

PALYNOS

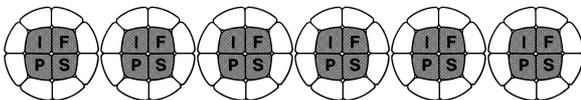
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NEWSLETTER OF THE INTERNATIONAL FEDERATION OF PALYNOLOGICAL SOCIETIES

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MEETING REPORTS

2010 Linnean Society Palynology Specialist Group: Pollen and Spore Research: Morphology, Ecology and Phylogeny, London, October 28, 2010



The annual meeting of the Linnean Society Palynology Specialist Group (LSPSG) was held at the Linnean Society of London, Burlington House, Piccadilly, London (<http://www.linnean.org>) on Thursday 28

October. As is the usual custom, it followed the Linnean Society Palaeobotany Specialist Group's annual meeting held the previous day, on Wednesday 27 October. This facilitates attendance at both meetings by members of both groups and encourages cross-fertilisation of ideas and discussion. The Palynology meeting was attended by over thirty people representing a good cross-section of the palynological community. Eight talks were presented (summarised below) that gave an excellent representation of the scope and breadth of modern pollen and spore research. As was hoped, this varied programme generated a great deal of lively discussion, both during the sessions and in the coffee breaks. This was further continued at the wine reception held after the meeting in the Library of the Linnean Society. The LSPSG is one of the Specialist Groups of the Linnean Society and we are grateful for the Society's continued support. We are a friendly group that welcomes new members (there is no membership fee) with an interest in any aspect of pollen and spores. Next year's (2011) meeting will be held at the Linnean Society in late October. Details will be available from Carol Furness (c.furness@kew.org). Why not come along, or, better still, offer to present a talk?

2010 talk summaries:

Simon Wallace, University of Sheffield: *How plants conquered the land: an EvoDevo analysis of the spore wall*

By examining the results of a fully replicated microarray analysis at early and mid stages of moss sporogenesis, up and down regulated genes have been compared with those known to be involved in pollen wall development, therefore allowing the identification of candidate genes likely to be involved in the development of the spore wall and consequently the ability of the sporophyte to survive in the terrestrial environment.

Robert Grant-Downton, University of Oxford: Small RNAs and the male gametophyte: great leaps in small steps

In flowering plants, small RNAs are essential for normal developmental processes. However, until recently nothing was known about small RNAs in the gametophyte stage of the life cycle. We have discovered a novel class of small RNAs in *Arabidopsis thaliana* pollen and we present compelling evidence that they have a critical function in late pollen development, including germination and pollen tube growth.

Sophie Nadot, Université Paris-Sud: Constraints and selection on pollen aperture determination

Microsporogenesis is a key event in pollen development during which aperture pattern determination takes place. A number of features of microsporogenesis have been shown to play a role in the relative distribution of apertures on the surface of the pollen grain. These features include the type of cytokinesis, the way intersporal callose walls are formed, the resulting tetrad shape, as well as the way additional callose is deposited in the tetrad. We discuss the relative contribution of these features to the design of the aperture pattern.

Carol Furness, Royal Botanic Gardens, Kew: Pollen of early-divergent monocots

Pollen and anther characters including microsporogenesis, tapetum and pollen apertures have been shown to be key characters in monocot phylogenetics, especially in the lilioid orders Asparagales and Liliales. This talk reviews these features in the order Alismatales, and compares them with other early-

branching and lilioid monocot lineages. Current phylogenetic data indicate that the characteristic smooth, exineless pollen of Alismatales has evolved iteratively within the order, probably related to the aquatic or semi-aquatic habit that is characteristic of many alismatid species.

*Jeff Ollerton, University of Northampton: Fly pollination in *Ceropegia* (Apocynaceae: Asclepiadoideae): biogeographic and phylogenetic perspectives*

Ceropegia (Apocynaceae subfamily Asclepiadoideae) is an Old World plant genus of more than 180 spp., all of which possess distinctive flask-shaped flowers that temporarily trap pollinators, and (like all asclepiads) pollen presented as structurally coherent pollinia. The taxonomic diversity of pollinators, biogeographic and phylogenetic patterns of pollinator exploitation, and the level of specificity of interactions were assessed in order to begin to understand the role of pollinators in promoting diversification within the genus.

Dianne Edwards, University of Cardiff: Ultrastructure of permanent dyads in Lower Devonian valvate sporangia

In screening hundreds of sporangia from a Lower Devonian (Lochkovian) locality in the Welsh Borderland we recovered five very fragmentary specimens united in the presence of four valves and in containing sculptured, permanent dyads. TEM studies have revealed a multilayered wall in two of the specimens. This ultrastructure is compared with that observed in dyads isolated from older rocks. Its relevance to the formation of dyads during meiosis as well as the development of the wall itself are mulled over.

*Jiřina Dařková, University of Birmingham: *Narthorstia* versus *Konijnenburgia* – why introduce a new taxon?*

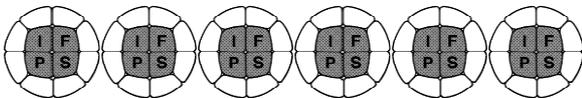
Narthorstia angustifolia from the Lower Cretaceous of Greenland was revised and the true status of the genus *Narthorstia* has been verified in 2007 (Kvaček and Dařková). *Narthorstia* was redefined as a morphogenus of fern foliage recalling the family Matoniaceae, but lacking diagnostic characters of this family:

sori consisting of radially arranged sporangia having Matoniaceae spores in situ. It was the first step in establishing the new genus of unequivocal Cretaceous fossil Matoniaceae: a new genus *Konijnenburgia* was introduced in 2010 (Kvaček and Dašková).

Phil Jardine, University of Birmingham: The nature of tropical expansion during global greenhouse climatic phases

Global mean annual temperature (MAT) has previously been shown to correlate well with sporomorph (pollen and spore) standing diversity and turnover in the Palaeogene equatorial neotropics. We test the generality of this result in the middle latitude paratropics using sporomorph data from the US Gulf Coastal Plain (GCP). Our time-series extends across ~ 18 Ma from the late Early Paleocene to the Middle Eocene.

Report by the meeting organiser, Carol Furness (Royal Botanic Gardens, Kew, c.furness@kew.org)



FUTURE MEETINGS

2011 4th Joint Silicofossil-Palynology Group Specialist Meeting of the The Micropalaeontological Society, Tromsø, Norway, March 31-April 1, 2011

This meeting will take place on 31st March 2011 at the University of Tromsø, Norway, and will be locally coordinated by Catherine Stickley (catherine.stickley@npolar.no). As with previous joint meetings (UEA 1992, Cardiff 2004, Utrecht 2006), this conference will take advantage of the shared interests and expertise of these groups' members, and will bring together exciting new developments in silicofossil and palynological research. The meeting will include a day of talks and discussions followed by a wine reception. We also invite you to join us for dinner in the city

of Tromsø at a popular traditional restaurant. On 1st April there will be an optional afternoon through evening tourist excursion to the Norwegian fjords by bus and boat that will hopefully take in the Northern Lights (both meal and excursion to be paid for by participant). If necessary, talks may continue into the morning of April 1st prior to the excursion. Please note that there is no registration fee for the event. Non-members of TMS are welcome to attend. We welcome abstract submissions for oral presentations of 20-30 minutes duration including questions. Submissions can be on any aspect of siliceous micropalaeontology or palynology. Abstracts should not exceed 250 words, and should also include the presentation title, names of authors and their affiliations. An abstract template is available for download at http://www.nhm.ac.uk/hosted_sites/tms/silicopaly2011.htm; please use this when preparing abstract submissions. Abstracts should be submitted by 14 March 2011 to Phil Jardine (Palynology Group Secretary) at pej083@bham.ac.uk.

Tromsø is a vibrant, picturesque city nestled between stunning mountains and fjords more than 300 km inside the Arctic Circle. Known as the 'Paris of the North', it is a popular tourist destination as well as the first, or last, mainland port of call for scientists carrying out research in the Arctic. Further popular information can be found here:

<http://www.destinasjontromso.no/english/>

Local meeting information will become available nearer the time. Please see

http://www.nhm.ac.uk/hosted_sites/tms/silicopaly2010.htm for updates.

2011 XVIII. INQUA-Congress, Bern, Switzerland, July 20-27, 2011

The next INQUA-Congress will be held 20-27 July 2011 in Bern, Switzerland. See <http://www.inqua2011.ch/> for further details.

2011 Pan American Aerobiology Symposium (PAAA), San Diego, USA, August 7-9, 2011

This symposium will be held at the Bahia Resort Hotel, San Diego. Abstract submission by April 30, 2011. For further information: <https://sites.google.com/site/paaa2011aerobiologysymposium>

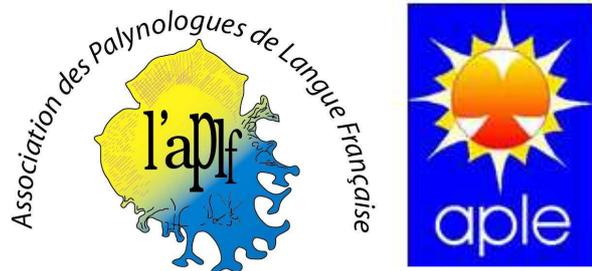
2011 XIII All-Russian Palynological Conference, Syktyvkar, capital of Komi Republic, Russia, September 5-8, 2011

The next XIII All-Russian Palynological Conference with foreign participation will be hosted by the Institute of Geology and Institute of Biology of the Komi Science Centre of the Ural Branch of the Russian Academy of Sciences. Conference theme will be on "Problems of a modern palynology". the purpose of the conference will be the widest exchange of opinions on the basic theoretical and practical problems of palynology. For more information see www.geo.komisc.ru/news/confer/2011/

2011 6th International Conference on Environmental Micropaleontology, Microbiology and Meiobenthology (EMMM), Moscow, Russia, September 19-22, 2011

This EMMM conference will take place at the A.A. Borissiak Paleontological Institute of the Russian Academy of Sciences in Moscow. Abstract submission by April 1st, 2011. More information is available at www.paleo.ru/EMMM-2011

2011 XXII APLF Symposium and XVIII Symposio de l'APLE, Meudon (Paris), France, September 19-23, 2011



The APLF and APLE Joint Symposium will take place in September 2011 in Meudon, France, around the subject of *Palynology and Diversities: tools, landscapes, methods, models, applications*. This Joint Meeting will take place at Meudon Bellevue, headquarters of the regional delegation 05 CNRS, 1 place Aristide Briand, in Meudon, and will be organized by Agnès Gauthier (UMR 8591 CNRS), Nathalie Combourieu Nebout (UMR 8212 CNRS), and Vincent Lebreton (UMR 7194 CNRS), as well as by D. Fernandez-Gonzales (Universities of Leon, Spain) and M.R. Rivas Carballo (University of Salamanca, Spain). The [French language Palynology Association \(APLF\)](#) and the [Spanish language Palynology Association \(APLE\)](#) federate many scientists involved in Sciences of the Nature, of the Earth, of the Man and of the Society. As an extension of the year of biodiversity, the main theme of the next symposium of the APLF/APLE focuses on the diversity through the Palynology. Under the title *Palynology and Diversity* it is aimed at exploring the multiple markers (pollen grains, spores, dinoflagellate, acritarchs, quitinozoos, NPPs, microcharcoal, etc.), media (temperate, mediterranean, tropical, peat bogs, lakes, ponds, marine), methods (morphology, taxonomy, analysis, statistical), models (calibration, maps of vegetation, quantification climatic, analysis of data) and applications (aeropalynology, allergology, biology of the reproduction, melisopalynology, paleontology, ecology, climatology, archeology) developed and used by the community of palinologist. We hope that this issue, totally

open, raise your interest and we can meet to make discussions rich and animated concerning our investigations. All the scientific presentations to address any of the thematic mentioned, will be welcome. Abstract submission by April 20, 2011.



For more information see:
<http://w3.laplf.univ-tlse2.fr/> or
<http://aple.usal.es/home.htm>

2011 DINO9: 9th International Conference on Modern and Fossil Dinoflagellates, Liverpool, UK, August 28-Sept. 2nd 2011



This Ninth International Conference on Modern and Fossil Dinoflagellates will be held at the University of Liverpool, UK. The overarching aim of the conference is to bring together researchers working on present day dinoflagellates with those working on dinoflagellates in the fossil record to foster interdisciplinary understanding and collaboration. Four workshops are planned with themes to be decided. Organizing committee: Fabienne Marret (School of Environmental Sciences, Liverpool, UK) and Jane Lewis (School of Life Sciences, University of Westminster, UK). To contact us: dino9@liv.ac.uk. Further details are available from the following website: <http://pcwww.liv.ac.uk/~dino9/index.htm>

2011 AASP Annual Conference, Southampton, UK, September 5-7, 2011

This AASP conference will immediately follow [DINO 9](#), which is to take place at the University of Liverpool 28 August-2 September. Pre- and post-meeting day-long fieldtrips are being planned to the Dorset Jurassic coast and the Isle of Wight. Registration will be handled by personnel at Southampton University. It is expected that registration will run about 100 £. For further details see www.palynology.org/meetings.html

2012 34th International Geological Congress, Brisbane, Australia, August 5-10, 2012

The 34th International Geological Congress will be held in Brisbane, Australia. Further information at <http://www.34igc.org/>.

2012 IPC XIII / IOPC IX Joint Meeting in Tokyo, Japan, Aug. 23-30, 2012

The joint meeting of the 13th International Palynological Congress (IPC-XIII 2012) and the 9th International Organisation of Palaeobotany Conference (IOPC-IX 2012) will be held in Chuo University, Tokyo, Japan, under the theme: **Palynology and Palaeobotany in the Century of the Environment**.

Our world is changing dramatically. There are many urgent environmental issues, such as pollution, climate change, landscape and land-use changes, that have affected ecosystem, biological diversity and human life. Palynology and Palaeobotany have provided baseline information on the past biological and environmental changes, which have in turn become critical for sustainable environmental management and nature conservation. In Japan and elsewhere more medical doctors are actively involved in Aerobiology and Palynology to prevent further spread of pollen-related allergies influenced by human-induced environmental changes. Our disci-

plines now have wider implications and applications relevant to the modern society than ever. The main theme is thus timely for the IPC/IOPC 2012 meeting in Tokyo, Japan. Please visit <http://wwwsoc.nii.ac.jp/psj3/> for more information. The joint meeting of IPC and IOPC will be composed mainly of plenary sessions, poster sessions and oral sessions, as well as of symposia for special topics (see schedule).

AUG		am	noon	pm	ev
23	THU			Plenary session	ice breaker
24	FRI	Plenary session	poster session 1	session 1-6	
25	SAT	session 7-12	poster session 1	session 13-18	
26	SUN	one day excursion	one day excursion	one day excursion	
27	MON	session 19-24	poster session 2	session 25-30	Banquet
28	TUE	session 31-36	poster session 2	session 37-42	
29	WED	session 43-48	poster session 3	meetings	
30	THU	session 49-54	poster session 3	Closing ceremony	Farewell party

The pre-proposal call for symposia is already open, with a deadline of May 31st, 2011, see http://wwwsoc.nii.ac.jp/psj3/ipc13japan/call_for_symposia/index.htm

Also, attractive field trips and social events will be proposed.

For details on tourism in Japan, see the web sites of JNTO (<http://www.jnto.go.jp/>) and TCVB (<http://www.tcvb.or.jp/>). Why don't you make plan for IPC/OPCC 2012?



Sciadopitys verticillata, endemic to Japan (Photo Takeoka & Takahara)

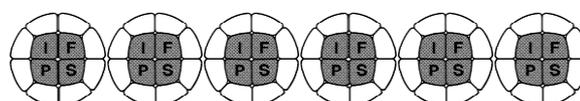
2012 5th ESA-European Symposium on Aerobiology, Krakow, Poland, September 3-7, 2012

The 5th European Symposium on Aerobiology will be held in Krakow, Poland, September 3-7, 2012, and will be organised under the patronage of the Rector of Jagiellonian University. Further Information at <http://www.5esa.cm-uj.krakow.pl/>

Contact person is Dorota Myszkowska (dmyszkow@cm-uj.krakow.pl). Symposium Secretary: 5esa@cm-uj.krakow.pl

2014 9th European Palaeobotanical Palynological Conference (EPPC), Padua, Italy, Aug./Sept., 2014

The Italian group of Palaeobotany and Palynology is very glad to be able to invite all of you to Padova in the year 2014 for the next EPPC. Padua (Padova in Italian) is a picturesque, historic city in Northern Italy (about 40 km west of Venice), with a dense network of arcaded streets, large communal "piazza" (squares) and many bridges crossing the various branches of the Bacchiglione. It hosts the almost 800 years-old Università di Padova, which is famous for having had Galileo Galilei among its lecturers as well as important palaeobotanists of the XIX century: Abramo Bartolommeo Massalongo and Barone Achille de Zigno. All scientific sessions will be held at the new Department of Geoscience, however also the famous Botanical Garden and the Museum of Palaeontology will be involved during this conference. Field-trips are planned in the fascinating landscapes of the Dolomites, Sardinia, Emilia-Romagna, Latium and Tuscany. The conference date is planned to be the end of August-beginning of September. In order to favor the attendance of young scientist it will be tried to use University residences. Hope to see you all in Padova! The EPPC 2014 organizing group Edoardo Martinetto (Präsident, Università di Torino), Guido Roghi (Vize-Präsident, CNR Padova), and Evelyn Kustatscher (Secretary, Naturmuseum Südtirol). For further information please contact Evelyn.Kustatscher@naturmuseum.it



PALYNOLOGICAL SPECIAL ISSUES

QUATERNARY INTERNATIONAL VOL. 225 (1) 2010: Palaeobotanical and Palynological Records from Italy

The special issue “Palaeobotanical and Palynological records from Italy” was published in September 2010 in Quaternary International (Volume 225, Issue 1), the official journal of the International Union for Quaternary Research and guest edited by Adele Bertini and Laura Sadori. Articles can be downloaded from

http://www.sciencedirect.com/science?_ob=ArticleListURL&_method=list&_ArticleListID=1552535152&_sort=r&_st=13&view=c&_auct=C000058858&_version=1&_urlVersion=0&_userid=2814622&md5=d9657822430eac8a3f3d72fb3be406d0&searchtype=a

In the last years, the Pliocene and Pleistocene have been the subject of much debate, in particular concerning climatic and stratigraphic themes. In Rome, at the end of 2007, a meeting was organized, especially to enable researchers, working on palynology and palaeobotany, to present their latest findings and summarize past evidence for the Italian successions. The workshop was sponsored by GPSBI (Gruppo di Palinologia della Società Botanica Italiana), affiliated to IFPS, and AIQUA (Associazione Italiana per lo studio del Quaternario), affiliated to INQUA. Most of the participants agreed to prepare their articles and thanks to the opportunity given us from Quaternary International we decided to welcome the presented papers covers as well as three invited papers. The assortment of papers comprehends ten contributions (with records spanning from Pliocene to Middle Pleistocene) plus the introduction: five propose new data from central and southern Italian sites, three are prevalently methodological papers whereas two are mainly synopses. Papers were accepted for online publication within the time interval which just preceded and followed the vote of the IUGS Exe-

cutive Committee on 29 June 2009. This explains why some contributions (those accepted earlier) are not updated to the new status of Quaternary, in contrast to others (the last accepted), with the new limit considered.

Submitted by Adele Bertini, Laura Sadori and Norm Catto

PLANT BIOSYSTEMS VOL. 144 (4) 2010: Cultural Landscapes of the Past

The special issue “Cultural landscapes of the past” guest edited by Anna Maria Mercuri and Laura Sadori is the outcome of the idea to present a set of researches centred on past cultural landscapes reconstructed principally on the basis of an integrated archaeobotanical approach, using both pollen and plant macro-remain analyses. The publication of this topic on Plant Biosystems (Volume 144, issue 4), the research international journal edited by the Società Botanica Italiana, accomplishes to our deliberate purpose of emphasizing the role of plants as key elements of the landscape and their consequent invaluable usefulness in revealing past cultural trajectories involving environmental transformations. As archaeobotanical analysis deal with the study of anthropogenic indicators in past contexts, most part of these papers is dedicated to consider and discuss the roles of cultivated and wild synanthropic plants. The papers reported in this special issue present seven examples of archaeobotanical studies from Mediterranean countries, and offer a fairly articulated illustration of how much different contexts can be investigated. The range of time mainly includes Bronze Age and Roman times, but also some reference to later periods are included. Some of these articles are the follow-up of a successful symposium titled “Reconstruction of past cultural landscapes and human-related environmental changes using palynological and archaeobotanical studies” of the Joint 12th IPC - 8th IOP Conference held in 2008 in Bonn. This symposium covered a vast range of input, as 61 abstracts have been received and a two-

days oral session was planned with contributions from many countries. Articles can be downloaded from:

<http://www.tandf.co.uk/journals/TPLB>

Submitted by Anna Maria Mercuri, Laura Sadori and Carlo Blasi

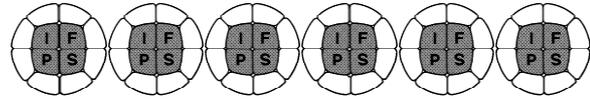
VEGETATION HISTORY AND ARCHAEOBOTANY

VOL. 19 (5-6) 2010: Fresh Insight into the Palaeoecological and Palaeoclimatological Value of Quaternary Non-Pollen Palynomorphs

This special issue edited by Jean Nicolas Haas (University of Innsbruck, Austria) comprises 12 publications from 38 authors on Quaternary non-pollen palynomorphs from England, France, Ireland, Italy, Georgia, Greenland, Ontario, the Black Sea corridor, as well as from the Tibetan Plateau. Nearly all papers (available online at <http://www.springer.com/earth+sciences+and+geography/journal/334>) were either presented at the 2nd International Workshop on Non-Pollen-Palynomorphs (Extrafossils) held at Innsbruck, Austria, in August 2006, or at the 12th International Palynological Conference and 8th International Organisation for Palaeobotany Conference in Bonn, Germany, in August 2008. Since a few years non-pollen palynomorphs (NPPs) have gained increased attention from Quaternary palynologists due to their ubiquity in all kinds of sediments, where they are sometimes more abundant than the total of pollen, fern and moss spores. Remains such as algal propagation cells and cysts, fungal spores and hyphae from plant parasites or coprophilous fungi, plant trichomes, parasite ova, foraminifer linings and Neorhabdocoela eggs, together with textile fibres, among others, do greatly add to the understanding of past ecosystems, climatic change and human impact worldwide. As most algal, cyanobacterial and fungal taxa have a longer geological history than flowering plants, the NPPs presented in this special issue may also be of interest to palynologists and palaeoecologists dealing with pre-Quaternary

deposits. NPPs therefore do deserve our full attention in any palynological study!

Submitted by Jean Nicolas Haas



PALYNOLOGICAL HOMAGE

Dr. Linda Heusser

The French Association of Palynologists (APLF) honoured Dr. Linda Heusser last September (2010) for her major contributions to the Marine Palynology. Linda has worked for many years in the Lamont Doherty Laboratory (New York, USA) being the pioneer of this discipline. She has produced seminal papers on the calibration of marine pollen signals, and vegetation and climate reconstruction of different regions in the world, such as Chile and the eastern of United States. These works have been published in mainstream scientific journals. This homage was held in Bordeaux in the framework of the Workshop on Biomisation organized by the Laboratoire Paléoclimatologie et Paléoenvironnements Marins (EPHE, UMR-CNRS 5805, Bordeaux University) between 27th and 30th September 2010.

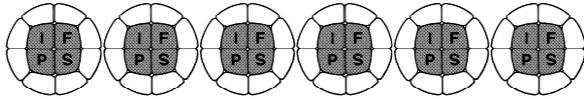


APLF-Homage to Dr. Linda Heusser: From the left to the right: Stéphanie Desprat, Anne-Laure Daniau, Jean-Louis Turon, Linda Heusser, María Fernanda Sánchez Goñi, Nathalie Combourieu-Nebout, Marie-Pierre Ledru and Dunia Urrego.

This workshop was funded by QUEST-DESIRE (NERC-INSU), the International Focus

Group ACER “Abrupt Climatic changes and Environmental Responses” of INQUA.

Submitted by Maria Fernanda Sanchez Goñi



ANNOUNCEMENTS

WORLD DIRECTORY OF PALYNOLOGISTS

Please note that the 4th edition of this invaluable directory has been published as a pdf by Owen K. Davis in 2008. It is available by request only (odavis@email.arizona.edu) or as a copy through your membership in an IFPS affiliated society, please ask your IFPS councillor for it.

Jean Nicolas Haas, editor of PALYNOS

PALYNOLOGICAL DATABASE PALDAT ONLINE – 10 YEARS OF PALYNOLOGICAL RESEARCH ON THE INTERNET

In 2010 we celebrate “PalDat online – 10 years of palynological research on the internet” and therefore PalDat has undergone a complete renovation. The “Society for the Promotion of Palynological Research in Austria” (www.autpal.at, also available in English) and ddc IT Solutions GmbH turn over a new leaf in the history of PalDat. And the best of all: PalDat is royalty-free for everybody! Let’s figure out some of the new main components in PalDat:

1. Online Submission Tool: PalDat submissions are not anymore restricted to the PalDat Team but from now on available for all researchers. We encourage you to publish your data in PalDat. We accept high quality photographs of fossil and recent pollen and/or spores as well as contributions to pollen/spore development and pollination biology. This feature will be available in short.

2. Peer-Review-Process: To guarantee the quality of pictures and descriptions in PalDat we implement a peer-review-process before publishing data on the internet. The process is completely automated and allows reviewers and editors to minimize their expenditure of time. When you are experienced in palynology we invite you cordially to join the group of experts in our team.

3. Forum: PalDat provides from now on a platform to discuss pollen terms and features, identify unknown pollen or spores and keep contact to palynologists in all research fields of palynology. Last but not least it is a big chance to get in touch with the PalDat users.

4. Advanced Functionality: PalDat has undergone the biggest change within the last 10 years and PalDat will be more user-friendly as ever before. The following features appeared to us as useful and will provide a more personal interface for PalDat:

Multi-Language Support: In the last 10 years some people were asking about multilanguage support of PalDat. Our standard answer was: “Definitely No.” But this holds not true anymore. With the new concept of PalDat we can support any language. When you are willing to translate PalDat’s User Interface in a language except for English or German please contact Ralf Buchner at info@paldat.org for more information. Furthermore any suggestion to improve the English or German text is pretty welcome.

SYS – Save Your Search: You need often the same search in PalDat? Just save it to your personal SYS-Folder.

PSA – Pollen Search Agent - coming soon: You are searching for pollen of a specific plant species? No problem: activate our Search Agent and you will be informed when it is published in PalDat.

PIB – Pollen in a Basket: Tired from downloading multiple pdfs? Save the pdfs to your personal basket and download all of them with one click to your hard disk.

SIO – Systematic Information Online: Your species concept varies from that of PalDat? Just change by one mouse click from PalDat’s system to Cronquist, APG II etc.

Submitted by Michael Hesse, PalDat



PalDat - Palynological Database

an Online Publication on fossil and recent Pollen and Spores



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HOME

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single sign-on

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forgot your password?



Centaurea littorale

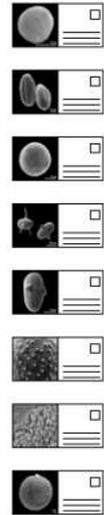
show all latest pictures

At present PalDat provides **12.546** pictures of **1.563** recent species, belonging to **857** genera, and **124** pictures of **32** fossil forms, belonging to **20** fossil genera.

Latest additions: **32** recent species and **0** fossil form species

Abies nordmanniana, *Aceras anthropophorum*, *Alisma lanceolatum*, *Cardiospermum corindum*, *Centaurea littorale*, *Chlorospatha dodsonii*, *Chlorospatha kolbii*, *Coelogyne fimbriata*, *Corallorhiza trifida*, *Croton triquetus*, *Cunninghamia lanceolata*, *Cyanostrum cordifolium*, *Deherainia smaragdina*, *Deutzia veitchii*, *Epipogium aphyllum*, *Erigeron glabratus*, *Glaux maritima*, *Goodyera repens*, *Gymnadenia conopsea*, *Helianthus annuus*, *Heliconia stricta*, *Heliosperma alpestris*, *Hoya multiflora*, *Hymenocallis littoralis*, *Impatiens columbiana*, *Pedicularis portenschlagii*, *Piper querculatum*, *Pseudorchis albida*, *Rodgersia podophylla*, *Scabiosa triandra*, *Traunsteinera globosa*, *Veratrum nigrum*

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POLLEN – SO SMALL – SO GREAT: PERMANENT EXHIBITION ON POLLEN AT BERGEN MUSEUM, NORWAY

An impressive and fascinating exhibition on all aspects of pollen was prepared by Kari Loe Hjelle and colleagues (University of Bergen – Bergen Museum), so if you visit Bergen, have a look to it!

Address: Muséplass 3 in Bergen, Norway.

Opening hours: Tuesday-Friday: 10-15 h (summer: 10-16 h), Saturday-Sunday: 11-16 h (summer: 11-15h). Monday closed. More information available at

www.bergenmuseum.uib.no

Pollen – så lite – så stort
Pollen – so small – so great

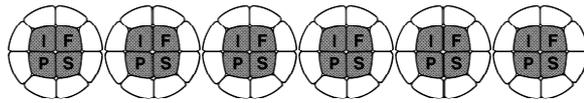
Tirsdag - Fredag 10-15 Lørdag - Søndag 11-16 Mandag stengt Tlf. 55582920 publikum@bm.uib.no

BERGEN MUSEUM
De naturhistoriske samlinger
Muséplass 3

CURRENT IFPS COUNCILLORS

The current list of the IFPS officers and IFPS councillors is provided below. The IFPS president (Thomas Servais), IFPS secretary-treasurer (Charles Wellman) and *PALYNOS* editor (Jean Nicolas Haas) should be informed of any errors or necessary changes (see email addresses below; postal addresses of all officers and councillors: see <http://www.geo.arizona.edu/palynology/ifpscncl.html>). The list of current IFPS councillors also includes information on website addresses for the various societies. Please inform the editor of possible website changes.

IFPS Officers	Affiliation	Email
IFPS President – Thomas Servais	Univ. des Sciences & Technologies de Lille, France	thomas.servais@univ-lille1.fr
IFPS Past President – Thomas Litt	University of Bonn, Germany	t.litt@uni-bonn.de
IFPS Secretary-Treasurer – Charles Wellman	University of Sheffield, England	C.Wellman@sheffield.ac.uk
IFPS Editor of <i>PALYNOS</i> – Jean Nicolas Haas	University of Innsbruck, Austria	Jean-Nicolas.Haas@uibk.ac.at
IFPS Web-Master – Owen Davis	University of Arizona, USA	odavis@email.arizona.edu
IFPS affiliated Societies	Acronym & Website	Councillors
American Association of Stratigraphic Palynologists	AASP http://www.palynology.org	Owen Davis & James Riding (IFPS Vice-president)
Arbeitskreis für Paläobotanik und Palynologie	APP http://www.palaeontologische-gesellschaft.de/palges/app/	Rainer Brocke
Arbeitskreis für Vegetationsgeschichte der Reinhold-Tüxen-Gesellschaft	AVRTG http://www.reinhold-tuexen-gesellschaft.de/	Klaus Oeggel
Asociación de Palinólogos de Lengua Española	APLE http://aple.usal.es	Maria Carmen Fernández
Asociación Latinoamericana de Paleobotánica y Palinología	ALPP http://www.ufrgs.br/alpp	Paulo Alves de Souza (IFPS Vice-president)
Association des Palynologues de Langue Française	APLF http://w3.laplf.univ-tlse2.fr/	Nathalie Combourieu-Nebout
Canadian Association of Palynologists	CAP http://www.scirpus.ca/cap/cap.shtml	Jean Nicolas Haas
Collegium Palynologicum Scandinavicum	CPS http://palyno.net	Dagfinn Moe
Commission Internationale de Microflore du Paléozoïque	CIMP http://cimp.weebly.com/	Zelia Pereira
Gruppo di Palinologia della Società Botanica Italiana	GPSBI http://www.societabotanicaitaliana.it/laygruppo.asp?IDSezione=22	Anna Maria Mercuri
International Association for Aerobiology	IAA http://www.isac.cnr.it/aerobio/iaa/index.html	Bernard Clot
Linnean Society Palynology Specialist Group	LSPSG http://www.linnean.org/	Guy J. Harrington
Organisation of Czech and Slovak Palynologists	OCSP	Jiřina Dašková
Palynological Society of China	PSC http://159.226.74.3:7003/02_english.htm	Huaicheng Zhu
Palynological Society of Japan	PSJ http://wwwsoc.nii.ac.jp/psj3/top.htm	Hikaru Takahara & Shinya Sugita (IFPS Vice-president)
Palynological Society of Poland	PSP	Ewa Durska
Palynologische Kring (Netherlands)	PK http://www.palynologischeskring.nl	Henry Hooghiemstra
Palynologists and Plant Micropalaeontologists of Belgium	PPMB	Philippe Steemans
Russian Palynological Commission	RPC	Valentina N. Mantsurova
Society for the Promotion of Palynological Research in Austria	AUTPAL http://www.autpal.at	Michael Hesse
The Micropalaeontological Society Palynology Group	TMS http://www.nhm.ac.uk/hosted_sites/tms/society.htm	Fabienne Marret-Davies
The Palaeobotanical Society (Lucknow, India)	PSL http://www.palaeobotanicalsociety.org	Ashwini Kumar Srivastava
Turkish Committee for Palynology	TCP	Zühtü Bati
International Union of Geological Societies	IUGS	Lucy Edwards
International Union of Biological Societies	IUBS	Jacques-Louis de Beaulieu
Societies on hold		
International Association for African Palynology	AIPA/IAAP	
Palynological and Palaeobotanical Association of Australia	PPAA	
Philippine Palynological Society	PPS	



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We welcome news items, reports on society activities, reviews etc. and members should forward these to the editor:

Jean Nicolas Haas
jean-nicolas.haas@uibk.ac.at

Please don't forget to visit our IFPS web site at:

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

