

PALYNOS

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NEWSLETTER OF THE INTERNATIONAL FEDERATION OF PALYNOLOGICAL SOCIETIES

EDITORIAL

I would like to express, at the end of my term of office, the pleasure I have had working with my two colleagues, Annick Le Thomas and Madeline Harley, who have been wonderful to work with; efficient, and dedicated to the worldwide assembly of palynological communities.



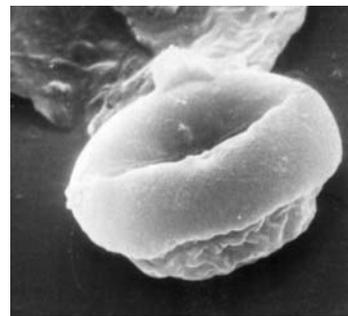
I have had the immense privilege of being the Editor of the newsletter of IFPS, PALYNOS, and at this time I can pay my immense respects, in particular to Annick.

As you probably know, Annick, in completing her term of office as President of IFPS, also comes to the end of a superb and exemplary career, that is very original within the French scientific community, and probably also internationally.

Annick in effect started her career as a botanist with Prof. H. des Abbayes at the University of Rennes, where she was interested in the anatomy of pteridophytes. After this, under the direction of A. Aubréville, and then J.F. Leroy, she studied the flora of Equatorial Africa and of Madagascar. It was A. Aubréville who suggested to her, in 1961, the study of a family which allowed Annick to provide major contributions to the

understanding of the origin and evolution of the angiosperms - the Annonaceae.

The study of pollen morphological characters of Annonaceae began in the form of a thesis supervised by M. Van Campo in 1978. Annick demonstrated that some structures, which she described for the first time - the granular structure of the exine in angiosperms and the lamellar structure of the foot-layer - suggested the ancient position of the family, thus confirming its place at the base of the angiosperms



Ambavia gerrardii Le Thomas
(Endemic genus of Annonaceae from Madagascar)

During the course of her career, she has also maintained fruitful, long-term professional and friendly relationships with J.A. Doyle (University of California) and B. Lugardon (University of Toulouse), and with them demonstrated that pollen morphology and, in particular, the study of exine ultrastructure is an indispensable tool, not only for systematic botany but also for the phylogenetic history of flowering plants.

Annick was one of the first people to link pollen morphological structures with molecular analyses. One cannot, however, limit Annick's curiosity only to the family Annonaceae, and forget to mention the fascinating research carried out more recently in collaboration with P. Goldblatt (Missouri Botanical Garden) and M. Suarez-Cervera (University of Barcelona) on the monocot family, Iridaceae.

At a time when studies of systematic botany and pollen morphology do not appear to be a priority for national scientific politics, as shown by the closing, or reduction, of well-known European laboratories (Montpellier, Stockholm, Paris) it is good to remember that the scientific community is indebted to some exceptional researchers such as Annick Le Thomas for the understanding of the living world and its history.

In France, the Ecole Pratique des Hautes Etudes, where Annick was Directeur de Recherche, the Museum national d'Histoire naturelle de Paris, where she carried out her research, and the Association des Palynologues de Langue Française, of which she was President, must have greatly benefited from her scientific contributions. The international community has also recognised her exceptional scientific qualities, but we also recognise her special qualities of generosity, kindness, happiness and honesty.

Anne-Marie Lézine, PALYNOS Editor

IFPS

Message from out-going IFPS President, A. Le Thomas

I would like all of the councillors and officers to join me in welcoming THOMAS LITT as Eighth President of the International Federation of Palynological Societies. Since 2001, Thomas has served IFPS as a Vice-President. In total, twenty six votes were received by the Secretary Treasurer and I want especially to thank the other candidates.

In accordance with the IFPS Constitution, the retiring President automatically assumes the office of Past-President. However, I have declined

to serve in this capacity because I am now retiring from my scientific activities. In this I am very fortunate because, not only is Owen DAVIS willing to continue as webmaster and as database manager for the World Directory, he has also agreed to continue as Past-President for another four years. Owen has always been a constant, efficient and patient adviser to me during the four years of my Presidency; I offer him my heartfelt thanks.

I hope that Thomas Litt will have the support of Officers as efficient as Madeline HARLEY, Secretary Treasurer, and Anne Marie LEZINE, Palynos Editor, who have been my two arms and, very often, my mind; together we have also shared great friendship. I am indebted to them for their constant support, and for their good humour. I think our trio is a great example of feminine solidarity and purpose.

IFPS new president, T. Litt

Thomas Litt is a professor of Palaeobotany at the Palaeontological Institute, University of Bonn, Germany. He was born in 1957. He studied prehistory, geology and botany at the University of Halle and received a doctoral degree in geology from the University of Greifswald in 1987. He was assistant at the Museum of Prehistory in Halle before he served as a post-doctoral fellow in the Department of Geology, University of Halle (1990-1993). T. Litt received the Habilitation (*venia legendi*) in geology from the same university. He was senior assistant at the Institute of Geophysics and Geology, University of Leipzig (1993-1994), before coming to Bonn. He teaches courses in palaeobotany and palynology, historical geology, Quaternary geology, and palaeoclimatology. His research interests include the vegetation history of the Cenozoic (Pliocene, Pleistocene) based on pollen and plant macrofossils, and the stratigraphy, palaeoecology and palaeoclimate of the Quaternary. He has been involved in several national and international research programmes dealing with annually laminated lacustrine sediments (Eifel Maar region, Germany; Dead Sea, Israel; Lake Van, Turkey). Thomas Litt is



chairman of the German Subcommission on Quaternary Stratigraphy and voting member of the Subcommission on Quaternary Stratigraphy of

the IUGS. in addition, he is the new leader of the PAGES PEP III Transect.

Current IFPS Councillors

Society	Acronym	Councillor
American Association of Stratigraphic Palynologists	AASP	Francisca Oboh-Ikuenobe
American Association of Stratigraphic Palynologists	AASP	Reed Wicander (Prof.)
International Association for African Palynology	AIPA/IAAP	Henry Hooghiemstra (Prof.)
Asociacion de Palinologos de Lengua Espanol	APLE	Ana Teresa Romero Garcia
Association de Palynologistes de Langue Francais	APLF	Marie-Pierre Ledru
Association de Palynologistes de Langue Francais	APLF	Edwige Masure
Arbeitskreis fur Palaeobotanik und Palynologie	APP	Thomas Litt (Prof.)
British Micropalaeontological Society: Palynology section	BMS	Paul Dodsworth
Canadian Association of Palynologists	CAP	Rolf Mathewes
Commission Internationale de Microflore du Paleozoique	CIMP	Charles Wellman
Commission Internationale de Microflore du Paleozoique	CIMP	Thomas Servais
Collegium Palynologicum Scandinavicum	CPS	Dagfinn Moe
Gruppo di Palinologia della Societa Botanica Italiana	GPSBI	Laura Sadori
International Association for Aerobiology	IAA	Carmen Galan Soldevilla
Linnean Society Palynology Specialist Group	LSPSG	Robert Marchant
Organisation of Czechoslovak Palynologists	OCP	Jiri Beck
Palynologischsches Kring (Netherlands)	PK	Oscar Abbink
Palynologists and Plant Micropalaeontologists of Belgium	PPMB	Emile Roche
Palynological Society of China	PSC	Gengwu Liu
Palynological Society of Japan	PSJ	Yuichi Takahashi
Palynological Society of Poland	PSP	Malgorzata Malkiewicz
Russian Palynological Commission	RPC	Olga Dzyuba
Russian Palynological Commission	RPC	Valentina Fedorova
Turkish Committee for Palynology	TCP	Kaya Ertug
International Union of Geological Societies	IUGS	Lucy Edwards (Dr)
International Union of Biological Societies	IUBS	Jacques-Louis de Beaulieu
IFPS President - Annick LeThomas		
IFPS Past President - Owen Davis		
IFPS Secretary-Treasurer Madeline Harley		
IFPS Editor of PALYNOS - Anne Marie Lezine		
Societies on hold		
Asociacion Latinoamericana de Paleobotanica y Palinologia	ALPP	Vera Alleman (Dra)
Palynological and Palaeobotanical Association of Australia	PPAA	? Neville Alley (contact)
Philippine Palynological Society	PPS	?
Palaeobotanical Society, Lucknow	PSL	Hari Gupta

IFPS – Taking account 2000-2004

It seems impossible that four years have passed since Annick Le Thomas, Anne Marie Lezine and I began four years at the helm of IFPS – with Owen Davis providing the support and encouragement! I feel privileged to have been a part of this team – always good humoured, energetic and friendly, consultative and interactive, and very hardworking. I have to admit to musings with Anne Marie from time to time, as we worked through issues of PALYNOS counting down on how many were still to be produced – each one a milestone but always dreaming of the eighth and last. Since Anne Marie successfully steered PALYNOS into electronic format my work load diminished rapidly because it was I who had to arrange the printing and do the packing and mailing of each issue to the Councillors. Electronic publication of PALYNOS also had another, more wide reaching benefit, it improved the bank balance and, recently, allowed us to make the decision to offer some financial awards to help defray costs for a number of delegates who would otherwise have been unable to attend 11 IPC and present their research.

Now that the eighth and last of our issues of PALYNOS is on the website, and the final accounts for 2000-2004 have been prepared it seems curious to imagine life without these things getting in the way from time to time. I am not sure whether my somewhat limited French has improved during the last four years, but we managed to understand each other – thank you Annick and Anne Marie for your friendship and help.

The accounts – 2000-2004

The transitional period during which the accounts were moved from Scott Anderson's care in the USA to my care, involved a change in currency. Since then IFPS has had to bear the charges entailed in exchanging US dollars to sterling when many of the dues come in.

One of the things which seems to confuse Councillors of IFPS affiliated societies, and their members, is that the IFPS financial year runs from the 1st May to the 30th April. Annual dues for affiliated societies are payable from the 1st of May until 31st December. However, a society is officially declared delinquent after December 31st

(Constitution article 5 of By-laws). Although the savings (deposit) account, and the checking (current) account were not moved until late August through early October 2000, I was to find that many affiliated society dues for 1st May 2000 – 30th April 2001 had still not been paid. Four years later I know this is normal every year, though it is not to be applauded.

Essentially IFPS is about communication among palynologists; IFPS income is very dependent on the dues from the affiliated societies, it is what keeps the organisation afloat. If these dues are not paid we cannot support our 4-yearly international congresses. Until two years ago, when PALYNOS, moved to electronic format, the dues also supported its printing, and distribution, which I found was quite expensive. Since the electronic version was introduced we have only had to print a limited number of copies to help RPC and PSC, until their computer networking links improved. We also have a few copies printed for reference and archiving. Over the years IFPS funds have allowed the printing of two editions of *The World Directory of Palynologists* – a third edition has been prepared in time for distribution at 11 IPC in July.

2000-2001

Deposit account

The monies transferred from the US savings account amounted to £16058.74 sterling. Our only income for the rest of the fiscal year was interest on this money; rates were excellent and amounted to £191.25 in just five months.

Current account

The monies transferred from the US checking account amounted to £3301.97 sterling. Income from affiliation society dues: £2994.67. We lost one society – PPS.

Main expenditure was printing and mailing of one issue (23/2) of PALYNOS - £2406.07.

2001-2002

Deposit account

At the beginning of the new fiscal year we had a balance of £16249.99. Our only income for the year was interest on this money, rates fell after the terrorist attack in New York in September 2001,

and the amount for 12 months was down to £136.48.

Current account

At the beginning of the new fiscal year we had a balance of £3663.82 sterling. Income during year from affiliation society dues: £2905.07. We lost three societies – ALPP, PPAA, PSL.

Main expenditure was the printing and mailing of two issues (24/1; 24/2) of PALYNOS - £5464.01.

2002-2003

Deposit account

At the beginning of the new fiscal year we had a balance of £16386.47 sterling.

Our only income for the rest of the fiscal year was interest on this money, rates were

even worse than last year – amounting to only £95.25.

Current account

At the beginning of the new fiscal year we had a balance of £1444.06 sterling. Income during year from affiliation society dues, plus the bank introduced interest on the current account half way through the year: £3690.40. One society in default for non payment of affiliation dues.

Main expenditure – PALYNOS now electronic, printing and mailing reduced to 300 copies of two issues (25/1; 25/2) of PALYNOS to Russia and China - £1230.01.

2003-2004

Deposit account

At the beginning of the new fiscal year we had a balance of £16481.72 sterling.

Our only income for the rest of the year was interest on this money; rates had turned the corner from the previous year, although not back to 2000-2001 standards, and amounted to £140.77.

Main expenditure – IFPS support money, amounting to £3702.46 sterling was transferred to the 11 IPC Organising Committee account in Spain.

Current account

Income balance – at the beginning of the new fiscal year: £2574.03 sterling. Income for year from affiliated society dues; an IUGS award of

\$1000.00 = £594.39, and interest on the current account, left us with a healthy balance of £4588.36 at the end of the year.

Three affiliate societies are in default for non payment of dues.

Main expenditure – printing 300 copies of two issues (26/1; 26/2) of PALYNOS to Russia and China - £968.16.

1st May 2004 – 30th June 2004

Deposit account

At the beginning of the new fiscal year we had a balance of £12920.03 sterling. Income – a second award from IUGS of \$1000.00 equal to £537.11.

Main expenditure – IFPS award money for 11 IPC sent to 11 IPC Bank account, for distribution to awardees at registration – cost in sterling £6752.65; not yet paid out: fees for printing 3rd Edition of World Directory.

Current account

Income balance – at the beginning of the new fiscal year: £4588.36 sterling. Income from affiliated society dues are coming in but are far from complete, so far only received from seven societies.

Expenditure so far – mailing PALYNOS 26/1; 26/2 to China and Russia £152.35.

Madeline Harley, IFPS Secretary-Treasurer

XI INTERNATIONAL PALYNOLOGICAL CONGRESS

4-9 July 2004, Granada, Spain.

With just four weeks to go before the beginning of the 11 IPC I would like to inform you about several aspects which will help us to make the conference run smoothly.

1.- CONTRIBUTIONS

The conference centre has an internal network, which sends all the presentations to the appropriate room where your talks will be given.

ORAL CONTRIBUTIONS: Your power-point and slide presentations must be handed in at least the day before you are due to give your talk, so that the technical secretary can check that everything is in order for the smooth running of the conference. The presentations should be handed in to the audio-visual secretariat, which is on the first floor of the conference centre, beside the Andalucía rooms. Talks are scheduled to last for 15 minutes, including any questions. It is essential that everybody is very careful to keep to this schedule.

POSTER CONTRIBUTIONS: Your session organisers will inform you during the conference if your poster has been selected as a brief oral presentation in your poster session. If your poster is selected remember that you should hand in for checking slides or any materials you have for your presentation to the audio-visual secretariat, at least the day before you are due to give your poster presentation, which is on the first floor of the conference centre beside the Andalucía rooms.

2.- NAME TAG

For security reasons participants and registered accompanying persons are requested to wear their official identification name tag at all times during the conference within the Exhibition and Conference centre. You will be given your name tag when you receive your documentation at the registration desk. The security staff will be checking these name **tags at the entrance to the conference centre.**

3.- PROGRAMME

You can find the conference programme and the timetable at www.11ipc.org to check the date and time of your contribution.

4.-OPTIONAL SCIENTIFIC EXCURSION TO SIERRA NEVADA

We have planned a scientific excursion to Sierra Nevada on Tuesday, Wednesday and Thursday. If you are interested please check the programme and send an e-mail to aerobio@ugr.es indicating the day you would like to go on the excursion. The price of the excursion includes lunch.

You will have to pay (30 euros) the technical secretary at the registration desk when you arrive, but we need to know how many people are interested because the minimum number of people per excursion is 30 participants and the maximum 50 participants.

Thank you very much for all your support and contributions to the efficient running of the conference.

We look forward to welcoming you here in Granada,

Ana T. Romero, Chairwoman 11 IPC

Awards towards the costs of attending 11 IPC

This year three award funds were available to assist with the costs of attending 11 IPC. Graduate students or professional researchers, experiencing financial difficulties, but with an accepted poster or oral presentation, were eligible to apply. In total 67 people received an award from one of the following funds:

The 11 IPC Award Fund for registration and accommodation; the IFPS Award Fund with cash awards of €500.00 to be used towards costs incurred in attending 11 IPC (these monies distributed at the Conference registration desk), and the AASP Award fund which provided awards for travel and, during the conference, will allow the students who applied to the AASP Awards Committee to compete for best student paper, prizes awarded being for accommodation.

Together, the Award Funds have provided some form of financial support, or support in kind, to 11 IPC delegates from no less than 29 countries: Argentina, Australia, Bulgaria, China, Colombia, Eire, France, Greece, Hungary, India, Israel, Italy, Japan, Mexico, New Zealand, Poland, Portugal, Romania, Russia, South Africa, South Korea, Spain, Sweden, Switzerland, Togo, Uganda, UK, Ukraine, USA

FUTURE MEETINGS

GSA Annual meeting, Denver, Colorado, November 7-10, 2004

Dear Colleagues,

I wish to draw your attention to the following topical session at the 2004 Geological Society of America meeting in Denver this November. Oral and poster papers are being solicited. Note: Abstracts are due July 13, 2004:

Session T54: The Evolution and Expansion of C4 Plants

Conveners: Mark Pagani (Yale University);
Darren Gröcke (McMaster University)

This session explores the history of C4 photosynthesis during the Mesozoic and Cenozoic. We hope that this session will bring together a varied audience due to the cross-disciplinary nature of this topic and ultimately help us to understand the relationship between the evolution/expansion of C4 plants and the history of atmospheric CO₂ concentrations, annual minimum temperatures and hydrologic cycle.
ORAL and POSTER

<http://www.geosociety.org/meetings/2004/topical.htm>

Sincerely,

Darren R. Gröcke
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XI Russian Palynological Conference, Moscow, September 2005

The XI Russian palynological conference will be held on September, 2005 at the Paleontological Institute of the Russian Academy of Sciences (Moscow). Presentations on all branches of modern palynology are welcome. The working language is Russian, but English presentations are acceptable. Contact

Address: e-mail vkras@paleo.ru, phone (7095) 3396022, fax (7095) 3391266. More information will be available at www.paleo.ru at the end of this year.

Contact : Natalia Zavialova zavial@mail.ru

NEWS AND VIEWS

Pollen and plant DNA

Fossil pollen data have shown their usefulness and accuracy in reconstructing past landscapes and past climates and in depicting the imprint of human inferences. These palaeo-reconstructions have been based either on separate times series or a dataset built from published work. Huntley and Birks (1983) have provided a solid understanding of the history of much of the European taxa, and many of the hypotheses and explanations have been confirmed in later works.

During the past few years, hundreds of pollen records have been collected and archived in a few relational databases (see <http://www.ngdc.noaa.gov/paleo/pollen.html> and mirror sites). Harmonizing and standardizing these available times series over a continent in one single database and making it accessible through the internet allowed the palynological community not only to perform different palaeoenvironmental reconstructions based on raw data but also to ease the refinement of these reconstructions with the use of other proxies such as insects, macrofossil remains, lake level status etc.

Besides these "classical" multiproxy studies one should add the phylogeographic works which involve palaeo-environmental reconstructions and genetic data. Several studies have used the post-

glacial history of species to explain observed patterns in modern genetic diversity. One early example is the study of the lodgepole pine (*Pinus contorta* ssp. *latifolia*) by Cwynar and MacDonald (1987). In this original and pioneer work, existing pollen diagrams were used to estimate the founding ages for a set of populations of the lodgepole pine. Currently, although it is now widely accepted that past environmental changes had a direct impact on the modern genetic diversity of many plant species (Petit *et al.*, 2003; Lascoux *et al.*, 2004), studies involving directly genetics and paleoenvironmental reconstructions remain few.

In Europe the pedunculate oak is a good example that illustrates the amount of information one may obtain concerning its modern intraspecific diversity from a combined genetic and paleoenvironmental survey (Kremer *et al.*, 2002, Petit *et al.*, 2002). A selected genetic marker reflects the history of the taxon, for example the maternally inherited chloroplast DNA (cpDNA) in deciduous oaks. The low changes in its cpDNA structure mean that the cpDNA will only differ in populations that have been isolated during a long period of time. Glacial periods were sufficiently long for differentiation to occur at the genetic level between populations which were isolated in glacial refugia. However, as the genetic data contains no temporal information, it is hard to determine from which area a taxon may originate and following which routes it reached its present day location.

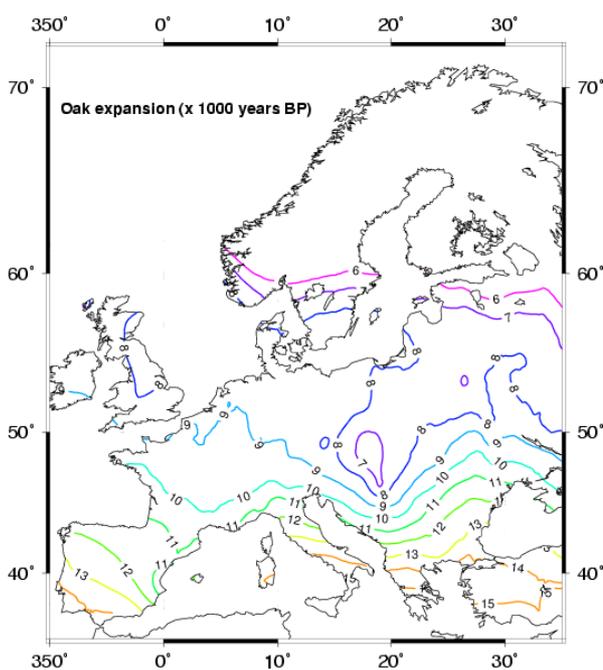


Figure showing the migration of *Quercus* deciduous through the last glacial-deglacial transition and the Holocene. Data expressed as isochrone curves in k-years (B.P.)

In fact, a network of data extracted from a database such as the European Pollen Database (http://www.ngdc.noaa.gov/paleo/epd/epd_main.html) helps not only in depicting these refugial areas during the last glacial period but also in reconstructing recolonisation routes that have been taken during the postglacial period. Concerning oak, fossil pollen data show that during the last glacial period its distribution range was constrained to a few restricted areas where local climate conditions allowed its survival. These refugial areas were identified by the pollen data in the Iberian and the Italian peninsulas and the Balkan area (Brewer *et al.*, 2002: figure).

Kremer *et al.* (2002) stated that genetic differentiation is retained during the process of recolonisation during the post-glacial period, and it may subsequently be used to infer details of this process, by examining the distribution of appropriate genetic markers, as modern populations will have the same genetic structure as their ancestors in the original refugia.

Brewer, S., Cheddadi, R., Beaulieu, J.L. and Data contributors. 2002. The migration of deciduous *Quercus* throughout Europe since the last glacial period. *Forest Ecology and Management*, Vol. 156 (1-3): 27-48.

Cwynar LC & MacDonald GM. 1987. Geographical variation of lodgepole pine in relation to population history. *Am. Nat.*, 129, 463-469.

Huntley, B. and Birks, H.J.B. 1983. *An atlas of past and present pollen maps for Europe: 0-13000 years ago*. Cambridge University Press, 667 pp.

Kremer, A., Kleinschmit, J., Koenig, A. Cundall, N. and coworkers. 2002. Is there a correlation between chloroplastic divergence and phenotypique or nuclear genetic divergence in European oaks? *Forest Ecology and Management*, Vol. 156 (1-3): 75-87.

Lascoux, M, A.E. Palme, R. Cheddadi and R. G. Latta. 2004. Impact of the Ice Ages on the genetic structure of trees and shrubs. *Philosophical Transactions of the Royal Society of London Series B*, 359, 197-207.

Petit, R. J., Brewer, S. Bordacs, S.B. Burg, K. Cheddadi, R. *et al.* 2002. Postglacial colonisation routes of European white oaks inferred from the variation of chloroplast DNA and from the analysis of fossil pollen. *Forest Ecology and Management*, Vol. 156 (1-3): 49-74.

Petit, R.J., Aguinagalde, I., Beaulieu, J.L., Bittkau, C., Brewer, S., Cheddadi, R., Ennos, R., Fineschi, S., Grivet, D., Lascoux, M., Mohanty, A., Muller-Starck, G., Demesure-Musch, B., Palmé, A., Pedro Marti, J., Rendell, S., Vendramin, G.G. 2003. Glacial refugia: hotspots but not melting pots of genetic diversity. *Science*, 300: 1563-1565.

R. Cheddadi, S. Brewer, R. Petit, J.L. de Beaulieu

New IGCP Project 499

“Devonian Land-Sea Interaction: Evolution of Ecosystems and Climate (DEVEC)”

Leaders of the project:

Dr. Peter Königshof (*),
Dr. Jurga Lazauskiene (**),
Dr. Eberhard Schindler (*), Dr. Volker Wilde (*) and Prof. Dr. M. Namik Yalçin(***)



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The Devonian was a critical period with respect to the diversification of early terrestrial ecosystems. The geotectonic setting was characterized by the switch from the post-Caledonian to the pre-Variscan situation. Plant life on land evolved from tiny tracheophytes to trees of considerable size in combination with a global increase in

terrestrial biomass, and vertebrates started to conquer the land. Extensive shallow marine areas and continental lowlands with a wide range of different habitats existed which are preserved in a large number of basins all around the world. Climate change finally led from greenhouse to icehouse conditions towards the end of the Devonian. Both, rapid evolution of terrestrial ecosystems and climate change had a pronounced influence on sedimentation and biodiversity not only in the terrestrial but also in the marine realm (“Devonian Change”). A major goal of the proposed project will be to focus on controls and interactions of the respective facies parameters in different paleogeographic settings in order to refine the global picture by international co-operation in a number of case studies. Geoscientific co-operation will include a variety of disciplines, such as sedimentology, paleontology, stratigraphy, paleoclimatology, paleogeography, geochemistry, paleoceanography, and structural geology.

The rapid evolution of early life on land and its interaction with sedimentary processes, climate, and paleogeography, both on land and in marine settings, will be covered by studies in different terrestrial and marine facies. Increasing colonization of the land by plants in combination with soil-forming processes and changing runoff led to major changes of sediment input into the marine system. On the other hand, sediment input and climate are major controls for carbonate production and reef development. The study of responses and interactions thus needs detailed characterization of facies and high-resolution correlation which can only be provided by a refined stratigraphy including biostratigraphy, lithostratigraphy, chronostratigraphy, etc. Characterization of facies and correlation of stratigraphic units is especially difficult in marine-terrestrial transitions and will be an important focus of the project. Resolution of sea-level changes will be enhanced by recognition and exact correlation of their effects which may be hidden just in these transitions. On the background of the global geotectonic situation (paleogeography s.l.), this will be an important prerequisite for a better discrimination of eustatic, climatic, and biotic controls, both on regional and global scale.

The focus of the project concerns the interrelated evolution of terrestrial and marine paleoecosystems with respect to biotic and abiotic

factors in space and time. Studies will include individual paleoecosystems and their components as well as their paleobiogeographic distribution. Biotic and abiotic factors of paleoecosystems are controlled by both, earthbound and extraterrestrial triggers causing either cyclicity and/or distinct events. Thus in turn, such studies may give a clue to underlying causes of global changes. The project will include sedimentologic and climatic controls of reef development and distribution as well as diversity, and paleoecology of reef building organisms throughout the Devonian, because the Middle to Late Devonian was a peak in reef development with reefs spreading into latitudes as high as 45-60 degrees. On the other hand, accommodation space for Early Devonian reefs was greatly reduced due to major input of sediment from the continents in combination with sea-level lowstand(s). A marked decline in reef development towards the end of the Devonian was probably caused by climatic deterioration.

The integrative kind of research which is needed for the success of the proposed project can only be carried out by a worldwide network of research groups representing different disciplines. Such a network can now be based on core groups successfully participating in the recently terminated IGCP 421. Furthermore, the project will extend the results of the former IGCP 328. It will actively interlink with the existing IGCP 491 which is mainly centered around vertebrate research. But, the proposed project will concentrate on the correlation and interaction of different ecosystems in a more general way. Special attention will be paid to coupling effects between the terrestrial and marine realm. Co-operation is also intended with the proposed IGCP "The Rheic Ocean: its origin, evolution and correlatives". Furthermore, an active network is represented by the members of the "Subcommission on Devonian Stratigraphy" (SDS). These existing networks will be integrated and thus providing the necessary base for an improved understanding of the Devonian period. A number of the respective colleagues and working groups have already agreed to contribute to the proposed project (see letters of support).

For supporting the network and communication among the participants there will be a website provided which will be hosted at the Senckenberg Research Institute and Natural History Museum. It will include links to participating

groups/institutions and other relevant sites such as funding agencies.

Further information may be obtained from the respective website www.senckenberg.de/igcp-499/

Colleagues interested in participation should contact one of the leaders in Frankfurt, for palynology/palaeobotany preferably V. Wilde; colleagues from Turkey should directly contact M. N. Yalçin (all contact details see above). Mailing address for all of the project leaders in Frankfurt is: Forschungsinstitut und Naturmuseum Senckenberg, Senckenberganlage 25, D – 60325 Frankfurt am Main, Germany.

WHO KNOWS?

- Who published the first pollen diagram in Europe? Is there any picture of this?
- Where is it possible to get Lycopodium tablets?
- Is some one able to determine this pollen grain from a surface sample from Albania?



Please send your response to the PALYNOS Editor : Anne-Marie Lézine

NEW BOOK

L'Evolution de la Végétation depuis deux millions d'années

Anne-Marie Sémah and Josette Renault-Miskovsky
Errance Editions, Paris
ISBN 2-87772-278-3, 22 euros

This book starts with a brief overview of the main methods of vegetation reconstruction (Palynology, Anthracology, Carpology, Rock painting from archaeological sites) and with a pollen chronology in Europe from the Plio-Pleistocene to the Holocene. The history of the

main ecosystems of the world is illustrated through selected samples.

With contributions from R. Cheddadi, A. Chepstow-Lusty, D. Jolly, V. Lebreton, M.-P. Ledru, J. Maley, L. Scott and E. Van Campo. Introduction by A. Le Thomas

IN MEMORIAM

Pim Brugman

In November 2003, Pim Brugman passed away due to the effects of MS.

Willem Adriaan Brugman (Pim) was born in 1952.

During his youth he lived for several years in

Canada, providing his Dutch with a nice Canadian accent. After his high school he studied geology in Utrecht. In 1984, he completed his Ph.D. research on Permian-Triassic palynology. He then became Assistant Professor at the Laboratory of Palaeobotany and Palynology in Utrecht.

In 1990, Pim left Utrecht for The Hague, to work for Shell International. Due to his illness, he gradually had to give up working, until he could not continue with palynology anymore in 1994. Although this ended his active career, a few colleagues and former students remained in contact with him. He continued to contribute to their work by providing data and thoughts.

Pim was very passionate about his work. He loved palynology. In Utrecht, he was involved in the start-up of many research topics, such as dinocyst studies and palynofacies analysis. Perhaps his greatest achievement was the successful application of ecological interpretations of pre-Quaternary palynomorph records. Pim has left a large amount of still unpublished work as Internal Reports of the Laboratory of Palaeobotany and Palynology. Most famous is his Report on Permian-Triassic palynology, which remains, to many, a standard guidebook.

On reflection, Pim was an inspiring and innovative palynologist with a good sense of



humor. Those who knew him well will surely miss him. May his family have the strength to bear their loss.

One of Pim's last wishes was to support MS research (see <http://www.msresearch.nl>), and any contribution in his name would be a small tribute to him.

Oscar Abbink (o.abbink@nitg.tno.nl)

Henk Visscher (h.visscher@bio.uu.nl)

Karl Mädler

I am sorry to have to inform you that Dr. Karl Mädler passed away October 22nd, 2003. Born in 1902, his life literally spanned a century.

Initially trained as a pharmacist his first professional appointment happened to be at Seiffhennersdorf, a small town in Saxony which is well known to palaeobotanists for the site of a rich Oligocene flora. There he gained interest in fossil plants and applied for a doctoral thesis with Prof. Richard Kräusel at the University of Frankfurt am Main in 1931. Following Kräusel's suggestion, he started to work on an exceptionally well preserved diverse Pliocene flora which was recovered from the construction site of the sewage treatment plant for Frankfurt (well known as "Klärbecken-Flora"). Due to unfortunate circumstances, he was not able to receive his degree at that time, but the results of his work were published as a monograph in 1939 ("Die pliozäne Flora von Frankfurt am Main") in the "Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft, 446". Applying cuticular analysis to the leaves and including fruits/seeds, this is an early and still important example of a synoptic publication on a Late Neogene flora.

Following the turmoil of the war and post-war years, Karl Mädler started his permanent professional career as a palaeobotanist with the German Geological Survey (Hannover) in 1955. His research was now directed mainly towards application and focussed on "micropalaeobotany". This led to a number of pioneering contributions on charophytes (starting



in 1953), on Mesozoic megaspores (Mädler 1955), and in Mesozoic palynology. He finally received his doctoral degree (Dr. rer nat.) in 1963 from the Technical University of Hannover with a thesis on spores and pollen from the German Triassic (“Die geologische Verbreitung von Sporen und Pollen in der Deutschen Trias”) which was published in 1964 as “Beihefte zum Geologischen Jahrbuch, 65”. When working on Mesozoic microfloras, he also realized the importance of remains of the microplankton (Mädler 1963, 1967, 1969) which is highlighted by his thorough study of the organic-walled phytoplankton from the Lower Jurassic Posidonia Shale (Mädler 1963, 1969). His palynological expertise was repeatedly demanded even by archaeologists for unraveling the origin of jet which was found in excavations (Mädler 1958, 1961, 1974, 1980).

Part of Karl Mädler’s later work was again devoted to macropalaeobotany and is especially documented in some monographs on Cretaceous and Tertiary angiosperm floras. He early recognized that angiosperm paleobotanists were in need of a classification for leaves (Mädler 1940, 1950, Mädler & Straus 1971), but the classification proposed by him (Mädler 1975) was never widely accepted. One of his late papers is dealing with Pliocene charophytes and was published at the age of 86.

Even at the age of 90, Karl Mädler published a Permian flora. He still regularly attended

meetings of the German Palaeontological Society and the group of German-speaking palaeobotanists (APP). When asked, he still liked to help with important information and advice from his long-lasting experience. He is remembered as a modest man never really boasting himself, but he was well recognized by the community of German speaking palaeontologists. In spite of a number of pioneering contributions to palaeobotany and palynology, Karl Mädler’s international recognition regrettably always remained limited because he published his work mostly in German; only three out of his 54 publications are in English.

An appreciation of Karl Mädler was published by Benda (1996) in a special issue (200) of the “Neues Jahrbuch für Geologie und Paläontologie Abhandlungen” at the occasion of his 95th birthday. A complete list of Karl Mädler’s publications was compiled by Heunisch & Wilde (2003) for the APP-Rundbrief which can be found on the internet (www.uni-muenster.de/GeoPalaeontologie/Palaeo/Palbot/apptext.htm). The attached photograph of Karl Mädler in his garden at the age of 80 is from private sources and was passed on by C. Heunisch. W. Riegel has to be acknowledged for commenting the text on this obituary.

Volker Wilde, Frankfurt am Main

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and don’t forget to visit our IFPS web site at:

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