INTERNATIONAL UNION OF BIOLOGICAL SCIENCES SECTION FOR PALAEOBOTANY

International Organisation of Palaeobotany

IOP NEWSLETTER 99

October 2012

CONTENTS

FROM THE SECRETARY/TREASURER
IPC XIII/IOPC IX 2012
MEET YOUR REGIONAL REPRESENTATIVES
RENEW YOUR MEMBERSHIP
IPC XIV/IOPC X 2016
OBITUARY
UPCOMING MEETINGS
JOB OPENINGS
BOOK REVIEW
SPECIAL OFFERS AND NOTICES

The views expressed in the newsletter are those of its correspondents, and do not necessarily reflect the policy of IOP.
Please send us your contributions for the next edition of our newsletter (February 2013) by January 31st, 2013.

IOP Logo: The evolution of plant architecture (© by A. R. Hemsley)

FROM THE SECRETARY/TREASURER

Dear International Organisation of Palaeobotany Members,

Thank you for allowing me to serve as your Secretary/Treasurer. It is a great honor, and I will do my best to follow in the tradition of past Secretary/Treasurers and keep our organization running smoothly. For those of you who don't know me, I thought it best to briefly introduce myself.

I am an Associate Professor of Biology at Cameron University in Lawton, Oklahoma, USA. My Bachelors Degree is in Biology and Masters Degree is in Geology, both from Boise State University at Boise, Idaho. My Ph.D. is in Biology with Gar Rothwell from Ohio University at Athens, Ohio. Currently my research focuses on Mississippian age plants, but I have experience with Carboniferous/Permian palynology as well as Miocene leaf floras. Previous executive experience includes four years as Secretary/Treasurer of the Paleobotanical Section of the Botanical Society of America.

I can be reached at:

Mike Dunn
Department of Biological Sciences
Cameron University
Lawton, Oklahoma 73505
Ph.: 580-581-2287
email: michaeld@cameron.edu

Please feel free to contact me with any information you would like passed on to the Membership.

IPC XIII/IOPC IX 2012

The 9th International Organisation of Palaeobotany Conference was held in conjunction with the 13th International Palynology Congress at Chuo University, Koraken Campus, Tokyo, Japan, 23-30 August 2012.

Approximately 513 participants from 50 countries enjoyed the hospitality of the people of the city of Tokyo, and particularly the conference organizers and their student assistants. Approximately 470 presentations were given, and 12 excursions were available to participants.

It was an extremely well-run conference, and numerous people contributed to it's success, but I would particularly like to thank, Organizing Committee President Norio Sahashi, Vice Presidents Kazuhiko Uemura and Harufumi Nishida, and Secretary General Hikaru Takahara. Please pass our thanks on to the rest of the Organizing Committee.

MEET YOUR REGIONAL REPRESENTATIVES

As an International Organisation, it would be very difficult if not impossible to manage the affairs of IOP from a central location without the assistance of our Regional Representatives, and I think it is appropriate to acknowledge them and introduce them to those who might not know who they are.

I will acknowledge and introduce the Executive Committee and complete the introduction of Regional Representatives in the next Newsletter.

Africa and the Arabian Peninsula

Marion Bamford

Biography and photo not available

China

Zhekun Zhou

ZHOU Zhekun, Professor of botany and Paleobotany working in Xishuangbannan Tropical Botanical Garden, Chinese Academy of Sciences. Major research interests include 1) paleoenvironment and biodiversity change caused by major geological events such as the uplift of the Himalayas and the onset of the Asian monsoon system, and its corresponding effect on the distribution of plants; 2) morphological responses of plants to climate change and consequent changes in plant distribution; 3) reconstruction of the paleo-CO_2 environment, and paleoelevation; 4). taxonomy, fossil history, modern distribution, phylogeny, conservation, and ecology of the Fagaceae and other main elements of eastern Asia.

Eastern Europe

Maria Barbacka

Maria Barbacka works as a muzeologist in the Hungarian Natural History Museum in Budapest, Hungary, and also does her research works at the W. Szafer Botanical Institute of the Polish Academy of Sciences in Cracow, Poland. Her interests concentrate mainly on macroflora of Jurassic, but occasionally reach older periods like the Upper Triassic, even Carboniferous, or younger such as Cretaceous. Her research focuses on taxonomy, palaeoecology, environmetal reconstructions, palaeofloristical analyses. From 2001, the IOP representative of the Central Europe.

India

Currently unfilled. Thank you Manju Banerjee for your previous service.

Asian Pacific

Currently in transition.

Central Europe

Lutz Kunzmann

Lutz Kunzmann is the head of section (curator) palaeobotany at the Senckenberg Natural History Colletions Dresden, Germany. He has a Diploma Degree in Geology/Palaeontology and a Ph.D. in Biology/Palaeontology from the Humboldt University at Berlin, Germany (supervised by Dieter H. Mai and Harald Walther). His research focus is on Paleogene and Neogene megafloras from central Europe including palaeoecology, taphonomy and palaeoclimate. Conifers are his favourite group. Currently he also studies gymnosperms from the Early Cretaceous Crato flora in Brazil. He is one of the two editors-in-chief of the journal Palaeontographica Abt. B. Since 2008 he has been Speaker of the German Palaeobotanical-Palynological Group (Arbeitskreis für Paläobotanik und Palynologie) in the Palaeontological Society e. V. in Germany."

South America

Georgina del Fueyo

Georgina M. Del Fueyo is a Research Scientist of the National Council of Scientific and Technological Researches (CONICET) at the Argentine Museum of Natural History “Bernardino Rivadavia” (MACN), Buenos Aires, Argentina. She is Head of the Palaeobotany Department and Curator in-Charge of the Paleobotany Collection at the MACN. She has a Licentiate Degree in Biology and a Ph. D. in Biology from Buenos Aires University. Her major interests are Mesozoic floras from Patagonia, morphology and anatomy of gymnosperms and ultrastructure of fossil gymnosperms cuticles and pollen grain exine.

Southern Europe

Brigitte Meyer-Berthaud

My research projects explore the diversification patterns of the major groups of plants during the Devonian and the Mississippian, with a special focus on anatomically preserved fossils collected on the northern edge of Gondwana (North Africa, Australia). I am a CNRS (for "Centre National de la Recherche Scientifique") researcher in Montpellier, France. My Research Unit, AMAP, is specialized in botany and plant bioinformatics.

North America

Currently open. Thank you Steve Manchester for your previous service. A new representative will be named soon.

Northern Europe

Lil Stevens

Lil Stevens is a curator in the Earth Sciences Department at the Natural History Museum in London. She studied Plant Sciences at Edinburgh University for her first degree and completed a PhD in British and Chinese Palaeozoic plant fossils with Jason Hilton at Birmingham University in the UK. She has recently been focussing on learning the museum trade but has also published on Chinese Permian palaeofloristic patterns and exceptionally preserved lycopsids and cladoceran crustaceans from Carboniferous chert.

RENEW YOUR MEMBERSHIP

Once again it's time again to renew your membership in IOP for 2013 and up to five additional years if you wish. It's very easy to do that online at http://www.palaeobotany.org/members/ by entering your user name (your e-mail address) and password. If you have forgotten your password, you can click on the "forgotten your password?" button, and a new password will be supplied.

Remember, only current IOP members are eligible to stand for office, nominate people for office, and vote.

IPC XIV/IOPC X 2016

The 2016 joint meeting of the International Palynological Congress and the International Organization of Palaeobotanists will be held in Salvador, Brazil. The proposal is attached to this email, and additional details are being worked out. However, at this time we can only say that the meeting will be during the fall due to the Olympic Games being held in Brazil during the summer of 2016. The organizers will attempt to schedule the meeting for as early in October, or late in September as possible, and will also work on a semi-split schedule so that Palynology and Paleobotany will be clustered either first or last, so that attendee's do not need to stay for the entire 10 or so days of the meetings.

I will send additional details as they are worked out.

OBITUARY

Otto Appert
31 August 1930 – 29 May 2012

I first met Father Otto Appert in the early 1970's at BPI Palaeontology, (Johannesburg, South Africa) when he came to visit Dr. Edna Plumstead to compare the Gondwana plant fossils he had collected from Madagascar with those of southern Africa. We soon discovered our Swiss connections and he was most surprised to find more than one Swiss German speaker in the palaeo–laboratory (the other was fellow post graduate student Annakati Benecke). Otto was born (31.8.1930) at Wangen (Canton Schwyz) on the upper reaches (Obersee) of the Lake of Zurich (my mother came from a village along the lake and my father from Zurich city). Otto soon met my parents and they generously took this quiet spoken, studious catholic priest on a visit to the Kruger National Park.

Otto was the youngest of nine children and after completing school (1951) he studied theology at the "Missionsseminar der Heiligen Familie (MSF)" in Werthenstein near Luzern. He was ordained as a priest (29.06.1957), entered missionary service and sailed from Marseille (21.8.1959) to take up a position in Madagascar. There he quickly applied himself to learning the language, the culture and natural history of the unique island. In July 1960 he took up a post at Befandriana (in the Morembe area, south west Madagascar) and alongside his busy life as priest/missionary he took a keen interest in all that the Lord had created around him. The many years Otto spent observing the birds of the area resulted in a publication of over 20 ornithological papers and he was made a member of the "Deutsche Ornithologen Gesellschaft (DOG)". He also pursued a keen interest in the local flora of the dry south west which has so many endemics (80%) and strange succulent plants.

Otto's special interest was the geological history of the area and searching for fossil plants. This was a passion he had developed in his student years when he made a collection of fossil plants of Miocene age in Switzerland. He soon amassed a fine collection of Madagascan fossil plants from Permian to Cretaceous age. In 1966 he was granted a sabbatical and study leave. This led to the publication of his first monograph

in 1973 on the Jurassic fossil ferns (Die Pteridophyten aus dem Oberen Jura des Manamana in Südwest-Madagaskar. Schweizerische Paläontologische Abhandlungen, Bd. 94. 62 S., 90 Taf.) and obtaining a doctorate degree from the University of Paris in the same year. In October 1973 he returned again as missionary/priest to Madagascar and was based at Manja. He continued with his fossil plant research and in 1977 published a monograph on the Permian Glossopteris Flora (Die Glossopterisflora der Sakoa in Südwest-Madagaskar. Palaeontographica, Abt. B, Bd. 162. 50 S., 40 Taf., 10 Abb.). From 1973 to 1981 he worked together with a fellow priest Roman Zwick (to whom I am indebted for email contact in the last years with Otto). Roman writes that the tension between missionary and researcher was sometimes quite evident and that Otto was somewhat of a "Grenzgänger zwischen verschiedenen Welten" i.e., "a man of many parts". Otto himself wrote "Mut und Energie wollen mich als Einzelarbeiter in der Wissenschaft oft fast verlassen. Aber was ich heute nicht verlernt habe: das Staunen über die Grossartigkeit der Schöpfung" i.e., "As a lone worker in science, I often nearly lost courage and energy: but what I have never forgotten is my astonishment at the immensity of Creation."

Otto and I kept contact over the years via letters and meeting up at a few IOP conferences. I was always sorry to never have the opportunity to take up his invitation to visit him in SW Madagascar which he left in 1988. I visited him again in Switzerland (11–12.8.2006) and that was the last time we chatted in person. He kindly met Keith Holmes and me at the station and took us to the Werthenstein Monastery. He now lived in retirement from his work as a catholic missionary but still took part in the daily cycle of attending mass. His room was filled with fossils, books and research papers (that spilled neatly out onto tables in the corridor). He was a careful, meticulous worker and took his own excellent photos of the plant fossils he described. He was busy researching a monograph on the Lower Cretaceous flora which was subsequently published in 2010 (Die fossile Makroflora der Unterkreide (Hauterivian) von Manja in Südwest-Madagaskar Farne und Schachtelhalme (Filicatae und Equisetatae). Schweizerische Paläontologische Abhandlungen, Basel 129:1–129). See a review in IOP newsletter 2011.

It was with great sadness that I received the news of his stroke (17.11.2011) and the end of his scientific career. He described so many new fossil plants from the Permian, Jurassic and Cretaceous of Madagascar that his name lives on in the annals of science. In 1982 he was honoured by having a water plant he discovered named *Appertiella* and the name *Appertia* was given to a Permian fossil insect. He finally departed from this world on 29 May 2012 at a quarter to midnight (just in time to make it the same day and month as my mother's birthday).

Dr. Heidi Anderson (neé Schwyzer)
Honorary researcher BPI Palaeontology,.
University of Witwatersrand Johannesburg, South Africa
hmsholmes@googlemail.com

UPCOMING MEETINGS

6th International Symposium on Extant and Fossil Charophytes

The 6th International Symposium on Extant and Fossil Charophytes will be held at Centro de Congresos y Exposiciones CIVIT, Avda. Peltier 611, Mendoza, Argentina, 25-27 November 2012 (22 Nov-2 December including two fieldtrips)

For detailed circular please contact:
Dr. Adriana Garcia, University of Wollongong
E-mail: adriana@uow.edu.au

The Carboniferous-Permian Transition

An international meeting devoted to all aspects of Carboniferous-Permian geology with special emphasis on the Carboniferous-Permian transition will be held 20-22 May 2013 at the New Mexico Museum of Natural History and Science, Albuquerque, New Mexico, USA

See separate attachment with this mailing.

30th Midcontinent Paleobotanical Colloquium

The 30th Midcontinent Paleobotanical Colloquium will be held 26-28, April 2013 at the Chicago Botanic Garden in Glencoe, IL.

See separate attachment with this mailing.

International Congress of Agora Paleobotanica.

The 2nd International Congress of Agora Paleobotanica, titled "A Congress in the Countryside" will be held in Ariño (Teruel, Spain) from 9th to 13th July, 2013.

For more information go to:

http://www.grupopaleobotanicaiberica.es/eventos/congresos/arino2013_en.htm

46th annual meeting of AASP –

The Palynological Society (AASP-TPS) will meet jointly with Dino 10, the Canadian Association of Palynologists (CAP), and the North American Micropaleontology Section of SEPM (NAMS). The meeting will be held in the Heart of San Francisco.

Questions or Suggestions? Contact Co-Chairpersons:
Lanny H. Fisk (Lanny@PaleoResource.com) and/or Joyce Lucas-Clark (jluclark@comcast.net)

4th International Palaeontological Congress

The 4th International Palaeontological Congress will be held in Mendoza, Argentina, September 28 - October 3, 2014. the Congress website is already up and running: www.ipc4mendoza2014.org.ar. There you can find preliminary information on the event, with more information to come soon.

JOB OPENINGS

Endowed Chair Position Louisiana State University

(NOTE: This is an old advertisement, but apparently they have not been able to fill it

yet and it is still open).

The Department of Geology & Geophysics at LSU announces a multiple year search to fill three endowed chair positions. For each position we seek an outstanding individual with an internationally recognized scientific reputation who will develop a strong, externally-funded research program. We invite inquiries, nominations, and applications for:

AASP Chair in Paleopalynology: We seek an individual that will develop a program in stratigraphic paleopalynology, particularly chronostratigraphy and/or paleoecology. The successful candidate will serve as Director of the American Association of Stratigraphic Palynologists (AASP) Center for Excellence in Palynology within the Department of Geology & Geophysics. Candidates with significant academic and/or petroleum industry experience, along with administrative leadership skills commensurate with building and directing a research center are encouraged to apply.

Required Qualifications: A Ph.D. in geological sciences or other relevant disciplines, a strong record of published research, and demonstrated ability to attract funding. The successful candidate will be expected to supervise graduate student research, publish in highly ranked journals, and teach undergraduate and graduate courses in his or her area of specialization. Chair appointments would normally be made at the rank of Full Professor. However, exceptional candidates at the Associate Professor level will be considered.

The Department of Geology and Geophysics consists of 15 tenured and tenure-track faculty members having a wide range of expertise and offers B.S., M.S., and Ph.D. degrees in geology. The Department has a strong record in research and graduate training, ongoing federal and industry funded research and teaching programs, and a large and active alumni base. Two interrelated focus areas: “Evolution of Sedimentary Systems” and “Earth Materials and Solid Earth Processes” have been developed within the LSU Department of Geology and Geophysics to enhance existing strengths of the Department and allow the Department to interface synergistically with other academic units at LSU. See www.geol.lsu.edu for more information regarding these focus areas, faculty, facilities, and research programs.
The review process will begin January 1, 2009 and continue until a candidate is selected.

Nominations or inquiries should be directed to Endowed Chair Search Committee, at 225-578-3353 or geology@lsu.edu. An offer of employment is contingent on a satisfactory pre-employment background check. Applicants should send a copy of their curriculum vitae (including e-mail address), a statement of their research and teaching interests, and the names, addresses, phone numbers, and email addresses of at least three references to: Endowed Chair Search Committee, Department of Geology and Geophysics, Louisiana State University, Ref: Log 2013, Baton Rouge, LA 70803.

LSU IS AN EQUAL OPPORTUNITY/EQUAL ACCESS EMPLOYER

BOOK REVIEW

Early Flowers and Angiosperm Evolution, by E. M. Friis, P. R. Crane, and K. R. Pedersen 2011 Cambridge Univ. Press, 585 pp.

Angiosperm Paleobotany typically has been relegated to one or a few chapters at the end of standard paleobotany texts. Indeed, with all the interesting extinct and extant groups of plants to consider in a standard course on our discipline, it is possible to "run out of time" to deal with angiosperms in any detail. The discipline has gained great momentum over the past few decades, with exciting discoveries published in a wide array of journals. In particular, a wealth of new information has accumulated on exquisitely preserved Cretaceous flowers but a comprehensive overview and synthesis has been lacking—until now.

Friis, Crane and Pedersen have produced a magnificent and impressively thorough treatment of the fossil record of flowering plants, copiously illustrated, and presented in a way that will be readily accessible to students of neo- as well as paleobotany. The book begins with an introduction to the angiosperms, their phylogenetic position and characteristic features, with a discussion of the timing of their diversification and rise to ecological dominance. Chapter 2 explains the fragmentary nature of the fossil record, the kinds of plant parts preserved and the means of studying them. Chapter 3 considers the environmental context of early angiosperm evolution by reviewing the paleogeography and inferred climate through stages of the Cretaceous and Paleogene. Chapter 4 provides relevant information on the geology and stratigraphic settings of locations around the world that have yielded important Cretaceous angiosperm remains, indicating the bases for age assignments used subsequently in the book.

Mesozoic and extant seed plant groups that have been included in considerations of angiosperm origins are treated in Chapter 5. Salient morphological features, stratigraphic and geographic extent of each group is considered, including Gnetales, Bennettitales, Ertmanithecales, Elaterates, Cycads, Pentoxylales, Corystosperms, Peltasperms, Glossopterids, Czekanowskiales, etc. Most of these are accompanied by informative line drawings of the relevant reproductive organs and, where possible, a reconstructed plant. Origin and age of the angiosperms are treated in Chapter 6, which opens with a review of traditional euanthial and pseudanthial hypotheses for evolution of the flower, followed by cladistic hypotheses based on morphology and those deriving from molecular data. The age estimates as surmised from molecular data are compared with those inferred from paleobotanical data. *Sanmiguelia*, *Furcula*, *Sweitzeria* and other pre-Cretaceous angiosperm-like fossils are discussed and dismissed, on various criteria, as representing actual angiosperms. Chapter 7 provides working hypotheses of the phylogeny and a classification scheme for extant angiosperm taxa as a framework for placing fossil representatives. Here the authors present their philosophy for placing fossil taxa relative to extant groups as treated in the subsequent chapters: "as far as possible, we adopt an implicitly phylogenetic approach...We attempt to give due weight to probable synapomorphies, and where possible we make the distinction between assignment of fossils to a crown

group and assignment to a stem group...We consider it prudent to adopt a conservative approach...[whereby]...to be considered part of the crown group a fossil must not only have all the synapomorphies of the crown group in all its preserved characters, but in practice it should also possess at least one synapomorphy of a subclade of that group."

Chapters 8-15 are a compendium of the best understood Cretaceous fossil angiosperms organized according to their inferred phylogenetic position following the APG III classification. Fossils placed in the basal grade are treated first (Ch 8) followed by a consideration of intriguing extinct taxa, whose placement is uncertain and/or controversial. Subsequent chapters within this section include early fossils of eumagnoliids (Ch 10), monocots (Ch. 11) and eudicots (Ch. 12-14). Here, as throughout the text, superb photographic documentation is provided, sometimes of substantial new specimens augmenting those previously published, accompanied by photo-realistic morphological diagrams, reconstructions and summary floral diagrams. In addition to providing Cretaceous representatives relevant to modern families, selected examples from the Tertiary are presented, especially for families that are not confirmed from the Cretaceous. Despite the preference for whole-plants, or at least flowers, when available, references include various kinds of evidence from dispersed plant parts including woods, leaves, fruits and seeds when deemed diagnostic for the taxa under consideration.

Chapter 16, "patterns of structural diversification in angiosperm reproductive organs," traces the increasing complexity of reproductive traits through the stratigraphic column as currently known, which brings up to date chapter presented by Friis and Crepet in Friis et al (1987). Chapters 17 and 18 deal with the history and evolution of pollination, and of fruit/seed dispersal in angiosperms, respectively.

Chapter 19, "Vegetational context of early angiosperm diversification," provides a synthesis of available macro-, meso- and microfossil plant data on the communities and climate of various regions through the Cretaceous. Based on available data, the authors emphasize that angiosperms "were diverse in the Early Cretaceous at least from the Late Barremian – Early Aptian onwards, but were not especially prominent in the vegetation." The increasing prominence of angiosperms and the represented taxa are reviewed through the remainder of the Cretaceous. The final chapter, on the accumulation of angiosperm diversity, summarizes some important patterns observed in the fossil record with examples of various groups that are particularly well documented in the angiosperm fossil record, such as Nymphaeales, Chloranthaceae and Fagales, discusses research on the K-T extinction, and gives brief overview on development of Paleogene and Neogene vegetation, and origin of modern biomes.

More than 70 pages of cited references provide a handy guide to relevant publications in various languages. The work is not simply a compilation of the ideas presented in the literature; the authors provide their own opinions, sometimes at odds with those of their peers, on the reliability of identifications and interpretations of available data in the cited literature. This book is recommended as a

convenient reference source for plant and insect systematists as well as paleobotanists, and is ideally suited as a text for graduate and undergraduate paleobotany courses, providing the angiosperm "dessert," supplemental to texts covering the broader spectrum of land-plant diversification.

Steve Manchester

SPECIAL OFFERS and NOTICES

Review of Palaeobotany and Palynology

Please allow me to introduce myself. My name is Dan Lovegrove and I am the publisher at Elsevier responsible for the Review of Palaeobotany and Palynology. I understand that IOP has an arrangement with Elsevier whereby IOP members can get a reduced annual subscription rate to the title of $135 (EUR 117, JPY 16128).

I am briefly writing to let you know that I intend to continue this offer into 2013, prices to be announced in due course, and that we encourage you to make this offer visible to IOP members. Any members who are interested may set up a subscription by contacting the Elsevier Customer Service Department at journalscustomerserviceemea@elsevier.com

Best wishes
Dan

Palaeontographica Abt. B

Dear colleagues,

It is a pleasure for us to announce the change in the editorship in the journal Palaeontographica Abt. B published by Schweizerbart Science Publishers. The following editorial has been recently published in vol. 288(1-4). However, the first papers edited by us will be printed in the next volume.

Editorial
Assuming the editorship of one of the oldest and esteemed journals in palaeobotany is both an honour and a challenge. Having known and appreciated our predecessors in office for a very long time, we realized quickly that this was an endeavor we would embark on with pleasure. We could like to take this opportunity to thank Dieter Hans Mai and Kurt Goth for their work and their helpful advice and support without which the transition would not have been as smooth, as well as the publishers for their trust. In addition, we are pleased to work together not only as friends and colleagues but also because our individual specialties complement each other so well. Our expertise in Palaeozoic and Cainozoic research matches the scope of Palaeontographica Abt. B perfectly. Dieter Hans Mai and Kurt Goth took over editorship of the journal at a time when approaches to research and publication were undergoing considerable changes. Interdisciplinary connectivity and cooperation and a stronger emphasis on applied topics continues to gain importance, as did the quality of raw data in systematic and taxonomic research papers. The latter aspect has been a major focus of the editorial work of Dieter Hans Mai and Kurt Goth and has firmly established Palaeontographica Abt. B's reputation for data-backed taxonomic and floristic contributions. Electronic manuscript

handling and bibliometric evaluation of papers have become ever more widespread over the last two decades. Nevertheless, monographic publications are still much appreciated in a historical science such as palaeobotany even many years after their publication. This is reflected by Palaeontographica B's long cited halflife of more than 10
years, which indicates the long-term relevance of published papers, and its ISI impact factor of 0.357 (2010). Both of us support the publishers in not simply following every trend, but instead carefully evaluating the scientific publication situation. It is important both to maintain the sort of conservatism essential to museums and archives and to strengthen the unique character of our publication while combining tradition and modernity where appropriate. Jointly we intend
to move forward toward online submission of manuscripts and an online reviewing process for all
submitted manuscripts. In 2011, in close collaboration with Kurt Goth and Dieter Hans Mai, we began editing new manuscripts and guiding them through the review process. We are aware of the fact, that increasingly complex research will require us to adapt our review processes. Extending our editorial board is one way for us to begin to meet these new challenges.

For more information please visit http://www.schweizerbart.de/journals/palb.

Kind regards and best wishes,
Lutz Kunzmann and Ronny Rößler
Dresden and Chemnitz

The Cuticle Database: An online visual library for the study of plant cuticle characters

Richard S. Barclay, Peter Wilf, Terry A. Lott, and David L. Dilcher

We announce the release of The Cuticle Database, the first large, unrestricted visual library of leaf cuticle available on the Internet, hosted at the Earth and Environmental Systems Institute at Penn State: http://cuticledb.eesi.psu.edu. The Cuticle Database is a reference tool designed to promote the study of plant cuticle characters, intending to facilitate systematic studies of living and fossil plants and to allow recognition of ecological variation. The Cuticle Database Project has been a collaboration between scientists at Indiana University, the Florida Museum of Natural History, Northwestern University, The Field Museum, and Pennsylvania State University. The project was initiated in 2005 and originally hosted at The Field Museum. Principal funding for major web development and data migration to Penn State was provided by the David and Lucile Packard Foundation, with additional support from the National Science Foundation. The image library of plant cuticle was created by photographing the prepared cuticle slide collection of Dr. David Dilcher. The originally sampled herbarium leaves and the prepared cuticle slides are both archived in the Paleobotany Collection at the Florida Museum of Natural History. This collection of slides was prepared by David. Dilcher, his students, and wife Katherine Dilcher at Yale University and Indiana University, using vouchered herbarium specimens. Now in digital form in the Cuticle Database, Dilcher's collection comprises 1678

individual records spanning 69 plant families, including 476 genera and 1298 separate species. The Cuticle Database will continue to grow, predominantly from future contributions by members of the botanical and paleobotanical scientific communities. New software was designed and coded by Alex Sokoloff to meet the specific goals of the Cuticle Database Project. The database runs on the open-source Django web framework (v. 1.3), which comes with an object-relational mapper that describes the database layout in Python code. The user interface was designed and implemented by Chris Thurman (christhurman.com), with site graphic design and logos by Jessica Leon-Guerrero (digigirlstudio.com). The content of the Cuticle Database is accessed principally through search. Each page allows family, genus, and species-level searches, or the user can conduct an advanced search on individual metadata fields. Search results provide the user with a scrollable list of records, including a thumbnail image of the lower epidermal surface and a subset of important metadata. Choosing a record from the search results builds a dynamic species record with a medium-resolution image of the upper and lower cuticle surfaces, as well as all available metadata. The highest resolution image available can also be viewed and downloaded.

Care has been taken to verify that the submitted taxonomic name for each record is free of typographical errors and updated to a consistent level. Data were cleaned of errors, and entries in metadata fields were standardized during data migration from The Field Museum to Penn State. The existence of each submitted species name was verified in the taxonomic databases of the Missouri Botanical Garden (www.tropicos.org), the International Plant Names Index (www.ipni.org), and The Plant List (www.theplantlist.org). No attempt was made to rectify synonyms at the species level, as these are not universally accepted, and we leave this to the discretion of the researcher to decide for each individual case. However, designed into the site is a system for updating the genus and family level designations using the 'Kew Genus + APG Family Lookup' tool (www.phylodiversity.net/phylomatic/kewlookup.html). On a periodic basis all records are filtered using this tool; genera are modified to match the list at Kew; families are changed to match the Angiosperm Phylogeny Group. The Kew Lookup tool does not always provide the most current name, which should be vetted by the user, but it is an automated improvement over the historic nomenclature associated with many slides. For transparency and consistency as the name changes over time, the 'Original Designation' of the submitted taxonomic name remains unchanged and visible to the user below the most current assignment.

The current release of the Cuticle Database (v. 1.0) is dominated by angiosperms from the Americas, because this was the research focus of David Dilcher's lab. However, future plans include expanding the database to increase taxonomic and geographic breadth. To enhance the value of the database, we encourage the contribution of well-documented material, especially if these are vouchered herbarium specimens or fully curated fossils. Contributors will be fully acknowledged, and those able to provide well-documented images from more than 50 species will be included as co-authors in the official Cuticle Database citation, although contributions of all sizes are encouraged. We invite you to bring

forward your collection of cuticle images to enhance this useful new tool for botanists and paleobotanists!