marine palynology and palynofacies across the New Zealand Cretaceous-Paleogene boundary. After some consultant work from her home in Denmark, Copenhagen, she embarked on a Postdoctoral stay at Oslo University, Norway (2004-2007) correlating terrestrial and marine palynomorphs in Oligocene to Miocene strata, Angolan Basin, West Africa. This project was run by Prof. B. Dale and fully funded by Statoil (now StatoilHydro). Since 2009 she worked as a researcher and teacher at Lund University, Sweden.
Dr. Jeffery G. Richardson
I received undergraduate training at Denison University, (B.A. 1993), my MS from The Ohio State University (1998), and my PhD from The Ohio State University in 2003 in geology with a specialty in Paleozoic palynology and sequence stratigraphy. I joined the faculty at Columbus State Community College in 2003 and I have been there ever since, receiving tenure and promotion in the last 10 years. I am currently the head of the Geosciences Group and the Shale Gas Task Force at Columbus State with curriculum additions in mind. Along with teaching a wide-range of students, I also continue to conduct active research. Currently I am working on Cambrian palynomorphs from the Mt. Simon Sandstone from Ohio’s subsurface and preparing a manuscript on spores from the Mississippian-aged Black Hand Sandstone. I have been a member of AASP for 10 years, and received the L.R.Wilson Award at the San Antonio Meeting in 2001. I also have active memberships to the Geological Society of America, the Ohio Geological Society, Sigma Xi, and the Canadian Association of Palynologists. I live in the Columbus neighborhood of Clintonville with my wife Nicole, our three year old son Ben, and our two wonderful dogs. I hope you keep me in mind while voting for a director-at-large position so I can serve AASP.

Dr. Niall Paterson
Niall is a palynologist with ExxonMobil Exploration Company in Houston, Texas. He began his geological career at the University of Glasgow in his native Scotland in 2001. There, he was awarded The Paleontological Association (PALASS) student prize in 2004, followed by the Ethel Currie Award for Paleontology and Stratigraphy in 2005. After graduating with a 1st Class Honors Degree in Earth Science, Niall relocated to Dublin, Ireland to pursue a PhD. It was at Trinity College that Niall was introduced to palynology. There, working under the supervision of Prof. Geoff Clayton, Niall conducted a palynological appraisal of Upper Devonian and Mississippian strata from several outcrop localities in Ohio, Kentucky, West Virginia and Pennsylvania.
In 2006, together with co-authors Sarah Heal and Geoff Clayton, Niall presented data from his PhD research at the 39th meeting of the AASP in Philadelphia, Pennsylvania. His presentation entitled, ‘Palynological correlation of Mississippian Stage Boundaries’ was the joint winner of L.R. Wilson Award for Best Student Paper.
Niall completed his PhD studies in the spring of 2009. Since October 2009, Niall has been employed as a palynologist with ExxonMobil Exploration Company. In this role he has continued to expand his palynological expertise, gaining a broad exposure to Mesozoic and Cenozoic palynology, in addition to experience gained in integrating palynology with other micropaleontological disciplines.
Obituary

D. G. Roy McNeilly

It is with sadness that we note the passing of D. G. Roy McNeilly, Sr, on January 12, 2012, in Houston, Texas, at the age of 85. Roy was born in Grenada in 1926 and joined Shell in Trinidad in 1953 working as a technical assistant. During the early stages of his career with Shell he developed an interest in palynology and had the opportunity to work with J.H. Germeraad, Charles Hopping and Jan Muller as well as many other palynologists based in Trinidad in the 1950s and 1960s. In 1968 Roy was transferred to Houston to continue his work with Shell and he remained in Houston until his death.

His work in Trinidad was recognized by Germeraad, Hopping and Muller in their seminal paper published in the Review of Paleobotany and Palynology in 1968. They named the species *Echitricolporites mcneillyi* in his honor and “in recognition of his contribution to Trinidadian palynology”. *E. mcneillyi* is only found in the Caribbean area, where it occurs from the base of the Pliocene aged *E. mcneillyi* Zone upwards. Its modern affinities are believed to be with the Asteraceae, particularly *Ambrosia*.

*Echitricolporites mcneillyi* is familiar to many generations of palynologists who have worked in Trinidad and Northern South America. Roy made a considerable contribution to our science of palynology and will be sorely missed by family and friends.

Peter H. Griggs and David Pocknall

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**Dr. Guy Harrington**

I started my palynological career with the Holocene of Hungary at the University of Cambridge before slipping back into deep-time to study Paleogene pollen and spores from North America for my PhD at the University of Sheffield with David Jolley. I have been a member of AASP since 1995 and have worked on industrial and academic research positions at The University of Sheffield, the University College Cork with Ken Higgs, and at the National Museum of Natural History, Smithsonian Institution where I am still an active research associate. Since 2004 I have worked at the University of Birmingham, UK as a Lecturer in Paleobiology and teach across a broad range of geology and paleontology including specialized courses in dinocysts and sporomorphs in 2012. My research is active in North America in the Paleocene-Eocene and has extended in recent years to include the Arctic and Europe. In 2007 I was awarded the Hodson Award from the Palaeontological Association for my early-career work in paleontology. Currently two postdoctoral researchers work with me on projects funded by NSF and the European Union. I’m undertaking the task of synonymizing taxonomy of the North American and European sporomorph literature as part of one of these projects – a quest that is prone to bouts of displacement activity unsurprising to any members familiar with Paleogene pollen and spores. On the plus side, I am now highly proficient at using eBay to buy things I don’t actually need. These last two sentences are not unrelated. Aside from taxonomic revision, I am a keen musician and play the viola in a number of orchestras and also undertake string quartet work. My weekends are usually taken over with rehearsals.

I have served on the board of the Paleontological Association and organised the Annual Meeting in 2009 that attracted over 275 participants. I have served previously the Palaeontographical Society as a board member. I am near-ending my term as the Organiser for the Linnean Society Palynology Specialist Group (LSPSG) that primarily represents the interest of pollen morphologists and developmental biologists at the Linnean Society of London. I would bring these experiences serving professional societies to AASP if elected onto the board as a Director-at-Large.
Recently we decided, as a board, that it would be a good idea to start a Facebook page for AASP- The Palynological Society. There are many benefits to having a page for our organization and it will be a fantastic way to reach not only the palynological community, but a broader audience. I am often surprised at how often I frequent Facebook. It has provided me with an additional venue and method of keeping up with friends, colleagues, and family members beyond more traditional methods such as phone calls, e-mail, and letters. And as much as I am slightly embarrassed to admit it, I visit Facebook on a daily basis (as I am sure many people do).

In short, about a month ago, I started putting together a page with Dr. Sophie Warny. I have a vision of what I want our page to accomplish. The main goal is to engage our target audience- the palynologists of AASP. This can be done through 1) periodic up-dates concerning past and present meetings, 2) sharing of recent publications and presentations, and 3) palynomorph photo exchanges for taxonomic identification. Additionally, we will be able to increase our online visibility, engage the scientific community globally, and further educate and promote interest in our science to a more diverse audience. Sophie and I currently have administrative access to the page, meaning we will continue to add new posts and updates periodically, while monitoring the overall content of the site. The overall success and utility of the page, however, will ultimately belong to the users of the site. Currently we have ~40 ‘likes’ for the page, 8 people ‘talking’ about us, and have reached 244 ‘users’. This is just the beginning. If you have any pictures, stories, new article links, comments, and/or discussion topics of interest please feel free to send me a message or e-mail me content and we can really capitalize on the possibilities of this page.

Current "likes" are from 10 countries, 20 cities, and representing 10 languages!

Help us spread the word and "like us" on Facebook!
Some of the AASP student members are interested in putting together an AASP student newsletter to be published 2-4 times a year as an attachment to the standard newsletter. It would include items like current student research, areas of specialization, and news about students attending and presenting at upcoming conferences. We are also interested in including palynomorph photographs from students, information about available scholarships, fellowships, and post-doc openings, contact information for current palynology grad students wishing to network with similar students and any other articles relevant to palynology grad students. We think that this will be a great way to network with other palynology students, learn about available palynology research opportunities, find out about other palynology graduate students presenting at upcoming conferences, as well as the types of palynological studies being conducted around the world! Please email Kate Griener at kgrien4@lsu.edu or join the AASP Facebook page if you’re interested in contributing to and/or subscribing to an AASP student newsletter or if you have any suggestions about what could be included in the newsletter.
Introduction
Over the past 30 years the numbers of biostratigraphers (palaeontologists) employed by oil companies has dramatically reduced. When this decline began, many of those displaced began consulting and provided a pool of skilled labour. Many of these individuals are now approaching (or have passed) retirement age. At the same time, the numbers of academic institutes offering training has significantly declined. In the United Kingdom for example, no university currently has an active M.Sc. course (the courses at University of Sheffield, Aberystwyth, Southampton and University College London have all closed). As such, the biostratigraphical skillpool, which in general has a large number of UK graduates either in operating companies or consultancies, has a severe challenge; where will the next generation of biostratigraphers come from to populate both the consultancies and the operating companies? If nothing is done, we will cease to be a viable skillpool within the next 5-10 years. This document proposes an action plan to re-invigorate the European side of the business. Similar needs to be done on the US side as the situation is more advanced, with the contractor demographics in general, being approximately 10 years more advanced than in the UK. At this time, this document intends to gather ideas, suggestions and interest, and to suggest a sustainable plan which hopefully can be used to leverage our respective managements into providing a continued source of funding.

Background
As a result of the perceived problem, it was decided that it was necessary to:-
1. Engage other operating companies, consulting companies and academic institutes to understand:-
   a. What model they operate under with respect to outsourcing and recruiting
   b. Perception of problem
   c. Possible solutions
2. Formulate a common solution that is:-
   a. Achievable
   b. Sustainable
   c. Acceptable to all institutes
3. Formulate a budget suggestion on an annual basis for sustainability

Please note, the institutions contacted to date are those which either attended a meeting held in Houston (24th August; operating companies to kick off initiative) or attended the AASP conference held at Southampton (5-7th September; various operating companies, consultants and University representatives) OR were visited by author at that time. The decision regarding which universities will be included will have to take place after more research although the ones so far included, have either a 4 year B.Sc. program (includes a 4th year project) or have a history/interest within biostratigraphy.

Operating companies
Shell, BP, ConocoPhillips, Statoil, Hess, Chevron, BG

Universities
Louisiana State University, University of Birmingham, University of Oslo, University of Utrecht, University of Plymouth, University of Southampton, University of Aberdeen, University of Dublin (Trinity College)

Consultancies
RPS, Fugro Robertson, Petrostrat, Ichron, IRF, Network Stratigraphic

Results
Operating Companies
All companies consulted, in general, outsourced between 70-100% of all work. In short, the operating companies only have a fraction of the resources in-house to complete the current workload. In many companies the average age of the in-house biostratigraphers was 55+ with little or no succession plan. Recruitment in general was sporadic and usually was focussed on replacing outgoing staff. This was usually completed by recruiting
freshly graduated PhD students or taking c. 5 year+ biostratigraphers from consulting companies.

Consulting Companies
In most cases, consultants were finding it increasingly difficult to recruit and retain younger individuals. In one company (e.g. In one consultancy in the UK, 5 staff out of c. 15-20 left over a 5 year period (2001-2006) to join Shell/Statoil). Whilst no specific demographics were completed, in most companies the most experienced staff (and the core both in numbers and expertise) are at least in the late 40’s -60’s, skewed towards the upper end. Hence it can be seen that in 5-10 years, with retirement and transfers to the Operating companies, the consultancies will have extreme difficulty maintaining numbers. As the operating companies rely on the consultancies to complete between 70-100% of the work, it is easy to see the problem. Some consultancies were actively sponsoring M.Sc./Ph.D but all were keen to provide training.

Academia
Over the last 20 years there has been a decline in the number of universities offering biostratigraphical training. For example, in the UK, 20 years ago there were 5+ MSc courses and countless universities training PhD students. Today, not one institution in the UK offers an MSc, and PhD students are restricted to isolated universities (University of Southampton, Kingston, Sheffield, Aberdeen). Those few individuals that complete these studies are usually immediately employed either by consultants or by operating companies. Elsewhere in Europe, the situation is equally bad. The University of Utrecht is currently undergoing a review; the outcome of which and how it affects the LPP foundation is far from clear.

Initial Conclusions
If nothing is done, ironically (as we study fossils) we face near extinction in 5-10 years
Based on contacts with the above institutions we are all clear of the problems we face, the urgency required if we are to have an impact and in general what needs to be done.

The Plan
Previously there has been little or no co-ordinated plan. Many companies have individually sponsored PhD and/or projects but these usually address a specific companies needs and do not address the overall problem.

Plan requirements
For the plan to succeed the following must be in place:-
• The plan needs to have sustainability both financially and institutionally (it is no use working towards setting a new MSc course if the only lecturer is close to retirement and will not be replaced).
• The plan needs to have adequate financial resources, both now and in the future.
• To be organised (both financially and logistically) by an external body that can liaise between operating companies/consultancies and academia
• Sufficient numbers of students must be attracted.
  o These students should have differing levels of education (if we just sponsor PhD students, these usually either join operating companies or remain in academia; as such they do not address the needs of the contractors but have options to pursue further studies if they have the interest
• Ideally the plan needs to concentrate on institutions that already have staff that meet requirements. It should not be dependent upon hiring lecturers in different disciplines; better to use consulting companies. Basic requirements are
  o Background in biostratigraphy
  o Good contacts with other academic and biostratigraphical institutions
  o Longevity

Plan
The plan is aimed at 4 levels; from raising awareness at the basic level through to providing specialised training at the highest level.

1. Raise awareness – Sponsor/Provide 4th year projects at various universities
Within the UK, a number of academic institutions (c. 4-5 institutions) offer 4 year undergraduate courses. The first 3 years gain the student a B.Sc. Within the 4th year approximately 3/8th is spent completing a project, after which student is awarded a M. Geol. One of the largest challenges the universities face is finding suitable and
challenging projects; we can do this.

- Operating companies provide a number of small scale 4th year projects along with a small budget (between UKP 500 – UKP 1k per project)
  - Finances used for processing/analysis of samples
  - Travel/accommodation to consultant training course
- Consultancies provide teaching and act as external advisors on projects
- Possible internships with consultancies (at Southampton this happens between 3rd and 4th year)

If at end of projects, some of the students decide they want to further investigate biostratigraphy via an MSc/Ph.D then we have achieved our goal with this item. An alternative is that a student may join a consultancy for further training at this time. Please note the following universities have 4 year courses at this time with suitable staff (awareness of biostratigraphy)

- Plymouth, Birmingham, Southampton, Leicester, Aberdeen (all can you help here?)

2. Start specialised training via a M.Sc.

It was mentioned earlier that within the UK the last M.Sc course ceased in 2008. However, the University of Birmingham is currently in the process of setting up an M.Sc course due to start October 2012. This is to be run in conjunction with various consultancies (Network Stratigraphic). We strongly urge the University of Birmingham to include other consultancies and operating companies so as to get as wide an input during the course as possible. In addition, the University of Bergen, Norway, is also in the process of setting up an M.Sc. course.

In order for these to be successful these courses need:

- Student numbers (bulletpoint 1 should address this)
- Funding – from a variety of operating companies
- Projects/project funding

In order to keep costs down, the universities concerned are strongly advised to use as much help as possible from the various consultancies. All the consultancies involved were eager to help out with teaching and supervising; this eliminates the university having to employ additional specialist staff.

Based on our needs alone (Shell), we probably employ on average one person per year. As such, we should sponsor at least 1 M.Sc per year preferably with a project that is beneficial to business. Costs for this are around UKP 10K per year.

3. Sponsor further specialised training (Ph.D)

Currently this is the easiest option to make happen but is also the most expensive. There are some universities that still have experienced staff. Whilst full sponsorship is expensive (in the order of UKP 30K/year), the project can be of direct benefit to the sponsoring companies which also have the chance to employ student afterwards. Sponsorship of these projects can be shared between companies. Alternatively, it is also possible to sponsor “Case studentships” which are sponsored by the university but only if an industrial partner can be found. Industrial contribution can be from as little as 1k UKP but more is better (we are currently sponsoring a Ph.D at the Univ of Sheffield for UKP 5K per year). Case studentships, however, only get awarded if a student gets a First and want to do the said project. Depending upon the aims of this initiative, step 3 may not be necessary. If enough good M.Sc. students are produced that become employed in consultancies, a few will always be willing to join operating companies having gained a number of years experience.

4. Ad-hoc sponsorship of students within countries that have restrictive export policies

We all have dealings with countries such as Kazakhstan, Nigeria & Brazil that have restricted sample export policies. It is suggested that we co-operate to train in-country consultants. Further work is required to identify where co-operation would prove useful

Level of funding required

- Funding to 4th year students at UKP UKP500 -1K per project – 5-10 projects UKP 5K
- M.Sc sponsorship at least 1 student at UKP 10K, maybe 2 UKP 20K
- PhD sponsorship, if deemed necessary UKP 10K per year (part sponsor one PhD or fully sponsor a "case studentship"
- Total UKP 35K per year c $55K
- The above is the minimum needed from each operating company to ensure success
Implementation

Financial

Rather than each company choosing its university of choice and sponsorship being completed ad hoc, it is strongly recommended to use the TMS Educational Trust Fund; a registered charity in the UK. As per attached Powerpoint from TMS, they would administer the granting of funds, allocation of projects, liaison with operating companies etc. A letter from TMS will shortly be sent to all operating companies requesting funding.

Initial implementation: 4th year projects

Whilst contact has been made with a number of universities there are some who have been missed out. Once we have secured finances and agreed the way forward, we need to engage with these (University of Liverpool, Leicester, Leeds amongst others)

Project Proposal: 4th year & M.Sc.

It is suggested that every year, that the sponsoring companies meet (Videocon) to suggest projects tailored to our expected needs (paly, nanno or forams, geographical location of project). 4th year projects need to be pretty simple, M.Sc. projects will need to be more in depth. These projects are then submitted to TMS who allocate to various institutions based on interests/wishes/quality of student at each institution.

Risks

• Lack of students – most institutions are currently increasing their numbers of geology students. With increasingly hard financial times, projects/M.Sc. that have a good employment opportunity attract students.
• Lack of sponsorship from other Operating Companies. Based on conversations, all the companies saw the imminent danger.

Other

This document addresses the needs of the European contractor market. Similar will be needed to address the US side. The latter is in even more need but in general is restricted to GoM. Another document will follow.

Conclusion

• If we do nothing, biostratigraphy will be virtually extinct within 5-10 years
• Proposed funding will alleviate problems
• Level of funding per year per company ($55K) is very small when compared with retention bonuses

Disclaimer:
The views aired in this document represent those of the author having spoken with the various companies/institutions named in this document. These views do not represent each of the individual companies/institutions views.

The past in picture

by David Jarzen

Sedley Barss and Geoff Playford on the bus at the AASP 23rd Annual Meeting, Banff, Alberta, Canada, en route to Drumheller to visit the Tyrell Museum of Paleontology.
Native Americans, living in nature and so in tune with the Earth, surely noticed giant bones, petrified logs, and sea shells weathering from the ground. What did they think about them? How did they interpret these natural objects now turned to stone? In her book, *Fossil Legends of the First Americans*, Adrienne Mayor documents the great wealth of Native American ideas and views about the fossil record. This book is about the paleontological knowledge of the First Americans – largely an untold story, nearly lost, that required extensive detective work to rediscover it. The primary goal of Mayor’s research was to uncover and record the oral legends of Native Americans, largely gleaned from extensive interviews with tribal elders and historians.

I first started reading this book and writing this review in January 2008 – four years ago. Contrary to what one commonly reads in book reviews, it should be quite obvious that this is a book that you can put down after you’ve started reading it. My primary interests in the book resulted from my own Native American heritage, my experience as a child growing up in Michigan collecting fossil crinoid columnals known as “Indian beads”, my discovery of arrow points made from petrified wood, and my experience working at two Native American burial sites where human remains were placed in graves dug in sediments already containing Pleistocene vertebrate fossils. The latter suggested that Native Americans clearly recognized fossils as the remains of past life and placed their relatives and friends where they could join that previous life.

My first conclusion when I picked up Mayor’s book was that the title of her earlier book – *The First Fossil Hunters: Paleontology in Greek and Roman Times* – was obviously a mistake. The first fossil hunters were native peoples living thousands of years before either the Greeks or Romans had an opportunity to hunt for fossils.

In the Introduction, Mayor contrasts the statements of Canadian paleontologist Edward Kindle, with statements made by the American paleontologist George Gaylord Simpson. In 1935, Kindle concluded: “We are indebted to the Indian for finding and collecting the first fossil bones that received scientific study.” In sharp contrast, eight years later in 1943 Simpson concluded the opposite: “Indians certainly found and occasionally collected fossil bones… but these discoveries are no real part of paleontological history.” One of Mayor’s goals in writing this book was clearly to discredit and prove wrong the statements made by G. G. Simpson regarding Native Americans and fossils. Simpson is mentioned on 40 separate pages of text, but never in a positive light.

In his book on the history of paleontology, Simpson declared that Native Americans had
made no real contributions to paleontology because they only picked up fossils out of "idle curiosity," without ever recognizing their organic nature. Simpson stated: "The abundant occurrence of fossil bones in North America was not widely known among Indians and not a common subject of remark by them." Simpson even went so far as to say that for men who passed most of their lives out of doors, Native American's interpretations of fossils were "ludicrously scanty."

Mayor repeatedly takes issue with Simpson's statements and goes out of her way to prove his statements are not just false, but "ludicrously" false. She concludes that the first American fossils ever studied by scientists were indeed collected by Indians, just like Kindle said, and completely contrary to Simpson's "ahistorical" and "fabricated" version of history.

Fossil Legends is divided into five chapters, plus an Introduction and Conclusion. The text is well illustrated with an appropriate sprinkling of maps, drawings, and photographs. The chapters are organized geographically, that is, divided roughly into Native American cultural areas, moving clockwise from northeastern North America down the Atlantic Coast to Mexico and South America, and then back north to the southwestern United States, through the midwestern prairies, and then further north to the high plains of Canada. The tribes included run from A to Z -- Abenaki to Zuni.

After an excellent Introduction, Chapter 1 tells of the familiarity of the Iroquois, Shawnee, and Delaware with fossil mastodons and giant bears. Chapter 2 presents evidence that the Aztecs and Incas had knowledge of fossils long before the arrival of Europeans. Chapter 3 looks at how dinosaur remains figured in Apache, Hopi, Navajo, Ute, and Zuni folklore. Chapter 4 presents fossil lore from the prairie tribes, including Pawnee, Cheyenne, Comanche, and Osage. In Chapter 5, we see how fossils were explained by the Sioux, Crow, Kiowa, Blackfeet, and Ojibwa, the tribe of my ancestors. The Conclusion provides a synthesis of Native American usage and meaning of fossils, and the last 100+ pages include appendices, extensive notes, references, and a useful index.

Alas, but understandably, there is no mention of fossil pollen or spores anywhere in the book. But, the author does recognize and offers sincere thanks to both the late Bill Sarjeant, with whom she had previously published, and the late Paul Martin, both former AASP members.

Fossil Legends of the First Americans would be a good read for anyone interested in the history of paleontology or in Native American folklore. And, keep in mind the added benefit that you can put this book down at any time and finish it, even years later, as I did! Books on history and prehistory are often like that.
Palynologists preparing microscope slides of fossil pollen in silicone oil often use dots of nail lacquer (also called nail polish, nail varnish or nail enamel) to hold coverslips in position, applying a small drop at each corner (Bennett and Willis 2001) or on two diagonally opposite corners (MacDonald 2001). Some researchers also use nail lacquer on reference pollen slides, in this case applying the lacquer around the full perimeter of the coverslip. The recent report by Cushing (2011) of a high incidence of pollen wall deterioration, or “pollen pox,” on reference slides sealed with nail lacquer in the University of Minnesota collection cautions against this practice. However, we continue to find nail lacquer convenient for tacking coverslip corners on fossil pollen slides. If chemicals in nail lacquer are responsible for pollen pox, we expect effects to be less on fossil pollen slides in which coverslips are tacked only at corners, compared to reference slides in which the sealant is applied around the full perimeter of the coverslip.

A visit to the sprawling nail lacquer section of a big box retailer presents the palynologist with a confusing array of choices: for example; base coat or top coat or three-in-one lacquer? Quick drying or regular? Nail hardener or nail polish? Clear or color? Here we outline some basic considerations that will assist palynologists in choosing nail lacquer. We also explain some simple storage techniques that may improve the shelf life of nail lacquer and prevent spoilage that can lead to a change in lacquer consistency that will affect slide quality. We draw from our experience as palynologists, and the pre-college experience of MAC at a cosmetic counter in London, England.

We begin with the nail lacquer already in your lab. When is the last time you checked the expiration date? The chief (and potentially most
serious) mistake that we have observed in pollen laboratories is that expired nail lacquer is used. It may be somewhat surprising that nail lacquer can be past its prime (often referred to as “expired”); technically, the “expired” product is still safe to use, but its consistency changes. A nail lacquer that has “expired” will show a change in color (clear lacquers become more yellow and other pigments may fade) and the film forming agent, pigment, and plasticizer (typically nitrocellulose mixed with either camphor, dibutyl phthalate, or toluene-sulfone-amideformaldehyde; Schlossman and Wimmer 1992) will separate from the thixotropic gel (typically stearalium hectorite) in which they were suspended. This results in a thick, stringy to globular liquid below a less dense, clear to yellow-colored liquid. This phenomenon, also known as syneresis, occurs within 12–36 months after opening a bottle. In the European Union, cosmetics are labeled with a symbol (Figure 1) indicating the recommended amount of time after opening before nail lacquer should be discarded. In the United States and other countries it is at the discretion of the producer to indicate when a change in consistency can be expected. Symbol or no symbol, you’ll likely see the results of syneresis in your lab if you keep your nail lacquer longer than 3 years.

Sometimes a bottle of older nail lacquer can be made usable by vigorously shaking the bottle, which mixes the chemicals back together. We have heard anecdotal accounts that storing nail lacquer in a refrigerator might delay chemical separation, but we have not tested this nor found any information in the academic literature or manufacturer guidelines to substantiate the claim. We advise discarding nail lacquer that appears to have separated and can’t be remixed by shaking. Using an old lacquer that is separated results in poor slide quality. While the more viscous nitrocellulose may adhere to coverslip corners, the separated solvents and thixotropic gel will seep underneath the coverslip and potentially disrupt the spread of silicone oil into the corners of the slides. Possibly, this could increase the interaction of the pollen residue and the nail lacquer, potentially increasing the risk of “pollen pox” as identified by Cushing (2011). The separation of nitrocellulose, solvents, and thixotropic gel in nail lacquer may be easier to observe in colored nail lacquer than in clear lacquer, possibly arguing for the use of colored lacquer, though many people do prefer clear. Colored nail lacquer is colored using mica, ground fish scales, crushed synthetic pearl (for pearlescent colors) and a variety of dyes in suspension (Brewster 1995). Some colors might potentially cause glare, and those with fish-scale fillers could potentially introduce contaminant microfossils, if the residue seeped underneath the coverslip. The choice of a base coat, top coat or three-in-one formulation can also affect the longevity of the lacquer on the slide. Familiarity with the cosmetic uses of different nail lacquers can help palynologists pick the right formula. A base coat formula is typically more viscous and is designed to coat the fine ridges of the nail bed so that they are not so prominent when an opaque color is applied. It is also used for French manicures to give a healthy looking pinkish tinge to the nail bed. A “whitener” is applied to the nail tip before a clear top coat of less viscous, shinier (enriched with acrylates copolymer) liquid is applied. The base coat is designed to dry quickly (it has a greater amount of the solvents ethyl- and butyl alcohol, which evaporate quickly), but has relatively low amounts of nitrocellulose, which means the liquid could be quite brittle if used without a top coat to protect it. Thus a nail lacquer base coat product would not be a good choice to use on slides that will be stored for a long time. The more brittle nature of base coat means that it would be easier to dislodge a coverslip with corners tacked with base
A nail-whitening liquid (another product in the nail lacquer aisle) would present the same problem. A top coat formula may be able to withstand more punishment, but these formulas are sometimes diluted with isopropyl alcohol because it is less expensive than using large amounts of nitrocellulose in the formula. The makers expect the user to be applying the top coat formula in conjunction with a base and color layer that adds strength and protection to the manicure. All this points to the recommendation that palynologists using nail lacquer to hold coverslips should purchase a three-in-one formula for which the manufacturers have attempted a balance of viscosity and strength in one liquid. The three-in-one formula will not be as brittle as a base coat, nor will it be enriched in isopropyl alcohol found in top coat formulas. These nail lacquer products are usually identified on the package labels as “three-in-one” lacquers, or products with “base and top in one.” Some brands may offer a “four-in-one” product that includes a nail strengthener; these can also serve the palynologist’s needs. If the package does not hint of a combination of products, the lacquer is likely a color meant to be used in conjunction with separate bottles of base and top coat. Avoid such lacquers.

In recent decades many cosmetic companies have produced products they have termed “nail hardeners”. There is no universally accepted formula for “nail hardener” and these products could contain acrylic, nylon, protein, gelatin, vitamins, or some combination. We do not recommend that nail hardener be used in the pollen lab as the formulas vary widely by brand and the products are often quite viscous, as they are intended for use in conjunction with other forms of nail lacquer. Even if a nail hardener has not “expired” it may still seep underneath the coverslip and prevent the spread of silicone oil, depending on which of the above types of hardener are used. Finally, some palynologists have asked whether there is any difference between quick dry and “regular” nail lacquers. Quick dry formulas are typically enriched in solvents, particularly ethyl- and butyl acetate, which make the nitrocellulose easier to apply before evaporating and leaving a film. Quick dry solvent mixtures lead to faster slide preparation, but may contain less nitrocellulose, which results in a less viscous and less durable lacquer. Therefore, we recommend products that do not promise “quick drying” time.

To summarize, we recommend using a three-in-one nail lacquer that is less than 36 months old to tack coverslip corners on fossil pollen slides. We leave whether to use a colored or clear formula to personal preference, though note that it may be easier to spot an “expired” color lacquer. Many of the ingredients in nail lacquer are bactericidal, but nail lacquer should still be replaced every few years when syneresis occurs, because the separation of the chemicals can affect the quality of slides.

References


FIRST ANNOUNCEMENT

ADVANCED COURSE in
Jurassic – Cretaceous – Cenozoic
ORGANIC-WALLED DINOF LagELLATE CYSTS

Morphology, Paleoeocology & Stratigraphy

Utrecht, JUNE 25-29, 2012

presented by

Henk Brinkhuis (Utrecht University, NL), Martin J. Head (Brock University, Canada)
Jörg Pross (Frankfurt University, Germany), James B. Riding (BGS, UK) and Poul Schioler (GNS, New Zealand)

With contributions from Rob Fensome, Graham L. Williams (GSC Atlantic, Halifax, Canada)
Appy Sluijs, Francesca Sangiorgi (Utrecht University, NL), Martin A. Pearce (Statoil, Houston, USA) and
Roel Verreusse, Dirk Munsterman (TNO Utrecht, NL)

Pre-registration of interest and further information: Timme Donders (timme.donders@tno.nl)
Second Announcement

Now a Joint Meeting:
45th Annual Meeting of AASP – The Palynological Society with the Acritarch, Chitinozoan, and Spore/Pollen Subcommissions of CIMP

University of Kentucky, Lexington, KY
July 21 – 25, 2012

Conference Co-Hosts
Cortland F. Eble, Kentucky Geological Survey
Jennifer M.K. O'Keefe, Morehead State University

Pre-Meeting Field Trip: Natural Bridge State Resort Park and the Red River Gorge National Geological Area (July 21)
Join us in our exploration, on well-maintained walking trails, of early Pennsylvanian sandstone cliffs, natural rock arches, and the unique microclimates and flora contained in this rugged terrain.

CIMP-Sponsored Devonian – Carboniferous Symposium in Honor of Geoff Clayton and Ken Higgs
Co-chaired by Zélia Pereira and Reed Wicander
Presentations in all aspects of Devonian-Carboniferous palynology and geology in honor of Geoff and Ken’s tremendous contributions to our understanding of Late Paleozoic strata are welcome. Contact Zélia (zelia.pereira@lneg.pt) or Reed (reed.wicander@cmich.edu) for more information.

Presentations on a variety of palynological topics and interactions with colleagues from around the world.
We invite your submission of presentations in all aspects of palynology. Studies concentrating on any portion of the geologic column and modern settings are welcome.

Post-Meeting Field Trip: World-class outcrops of Devonian and Carboniferous Strata (July 25),
Focused on the Devonian “Black Shales” and associated sediments of eastern Kentucky. Both macro- and micro- fossils are common and collecting is encouraged.

Conference website, registration information, abstract submission coming in March 2012! See www.palynology.org or contact Jen O’Keefe (j.okeefe@moreheadstate.edu) or Cortland Eble (eble@uky.edu) for more details.
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¹First author’s affiliation, country, email address
²Second author’s affiliation, country
³Third author’s affiliation, country

These directions are written in the format required for the abstract for IPC XIII / IOPC IX 2012, the joint meeting of the 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference to be held on August 23-30 2012 at Chuo University in Tokyo, Japan. We advise you to use this file as the template for your abstract. Also please note that you should upload the abstract file as a MS-Word 97-2003 Document through the abstract submission website by 31 March 2012.

The abstract contains text only – graphs, pictures, and tables cannot be inserted. The abstract should be written in English using the font type Times New Roman (11 points), with single spaced lines. Title of the abstract is bolded. Author’s names are written in full (given name and family name) and the presenter should be underlined. Authors are separated by commas and marked with superscript when necessary to distinguish authors from different affiliations. Author’s affiliations and countries are written shortly and the first author’s email address is included (italic). Abstract text is a single paragraph and not exceeded 400 words. Five keywords NOT in the title may be added at the bottom of the abstract.

The symposium organizer(s) and/or member(s) of the program committee will review the abstracts and the notifications of acceptance will be sent by e-mail.

Keywords: palynology, palaeobotany, Chuo University, template, symposium.