

# PALYNOS

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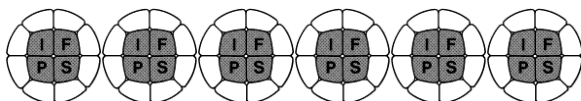
<http://www.geo.arizona.edu/palynology/ifps.html>

NEWSLETTER OF THE INTERNATIONAL FEDERATION OF PALYNOLOGICAL SOCIETIES

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Emeritus Owen Davis (University of Arizona, USA) has recently resigned as officer of IFPS and as IFPS web-master.



## **IFPS BUSINESS**

### **IFPS PRESIDENT'S MESSAGE:**

### **A HUGE "THANK YOU" TO OUR IFPS-WEB-MASTER OWEN DAVIS**

As president of the International Federation of Palynological Societies (IFPS) it is my duty to announce, that our web-master Prof.

Of course, this is a huge loss in terms of palynological Internet and web knowledge. Therefore, I would like – together with my other colleagues from the IFPS board and councillors – to warmly THANK YOU Owen for your tireless work for IFPS since you took over these web-master tasks more than ten years ago, and officially in 2012 (after the acceptance of the creation of an IFPS web-master officer position by the acceptance of according by laws at the XIII. IPC in Tokyo, Japan).

This work you did as IFPS officer and web-master compares in Internet terms to an incredible long time!

Myself, I got to learn you personally in 1992 at the VIII. International Palynological Congress in Aix-en-Provence, France. At that time, I was participating for my first time at an IPC as a young PhD student, and presented a poster on Neorhabdocoela worm eggs in palynological preparations from the Holocene of Switzerland. Indeed, you were one of the interested persons discussing the results on my poster, and your enthusiasm on such “exotic” objects was eye-opening for me, as well as your support in other domains later on, such as when setting up the idea of the now regularly happening International Non-Pollen Palynomorph workshops during a “Palynomorph-in-Dung-Symposium” in London in 2002.

Yes, you have supported lots of young (and less young) palynologists worldwide, and we are all aware of your regular updates on our IFPS and other palynology Internet pages.

Now, however, you have decided to retire from this time-demanding task as IFPS web-master and you leave behind a huge gap we will have to fill in the near future, which will not be easy.

The IFPS board is currently looking for a new Web-Master in order to replace you. In addition, the board of officers has decided to update the IFPS homepage accordingly. Also, the compilation of the *World Directory of Palynologists* is and was your beloved “palyno-baby” during all these years, and here too, we will have to find a solution how to continue with this important listing, a huge task for the remaining IFPS officers for sure.

Therefore, hopefully a new and updated 6<sup>th</sup> World Directory of Palynologists will be available in the near future.

Jean Nicolas Haas,  
IFPS President (2016-2020)  
Jean-Nicolas.Haas(at)uibk.ac.at

## IFPS STUDENT FUNDING FOR THE 10<sup>TH</sup> EUROPEAN PALAEOBOTANY AND PALYNOLOGY CONFE- RENCE (EPPC) IN DUBLIN, IRELAND, 12<sup>TH</sup>-17<sup>TH</sup> AUGUST 2018

The International Federation of Palynological Societies (IFPS) will support student participation at the upcoming **10<sup>th</sup> European Palaeobotany Palynology Conference (EPPC)** to be held in Dublin, Ireland 12<sup>th</sup> – 17<sup>st</sup> August 2018 (<http://eppc2018.ie>).

Funding will be awarded to Master and Ph.D. students presenting palynological results at the 10<sup>th</sup> EPPC (oral or poster) and which are members of one of the IFPS affiliated societies.



The IFPS board will review and evaluate all applications according to the quality of the submitted abstracts and the scientific merits of the candidates. Thus IFPS intends to sponsor up to 10 students with a 500 Euro contribution towards the cost of attending the conference.

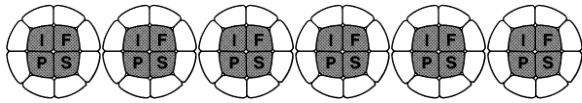
Students wishing to apply should e-mail (preferably as a pdf):

- 1) a covering letter (no more than one page, and explaining which IFPS affiliated organisation the student is a member of, and the nature of their palynological contribution to the meeting),
- 2) a short-CV (maximum one page)
- 3) their talk/poster abstract

Applications should be sent to IFPS Secretary-Treasurer James B. Riding ([jbri\(at\)bgs.ac.uk](mailto:jbri(at)bgs.ac.uk)).

Personal presence at the 10<sup>th</sup> EPPC is a pre-requisite, as awards will be presented at the

conference only. Applications should arrive before **March 1<sup>st</sup>, 2018**.



## **IFPS STUDENT FUNDING FOR THE 5TH INTERNATIONAL PALAEOLOGICAL CONGRESS (IPC5) IN PARIS, FRANCE, JULY 9TH - 13TH, 2018**

The International Federation of Palynological Societies (IFPS) has agreed to support student participation at the upcoming 5th IPC to be held in Paris, France, July 9th – 13th, 2018 (see <http://www.ipa-assoc.org/docs/First-Circular-of-IPC5.pdf>).



THE 5TH INTERNATIONAL  
PALAEOLOGICAL  
CONGRESS

July 9th - 13th, 2018  
FRANCE

Funding will be awarded to Master and Ph.D. students presenting palynological results at the 5th IPC (oral or poster) and which are members of one of the IFPS affiliated societies. The IFPS board will review and evaluate all applications according to the quality of the submitted abstracts and the scientific merits of the candidates. Thus, IFPS intends to sponsor up to three students with a 500 Euro contribution towards the cost of attending the conference.

Students wishing to apply should e-mail (preferably as a pdf)

1) a covering letter (no more than one page, and explaining which IFPS affiliated organisation the student is a member of, and

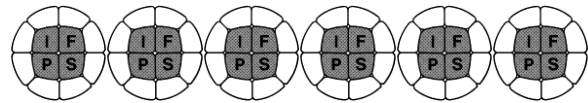
the nature of their palynological contribution to the meeting),

2) a short-CV (maximum one page) along with

3) their talk/poster abstract

to James B. Riding (IFPS Secretary-Treasurer: [jbri\(at\)bgs.ac.uk](mailto:jbri(at)bgs.ac.uk)).

Personal presence at the 5th IPC is a prerequisite, as awards will be presented at the conference only. Applications should arrive before March 31st, 2018.



## **PRESENTATION OF NEW IFPS VICE- PRESIDENTS**

As result of the IFPS-Vice-Presidents (Vs) election, we are pleased to introduce to all IFPS members our new VPs (2017–2020):

### **FABIENNE MARRET- DAVIS (AASP-The Palyno- logical Society)**

Fabienne Marret is an Associate Professor in the School of Environmental Sciences (in the department of Geography and Planning) at the University of Liverpool (UK). After her PhD studies in Bordeaux on the palaeoclimate of West Equatorial Africa for the Late Quaternary, she spent a few years in Montreal (GEOTOP), with Anne de Vernal to further study the recent and past distribution of organic-walled dinoflagellate cysts for quantitative and qualitative reconstructions of sea-surface conditions.

In 1997, she was a research fellow at the School of Ocean Sciences in Bangor (UK) where she further studied land-ocean interactions in the east equatorial Atlantic



using marine palynology as a tool. Still based in Bangor, she received in 1999 an EU-Marie Curie Grant to study the Holocene of the Celtic Sea based on dinoflagellate cysts and biomarkers, and in 2001, a Leverhulme Trust funded project allowed her to carry on working on late Quaternary climate changes in west equatorial Africa.



In 2005, Fabienne moved to the University of Liverpool as a Lecturer in Physical Geography. Her research interests range from modern and fossil dinoflagellate cysts as well as pollen and other Non-Pollen Palynomorphs (NPPs), from polar to tropical environments, from oceans to inland seas for the Quaternary period. She is particularly interested in the relationship between recent dinoflagellate cyst distribution and oceanographic conditions as a tool to reconstruction the past and is involved in the on-going development of a modern database for dinoflagellate cyst assemblages.

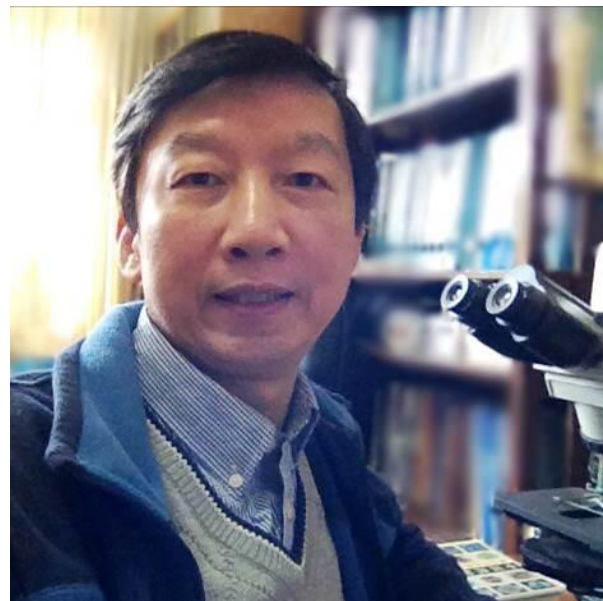
Her recent research focused on the Holocene of the Black Sea as well as the Caspian Sea, looking at the timing and amplitude of the reconnection between the Black Sea and the Mediterranean Sea at the beginning of the Holocene. In parallel, she is looking into the dinocysts and NPP records of the Holocene of Antarctica as well as interglacials in the Pacific Ocean.

She was a board member of the APLF (*Association des Palynologues de Langue*

*Française*) from 2005-2010, Chair of Palynology for *the Micropalaeontological Society* from 2010 to 2015, and now the TMS Special Publications Editor. She was a Director-at-Large for the American Association of Stratigraphic Palynologists (AASP) from 2013 to 2015 and since 2015 is the AASP Webmaster. She is also on the Editorial board for *Palynology*, *Marine Micropalaeontology*, *Revue de Micropaléontologie*, an Associate Editor for *The Holocene*, and an Editor for *Global and Planetary Change*.

[f.marret\(at\)liverpool.ac.uk](mailto:f.marret@liverpool.ac.uk)

## **WEI-MING WANG (Palynological Society of China)**



WEI-MING WANG is a professor at the Department of Palaeobotany and Palynology, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, where he received the MSc. and PhD in 1987 and 1990 respectively. In the early years of his career, he once worked at the Design and Research Institute, Bohai Oil Corporation in Tianjin, applying palynostratigraphy for oil and gas exploration in the East China Sea and the Bohai Sea. For years, he carried out some

international collaborations with several research stays abroad, such as Yamagata University and Meijo University in Japan, Royal Botanic Gardens, Kew in UK, Monash University in Australia, and Lower Saxony Institute for Historical Coastal Research in Germany, etc.

Wei-Ming's main research subject area and field of specialization are Cretaceous-Cenozoic stratigraphy and micro-plants including spores, pollen grains and phytoliths. His interests mainly lay in the evolution of angiosperms, palaeovegetation, phytogeography, and their relationship with environment; Cenozoic biostratigraphy; past global changes; and the history of early rice agriculture. He has been involved in some major national projects, such as the formation and development of characteristic components and major groups in the East Asia floristic region, the responses of biodiversity to major global change events, etc., and was once responsible for a project on palaeovegetation and biodiversity in South China. He is currently making a comparative study on Neogene basalt sedimentary intercalations and fossil floras in Fujian and Zhejiang region, and Penghu Islands.

[wmwang\(at\)nigpas.ac.cn](mailto:wmwang(at)nigpas.ac.cn)

## **LAURA SADORI (Gruppo di Palinologia della Società Botanica Italiana)**

Laura Sadori, professor of Systematic Botany and Archaeobotany, is an Italian palynologist working at Dipartimento di Biologia Ambientale of Università “La Sapienza” of Rome, Italy. She was first educated at Università “La Sapienza” (degree in Natural Sciences), then at Universitat Autònoma de Barcelona (Master in Botany and European PhD in Biology, option Botany).

The research activity of Laura Sadori led her to publish on international prestigious journals, with continuous production, in the

last 30 years (Scopus Author ID: 6602494875, ORCID ID: [orcid.org/0000-0002-2774-6705](https://orcid.org/0000-0002-2774-6705), ResearcherID: [researcherid.com/rid/E-4774-2015](https://researcherid.com/rid/E-4774-2015)).



Laura Sadori carries out palaeoecological studies, focusing on research aimed at palaeoenvironmental and palaeoclimatic reconstructions in the Mediterranean basin. Her research centres on understanding the response of flora and vegetation to variations in climatic forcing using long pollen records. She is also interested in evaluating the degree of human as well as climate change impact on the landscape.

The research carried out by Laura Sadori is based on morphology and taxonomy of plant micro- and macrofossils. Most of the analytical research of Laura Sadori is aimed to improve the knowledge of past biodiversity and to the detection of plant extinctions during the Quaternary. In this perspective palynology of natural and historical archives is used to understand present environmental dynamics and future scenarios under climate changes.

She cooperates with archaeologists, geologists and architects in the multidisciplinary study of a number of Italian and foreign historical and prehistorical sites.

[laura.sadori\(at\)uniroma1.it](mailto:laura.sadori(at)uniroma1.it)

# PRESENTATION of NEW IFPS COUNCILLORS

## MILENE OBREMSKA

### Palynological Society of Poland, PSP

Milena Obremska is currently based at the Institute of Geological Sciences, Polish Academy of Sciences in Warsaw, in Poland.

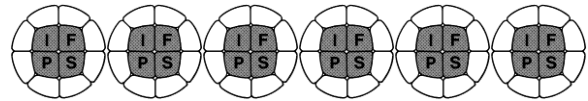
Her adventure with palynology began at the end of her graduate studies at the Adam Mickiewicz University in Poznań. She obtained a MSc (2002) and then a PhD (2006) and worked as an Assistant Professor in the Department of Biogeography and Palaeoecology in the Faculty of Geographical and Geological Sciences UAM. Since 2010 she has been working in the Institute of Geological Sciences Polish Academy of Sciences in Warsaw.



Her research focuses on palaeoecological reconstructions based on high-resolution pollen analysis (together with other proxies) which allows her to identify short-term environmental changes. She works with peat and lake sediments from Central and North Europe accumulated from the Late Glacial to present-day. The participation in the ICLEA project (<http://www.iclea.de>) was a great opportunity

to induce more emphasis in her research on the human impact record and the palaeoecological reconstructions of the phases of human activity from the beginning of the Holocene.

*mobremska(at)twarda.pan.pl*



## IFPS SOCIETIES' REPORTS

### Bi-annual conference of the Palynological Association of Nigeria (PAN)

The Palynological Association of Nigeria (PAN) hold her bi-annual conference with the theme:

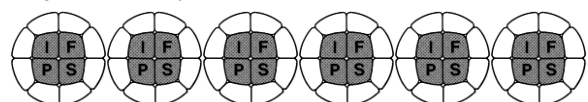
‘‘The Roles of Palynology in a Recessed Economy’’, with the following sub-themes

- Palynology and the diversification of the Nigerian Economy
- Palynomorphs and the Climate Change Challenge
- Palynology and Public Health
- Palynology as a tool in Basin Re-evaluation in the Oil Industry

**Dates:** May 21<sup>st</sup>-24<sup>th</sup>, 2017; **Time:** 9:00 daily  
**Venue:** University of Lagos, Nigeria

A member of the Palynological Association of Nigeria, Dr Judith Ibegbulem was promoted to the position of Extension Specialist 1 at the N.A.E.R.L.S., Zaria. Her new job involves organising trainings and empowerment of individuals in the beekeeping trade as well teaching in the Department.

*Emubosa A. Orijemie, representative of the Palynological Association of Nigeria (PAN).*  
*orijemie5(at)yahoo.com*





# CONFERENCE

## REPORTS

### VIIth Workshop on Non-Pollen Palynomorphs, University of Liverpool, 12-14 June 2017

The VIIth Workshop on Non-Pollen Palynomorphs took place June 12–14, 2017 and was hosted by the University of Liverpool. The workshop was organised by Fabienne Marret-Davies, Rachael Lem, Karen Halsall, Colette Campbell (all University of Liverpool), Lee Bradley (Manchester Metropolitan University) and Eline van Asperen (Durham University). The workshop was supported by the School of Environmental Sciences of the University of Liverpool and by grants from The Micropalaeontological Society and the Palaeontological Association. 34 participants attended the workshop from 12 countries, with 16 oral presentations, 14 posters and 2 lab sessions.

The workshop started with a keynote lecture by Prof Emilie Gauthier from the University Bourgogne Franche-Comté (France) on human Medieval impact on the environment, looking at three case studies from marginal environments: the Jura mountains in France, Norse settlements in Greenland, and the Serteya region in Russia. The keynote was followed by talks ranging in chronology from the Cretaceous to the modern environment, and showed the relevance of the study of non-pollen palynomorphs (NPPs) for archaeology and environmental studies. Jen O’Keefe (Morehead State University) discussed how fungal palynomorphs from Cretaceous to middle Eocene coals from the Mississippi Embayment may shed light on peat depositional and decompositional histories. Daniil Gornov (Saint Petersburg State University) compared subfossil spores and pollen from the Golovnin volcanic caldera on Kunashir Island (Kuril Islands) with the recent vegetation.

Lyudmila Shumilovskikh (University of Göttingen) presented a new database of NPPs to facilitate taxonomy and identification. On the website:

<http://nonpollenpalynomorphs.tsu.ru/>.

(see further information below in this issue of PALYNOS) interested researchers can also sign up for a newsletter on NPPs.

Maia Chichinadze (Georgian National Museum) showed how a palynological analysis of archaeological artefacts from the antique Georgian site of Vani yielded detailed information about human manufacturing methods and use of the artefacts. Eline van Asperen (Durham University) indicated that taphonomic factors may bias preservation of dung fungal spores, leading to problems with interpreting spore abundance as representing large herbivore abundance.

The afternoon of the first day of the workshop was dedicated to fungal palynomorphs. Jen O’Keefe and Eline van Asperen presented a range of fungal palynomorphs and discussed issues of preparation and interpretation.

This was followed by observations of these NPPs using the state-of-the-art microscopy facilities at the University of Liverpool’s Central Teaching Hub.



**Figure 1:** The workshop organiser Dr. Fabienne Marret-Davies (right) during the NPP microscopy session at the University of Liverpool’s Central Teaching Hub (Photo Jean Nicolas Haas).



Figure 2: The participants of the VIIth Workshop on Non-Pollen Palynomorphs, University of Liverpool, 12-14 June 2017 (Photo Jean Nicolas Haas).

The first presentation of the second day of the workshop, by Eliso Kvavadze (Georgian National Museum), showed how the presence of characteristic starch, plant epidermis and insect assemblages indicate Neolithic and Bronze Age ceramic vessels from Georgia were used to store wine.

In a similar study, Inga Martkoplshvili (Georgian National Museum) was able to distinguish between storage of flour and storage of cooked cereals, as well as meat. Benjamin Dietre (University Bourgogne Franche-Comté) discussed cross-correlations between micro-charcoal, pollen and NPPs, indicating how different taxa react differently to fire events.

Angelina Perrotti (Texas A&M University) presented pollen and NPP assemblages from the Page-Ladson archaeological site (Florida).

Frank Schlütz (Lower Saxony Institute for Historical Coastal Research) showed how NPPs may indicate depositional processes in marine and coastal environments. Irene Tunno (Lawrence Livermore National Laboratory) compared NPPs from a sediment core from Stonehouse Meadow in the Great Basin with NPPs in the modern landscape. Marie-Claire Ries (University of Innsbruck) took us to the Neolithic lake village of Weyregg-II in Upper Austria where NPPs gave information about livestock presence and human health. Althea Davies (University of St. Andrews) tested the use of dung fungi as indicators of historical grazing in peatlands by comparing their record with those of pollen and stocking patterns. Jean Nicolas Haas (University of Innsbruck) provided a taxonomic review of the fungus *Gelasinospora*, indicating that the use of the genus as



an indicator of fire events must be questioned. Finally, René Enevold presented a sophisticated statistical study demonstrating how even NPPs of unknown taxonomy can provide environmental information.

After a lunch break during which much discussion took place around the posters, the first part of the afternoon laboratory session was devoted to unidentified NPPs. Later, there was further opportunity to study slides with help of the microscopes. Many participants had taken the opportunity to bring photos and slides. Discussions continued over food at the conference dinner at Ego Restaurant that evening.

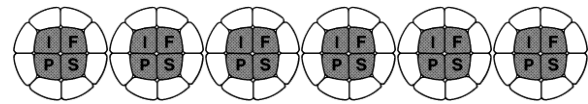
A round-table discussion took place on the final morning of the workshop. One of the problems the NPP community encounters is that it is difficult to obtain funding for meetings and research focused on NPPs. One reason for this is that the community has developed around a tool (the use of non-pollen palynomorphs to answer environmental questions) rather than a big question. The variety of the presentations at the workshop shows that this tool can be put to use in a wide range of fields (palaeoecology, archaeology, human impact on the environment, conservation) but it is difficult to formulate a single overarching research question. Some suggestions for an overarching theme included disturbance, local processes, ecosystem linkages, dynamics and megafauna. A number of funding and publication opportunities were identified, such as PAGES working groups, EU COST action, TMS special publication or a special issue of the Journal of Micropalaeontology, and INQUA recognised project awards. Special sessions on NPPs will be proposed for the next EPP (Dublin, 2018) and INQUA (Dublin, 2019) congresses, whilst the next NPP workshops are foreseen to take place in Barcelona (2019), Poland (2021) and potentially Baton Rouge, USA (2023).

Technical issues were also discussed as for example the minimal counts necessary to recover a full spectrum of NPPs using a rarefaction curve. Taxonomy and identification

issues were also addressed by the development of the NPP online database, as well as in a QRA technical guide on fungi in Quaternary studies, which is in preparation. There is scope for training or summer schools to be developed, possibly within the context of existing palaeoecological training courses.

After a fruitful discussion, it was time to go home. The workshop generated much debate over high-quality research, and we look forward to the next NPP workshop in Barcelona in 2019!

*Eline van Asperen, Durham University, UK.  
Envanasperen(at)palaeo.eu*



## CONFERENCE ANNOUNCEMENTS AND CALL FOR SESSIONS XX INQUA Congress, Dublin, Ireland, 25<sup>th</sup>-31<sup>st</sup> July 2019

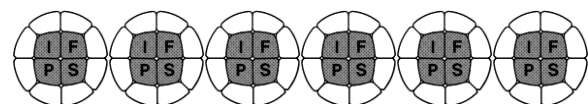
Updated information on the the Congress website ([www.INQUA2019.org](http://www.INQUA2019.org)) now has provisional details of the Pre-, Mid- and Post-Congress Field Trips:

<http://www.inqua2019.org/field-trips/>.

The outlines and dates of the excursions are available on the web and full details and costs will be posted at the end of November this year. The website also has contact details for suggesting thematic sessions:

<http://www.inqua2019.org/programme-themes/> and the Chair of the Scientific Programme Committee would be delighted to hear from you if you have suggestions.

*Pete Coxon, Trinity College Dublin  
pcoxon(at)tcd.ie*



# FUTURE MEETINGS

## 2017

### **2017 50<sup>TH</sup> ANNUAL MEETING OF AASP – THE PALYNOLOGICAL SOCIETY – THE GOLDEN ANNIVERSARY MEETING – HELD JOINTLY WITH CIMP AND THE MICROPALAEONTOLOGICAL SOCIETY PALYNOLOGY GROUP, NOTTINGHAM, UK, SEPTEMBER 3–7, 2017**

Information about registration, conference field trips and seminars and conference plans can be found in the following website: <http://www.tmsoc.org/aasp-2017>

### **2017 JOINT APLE – APLF – GPSBI CONGRESS, BARCELONA, SPAIN, 2017**

The Joint conference between the Asociación de Palinólogos de Lengua Española (APLE), the Association des Palynologues de Langue Française (APLF), and the Gruppo di Palinologia della Società Botanica Italiana (GPSBI) will take place in Barcelona, Spain, September 4-6, 2017. This conference will also celebrate the 50<sup>th</sup> anniversary of APLF! Further information can be found in the following website: <https://medpalyno2017.wordpress.com>

## 2018

### **2018 5<sup>TH</sup> INTERNATIONAL PALAEONTOLOGICAL CONGRESS (IPC 2018), PARIS, FRANCE, JULY 9 – 13, 2018**

The 5th International Palaeontological Congress (IPC 2018) will take place in Paris, France, from July 9-13, 2018. Further informations available at <http://www.ipa-assoc.org/docs/First-Circular-of-IPC5.pdf> .

### **2018 10<sup>TH</sup> EUROPEAN PALAEOBOTANY PALYNOLOGY CONFERENCE (EPPC), DUBLIN, IRELAND, AUGUST 12–19, 2018**

The 10th EPPC will take place in Dublin, Ireland, from August 12-18, 2018. For further information, please visit the conference webpage: <http://eppc2018.ie>

### **2018 11<sup>TH</sup> INTERNATIONAL CONGRESS ON AEROBIOLOGY (ICA), PARMA, ITALY, SEPTEMBER 3–7, 2018**

The 11th ICA will take place in Parma, Italy, from September 3–7, 2018. Website: <http://www.ica2018.eu/>

## 2019

### **2019 XX INQUA CONGRESS 2019, DUBLIN, IRELAND, JULY 25 –31, 2019**

The XX INQUA Congress will take place in Dublin, Ireland from July 25-31, 2019. The congress theme will be "Life on the Edge", with additional sub-themes of "Dynamic Ice Sheets on a Global Scale", "Extinction", and "Adaptation to Environmental Change". Further Information available at [http://iqua.ie/INQUA\\_2019.html](http://iqua.ie/INQUA_2019.html)

### **2019 VIII WORKSHOP ON NON-POLLEN PALYNOMORPHS, BARCELONA, SPAIN, 2019**

The VIII. Workshop on Non-Pollen Palynomorphs is foreseen to take place in Barcelona, Spain, in 2019 organised by Dr. Encarni Montoya, Institute of Earth Science Jaume Almera (CSIC), Barcelona, Spain. Further Information will be available in due times.

## 2020

### **2020 15<sup>TH</sup> INTERNATIONAL PALYNOLOGICAL CONGRESS (IPC) / IOPC XI JOINT MEETING, PRAGUE, CZECH REPUBLIC, 2020**

The 15th International Palynological Congress (IPC) / 11th International Organisation of Palaeobotany Conference will take place in Prague, Czech Republic, in 2020. Further Information will be available in due times.

# PALYNOLOGICAL HOMMAGE

## Fuelling palynology with mycological information: Obituary for Walter Gams (1934-2017)



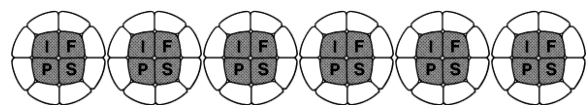
On 9 April 2017 professor dr Walter Gams suddenly passed away in the age of 82 while he was enjoying life in his second home in Bomarzo, Italy. Walter combined a vast mycological expertise with a friendly personality. He played an important role in bringing mycological knowledge to palynologists. Working at the ‘Centraal Bureau voor Schimmelcultures’ (nowadays Westerdijk Fungal Biodiversity Institute) in the Netherlands, he divided his energy over contract work for industry and hospitals, as well as pure scientific research. The latter included mostly taxonomic revisions. But Walter was not only interested in taxonomy but also in the ecology of fungi. When Bas van Geel was struggling in the 1970s and later, with the identification of fossil fungal spores, and with the question how these spores could contribute to the reconstruction of past environmental change, Walter Gams enthusiastically helped with identifications and ecological information. In 2012 he even contributed to a ‘Non-Pollen Palynomorph

Meeting’ in Amsterdam. Walter was aware of the importance to make links between adjacent fields of research. In this way Walter has not only contributed significantly to taxonomic mycology and medical research, but also to palynology.

Walter was a son of the famous biologist Helmut Gams (1893-1976). He obtained his PhD in 1960 at the University of Innsbruck. Under the supervision of Klaus H. Domsch he prepared the book ‘Pilze aus Agrarböden’ at the Biological Station Kiel-Kitzeberg. His Habilitation in 1972 at the University of Aachen was based on the book ‘Cephalosporium-artige Schimmelpilze (Hyphomycetes)’. He had a long career at the ‘Centraal Bureau voor Schimmelcultures’. Walter discovered the soil fungus *Trichoderma inflatum*, later described as *Polypocladium inflatum*, a producer of Cyclosporin-A, used in surgery to diminish rejection of transplanted organs. Between 1967 and 2011 he authored and co-authored 8 books and a long suite of publications. Walter had a very complete reference archive of mycological literature. Already during the first day Walter supervised Henry Hooghiemstra in 1977 during a 3-months mycological training period, Henry was impressed by Walter’s systematic and dedicated way of working.

Walter Gams was a world expert in the field of soil fungi. For his monumental work he received the ‘Anton de Bary Medal’ from the Deutsche Phytomedizinische Gesellschaft in 2012. He showed the way to bring taxonomical knowledge, often little appreciated by the general public, to places where it is of crucial importance for science and society.

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# ANNOUNCEMENTS

## NEW BOOK



Figure 1 Front cover of the published book.

**BERRETTELLA DEL PRETE** (*Euonymus europaeus* L.) *Common spindle*

Specie autoctona comune in tutta la penisola e spontanea in ambienti assai diversi dal punto di vista ecologico (Conti et al., 2007). Si tratta di una pianta che raramente supera i 3 metri d'altezza.

Comune nel sottobosco delle foreste di latifoglie, a Bosco della Fontana si trova ovunque ma è maggiormente concentrata nella zona a nord ovest dove la falda è più alta e dove sostituisce quasi completamente il pungitopo (Mason, 2004).

Infiorescenze a fiori ermafroditi, raramente unisessuali. I fiori sono piccoli e verdognoli, organizzati in grappoli. Ciascun fiore presenta quattro stami sporgenti.

**CELASTRACEAE**

FORMA BIOLOGICA: Nano-fanerofite Arboree Cespugliose Lianose

IMPOLLINAZIONE: autogama anemogama zoogama idrogama

La berretta del prete produce granuli pollinici tricolporati, provvisti cioè di aperture costituite dalla combinazione di tre colpi e tre pori. I granuli pollinici hanno profilo circolare, con diametro maggiore di circa 27-32 µm (Beug, 2004). La superficie è caratterizzata dalla presenza di un reticolo, con maglie (dette lumina) di dimensioni via via decrescenti in prossimità dei colpi (D).

Data la scarsa produzione e dispersione pollinica del genere *Euonymus*, il polline fossile di berretta del prete viene rinvenuto molto raramente. Nei livelli musteriani occupati dall'uomo di Neanderthal al Riparo Bombrini (Balzi Rossi, Ventimiglia) sono stati rinvenuti frammenti di carbone appartenenti alla berretta del prete, insieme a ginepro, rosacee e fabacee (Aroba & Caramiello, 2009).

**Polline di berretta del prete - didascalio immagini (A-F; MO; D-F: SEM)**

A: granulo pollinico in visione polare, 1000x.  
 B: granuli pollinici in visione equatoriale, 1000x.  
 C: disegno del granulo pollinico e indicazione dei principali elementi morfologici utili alla sua identificazione.  
 D: granulo pollinico in visione polare, 2000x. Possiamo osservare i lumina del reticolo, piccoli in prossimità del colpo e più grandi al centro del granulo.  
 E: granulo pollinico in visione polare, 2000x. Sono ben visibili i larghi colpi e la membrana granulata che ne riveste l'interno.  
 F: dettaglio del reticolo che si riduce vicino al colpo e granuli sulla membrana che lo ricopre.

Figure 2 Example of the taxa information included in the atlas: *Euonymus europaeus*.

The research group Gruppo di Ricerche Stratigrafiche Vegetazione, Clima, Uomo has recently published an atlas on pollen types of nearly sixty selected Phanerophytes of a natural reserve in northern Italy.

Book reference:  
 Consiglio Nazionale delle Ricerche - Istituto per la Dinamica dei Processi Ambientali, sede

di Milano (ed.) 2016: Guida per il riconoscimento del polline negli ambienti forestali della Pianura Padana. ISBN: 978-88-86596-14-5; in Italian).

Roberta Pini, C.N.R. - Istituto per la Dinamica dei Processi Ambientali, Milano. roberta.pini(at)idpa.cnr.it

# THE GLOBAL POLLEN PROJECT

The Global Pollen Project is a new, online and freely available tool developed to aid in the identification and dissemination of palynological resources. The online front facing interface can be accessed at <https://globalpollenproject.org>. Palynology as a discipline is widely utilised across many fields of study including, but not limited to, modern and fossil vegetation dynamics, forensic sciences, pollination, and apiaristry. This platform facilitates the opportunity for cross/multi-disciplinary integration and discussion, outsourcing identifications, expertise and the sharing of knowledge.

There are currently 2,877 images of pollen grains in the online reference collection covering 167 families, 767 genus and 1,565 species from Britain & Ireland, Europe, North America, Mexico, Mongolia, Madagascar, and the Canary Islands.

Traditional morphological characterisations of pollen grains are carried out using light microscope analysis and are identified using reference material in the form of reference collections. These collections are often only accessible in the form of glass slides or in printed books, which are bound to a specific physical location, limiting their access and use. The Global Pollen Project circumnavigates this problem by hosting an online reference collection (<https://globalpollenproject.org/Taxon>) to which anyone may freely use or contribute. This may be utilized for identification purposes or as a teaching tool. All collections/images contributed to the reference collection are able to be referenced in published literature using their URL.

Inherently pollen is derived from plants; therefore, The Plant List (<http://www.theplantlist.org/>) was chosen as the taxonomic backbone upon which the Global Pollen Project has been built. This is

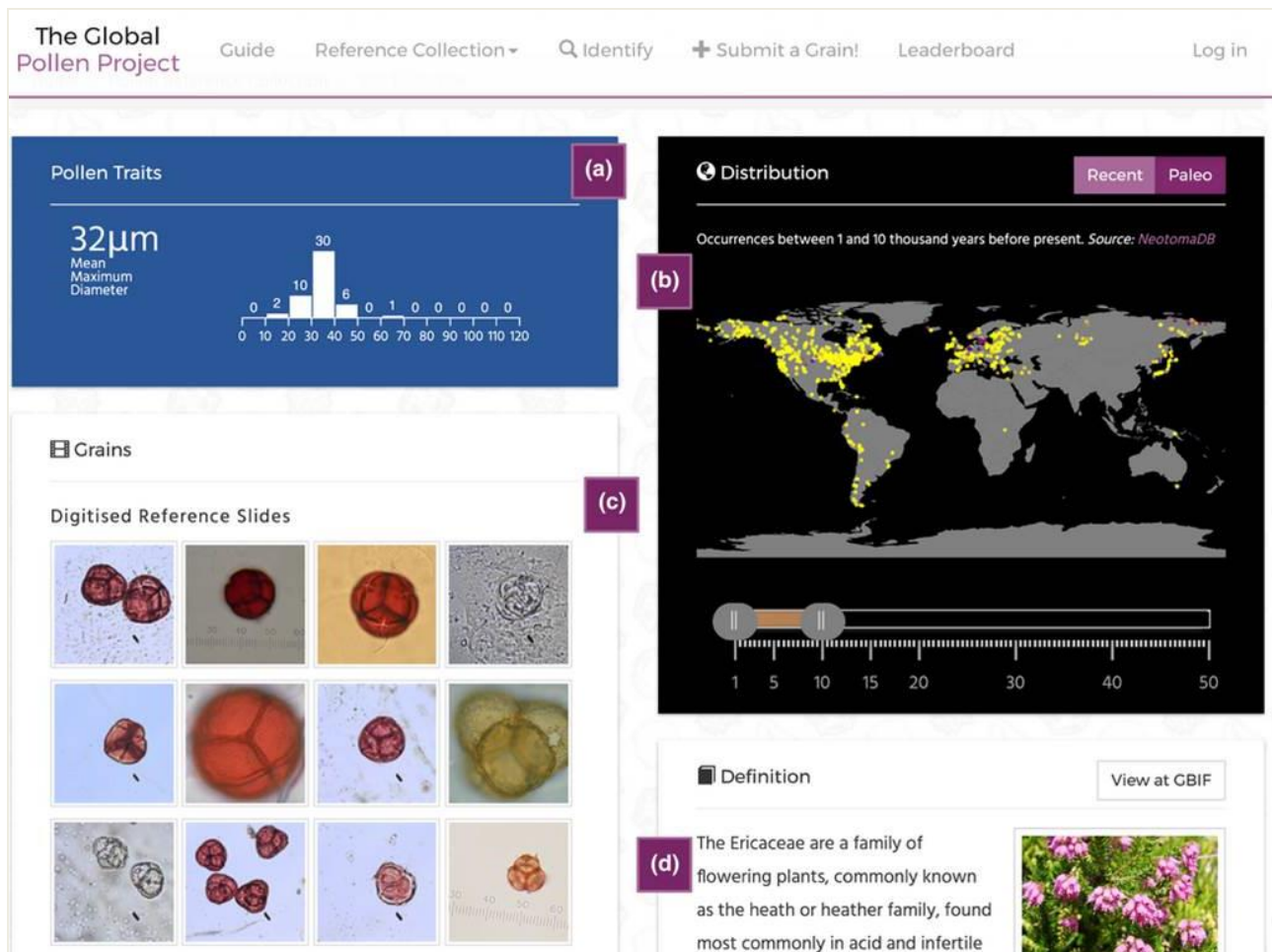
the only complete working list of all known plant species detailing all current accepted names and synonyms in floristic taxonomy. Pollen morphotypes are sometime used in taxonomic nomenclature, particularly in fossil pollen identifications, it is important to separate this practice when attributing pollen grains to their associated plant; however, it is suggested that this useful and important information is preserved as metadata.

There are currently two external databases integrated into the Global Pollen Project: The Global Biodiversity Institute (GBIF) (<http://www.gbif.org/>) and NEOTOMA (<https://www.neotomadb.org/>). Occurrence data from GBIF is projected onto a global map to show current distributions for a given Family, Genus, or Species. Similarly, palaeodata from Neotoma is projected across space and time with an option of selecting a given temporal window. These graphical tools can be useful for visualising and formulating scientifically driven questions for selected flora (Figure 1, next page).

The entire framework for the Global Pollen Project is open source and available on GitHub (<https://github.com/AndrewIOM/global-pollen-project>) for peer contributions and suggestions for future improvement. For a full and detailed methodological description of how this tool works please visit <http://onlinelibrary.wiley.com/doi/10.1111/2041-210X.12752/epdf>.

Many thanks to Danielle Sinclair and Leo Petrokofsky for their work digitising reference collections held in the Oxford Long-Term Ecology Lab (<https://oxlel.zoo.ox.ac.uk/>).

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**Figure 1** Ericaceae family in the Global Pollen Project. The Global Pollen Project represents data hierarchically, aggregating data from species to genus and family. a) Pollen Traits; b) Past distributions pulled from Neotoma; c) digitised slides from all taxa within this family; d) botanical information from GBIF, which in this case was originally from Wikipedia. Figure from Martin and Harvey (2017).

## DEVELOPMENT OF THE NON-POLLEN PALYNO-MORPHS WEBPAGE AND DATABASE

Non-pollen palynomorphs (NPP) represent a large group of microscopic remains found in palynological slides besides pollen. Starting in the 70<sup>th</sup> of the 20<sup>th</sup> century with studies by Bas van Geel and colleagues, large numbers of new described types are published every year. In order to get an overview to the wide world of these “extra fossils” in pollen slides,

we decided to create a webpage aiming to gather information about NPP, structuring it

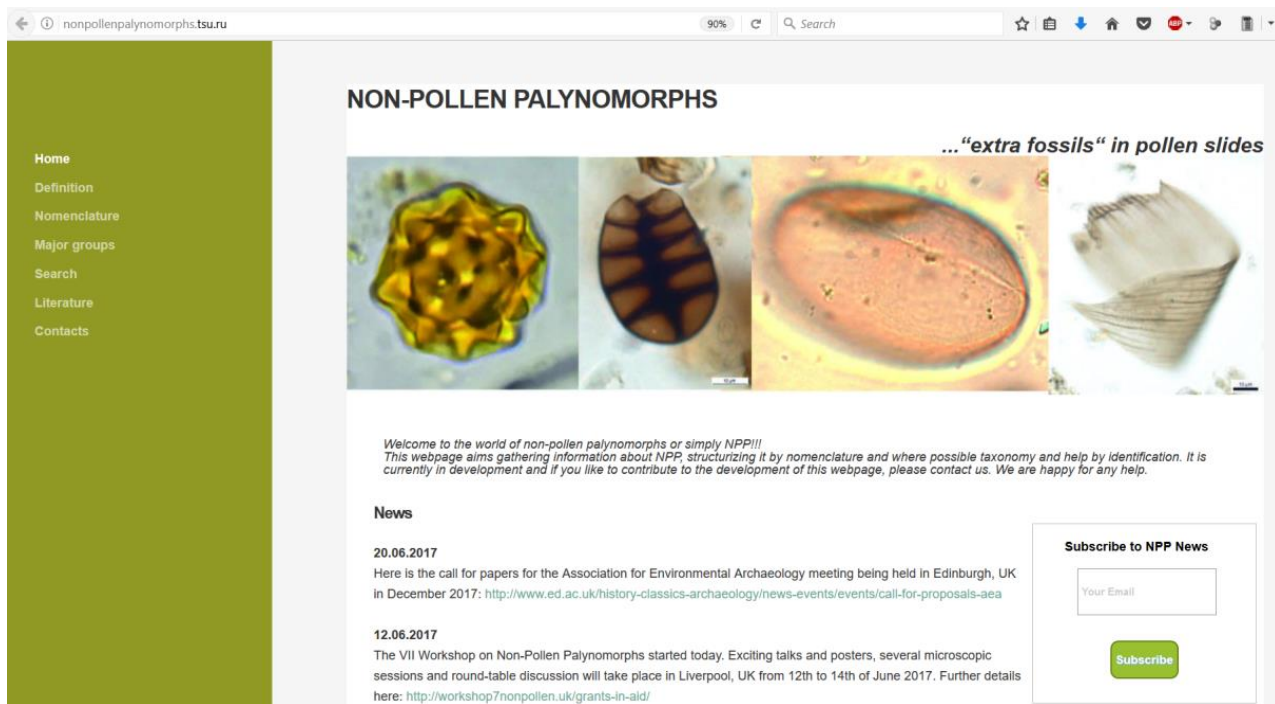
by nomenclature and where possible taxonomy and help by identification.

The webpage is hosted at server of the Tomsk State University:

<http://nonpollenpalynomorphs.tsu.ru/>.

It is in development but you already can subscribe to the NPP news there (Fig. 1). Moreover, you can find an updated list of the publications about NPP, started with the reference list of Miola (2012). One of the important parts of the webpage is the database with illustrations, descriptions and ecological information about the NPP. The access to it is via “Nomenclature”.





**Figure 1** Screenshot of the NPP webpage: <http://nonpollenpalynomorphs.tsu.ru/>

The NPP overview is based on Miola (2012) and complemented by new works on NPP. Acronyms of the NPP types are given as laboratory abbreviations or names of the studied sites or artificial names and are listed in the table.

Right now there are first 15 inputs from more than 1500 planned.

The webpage and database are currently in development and everyone is kindly invited to contribute to their development by finding bugs, checking English spelling, proposing new pages, subscription to the NPP mailing list, offering news to the community (papers, meetings, projects etc.), sending papers with NPP descriptions, providing own pictures for the database, contributing to the discussion on NPP morphology, filling database etc.

*Literature cited:*

Miola A (2012) Tools for Non-Pollen Palynomorphs (NPPs) analysis: A list of Quaternary NPP types and reference literature in English language (1972-2011). *Review of Palaeobotany and Palynology* 186:142-161.

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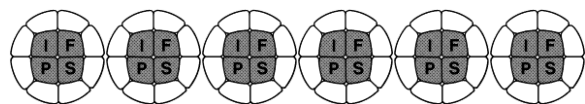
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## CURRENT IFPS AFFILIATED SOCIETIES AND COUNCILLORS

The current list of the IFPS officers and IFPS councillors is provided below. The IFPS president (Jean Nicloas Haas), IFPS secretary-treasurer (James B. Riding), IFPS editor of *PALYNOS* (Encarni Montoya), and the IFPS Web-Master (Owen Davis) should be informed of any errors or necessary changes (email addresses below; postal addresses of all officers & councillors: <http://www.geo.arizona.edu/palynology/ifpscnc.html>).

The list of current IFPS councillors also includes information on website addresses for the various societies. Please inform the IFPS Officers of possible website changes.

IFPS Officers	Affiliation	Email
IFPS President <b>Jean Nicolas Haas</b>	University of Innsbruck, Austria	<a href="mailto:Jean-Nicolas.Haas@uibk.ac.at">Jean-Nicolas.Haas@uibk.ac.at</a>
IFPS Past President <b>Charles Wellman</b>	University of Sheffield, England	<a href="mailto:C.Wellman@sheffield.ac.uk">C.Wellman@sheffield.ac.uk</a>
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Arbeitskreis für Paläobotanik und Palynologie	APP <a href="http://www.palges.de/arbeitskreise/ak-palaeobotanik-palynologie.html">http://www.palges.de/arbeitskreise/ak-palaeobotanik-palynologie.html</a>	<a href="#">Martina Stebich</a>
Arbeitskreis für Vegetationsgeschichte der Reinhold-Tüxen-Gesellschaft	AVRTG <a href="http://www.reinhold-tuexen-gesellschaft.de/">http://www.reinhold-tuexen-gesellschaft.de/</a>	<a href="#">Hermann Behling</a>
Asociación Latinoamericana de Paleobotánica y Palinología	ALPP <a href="http://www.ufrgs.br/alpp">http://www.ufrgs.br/alpp</a>	<a href="#">Mercedes di Pasquo</a>
Asociación de Palinólogos de Lengua Española	APLE <a href="http://aple.usal.es">http://aple.usal.es</a>	<a href="#">Juan de Dios Alché Ramírez</a>
Association des Palynologues de Langue Française	APLF <a href="http://laplf.org/">http://laplf.org/</a>	<a href="#">Marie-Pierre Ledru</a>
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Palynological Society of Poland	PSP	<a href="#">Milena Obremaska</a>
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Russian Palynological Commission	RPC	<a href="#">Elena Novenko</a>
Society for the Promotion of Palynological Research in Austria	AUTPAL <a href="http://www.autpal.at">http://www.autpal.at</a>	<a href="#">Michael Hesse</a>
The Micropalaeontological Society Palynology Group	TMS <a href="http://www.tmsoc.org/paly.htm">http://www.tmsoc.org/paly.htm</a>	<a href="#">Manuel Vieira</a>
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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:

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

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

