

International Organisation  
of Palaeobotany



**IOP NEWSLETTER 135**

November 2024

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## Letter from the president

Dear Colleagues,

2024 has been a very busy year for IOP. There have been many meetings, both large and small, such as the IOPC Prague in May, the IBC Madrid in July, and the International Workshop on Plant Taphonomy Berlin in November, and above all, there has been a change in the Executive Committee Member. As a result, the publication of the newsletter, which plays a major role in exchanging information with each other, has been delayed. The reason we are delivering this issue so soon after the previous newsletter 134 is to keep our implicit promise of publishing at least three times each year. I would like to once again thank Lutz for his editorial efforts and the executives and members for providing information.

The beginning of a new year comes almost at the same time because many people and countries adopt a calendar that follows the orbital period of this planet. Although there are some differences in the dates, the fact remains that we celebrate the New Year. There are various annual events throughout the year depending on the region and culture. I believe that a world in which many people can celebrate with each other, even if the events have different origins and purposes, is favorable if they bring peace and happiness to the people who wish to congratulate something. In the same manner, I believe that IOP will continue to respect each other's research as a group of good-hearted scientists and contribute to the development of paleobotany and science in general. This month, I wish you all a Merry Christmas from east Asia for the simple reason that we all would like to celebrate happy moment together.

I hope that we will be able to continue to exchange information actively through the newsletter next year. Of course, we may also share sad things through this paper. Some of our colleagues have passed away this year, although I do not mention their names here. As in the past, with great respect from the IOP, we pray for the repose of their souls.

There comes good news from Carol Gee (University of Bonn, Germany) would like to offer the membership of IOP and the greater paleobotanical community a 30% discount on the book that she has just published called *Rooted in Time: Living Fossils and Other Tenacious Plants*. Please find the flyer from publisher Johns Hopkins University Press, on page 23 of this newsletter.

I have attended every IOPC except the first one. I have also been inspired by attending EPPC and other regional meetings worldwide. Commemorative pin badges are sometimes made for each conference, and I have been collecting them in a drawer. This is a good opportunity to put them up on a figure. I know it's a shame for me as a scientist that I have not recorded the names of conferences, dates, etc. Does anyone have any idea? When you line them up like this, you can imagine various faces of paleobotany. I now regret not making one at the IOPC Tokyo in

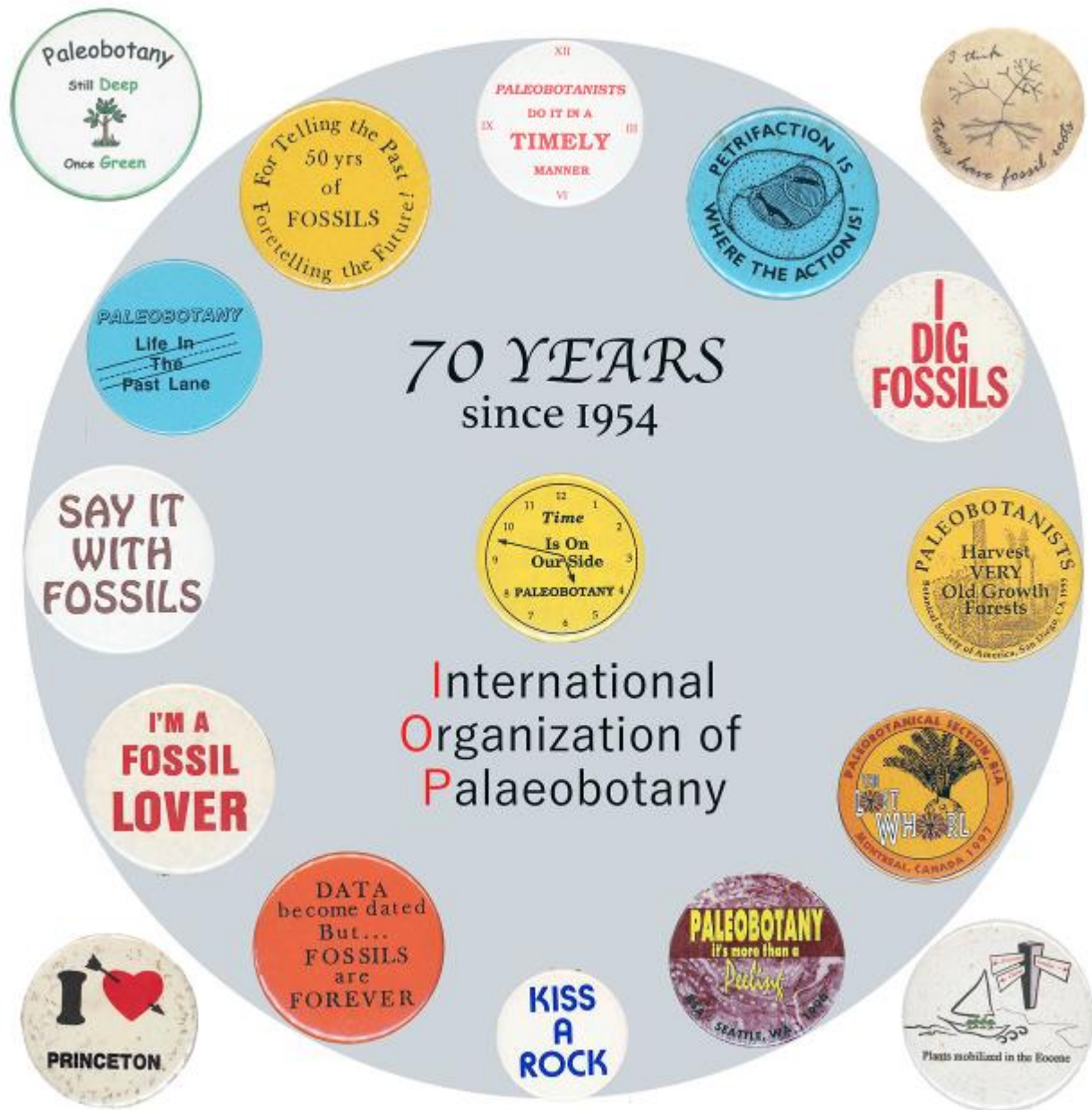
2012. As we enter the New Year, I am looking forward to seeing new logos on metal, although I guess I'll be pushed by youths to start presenting on the web.

May Peace Prevail on Earth!!!

*Haru*

Harufumi Nishida, IOP President

Prof. Emeritus, Chuo University, Tokyo; Patagon Institute of Palaeobotany, Chiba, Japan



## Obituary

### DMITRY GROMYKO

(14.03.1957–15.11.2024)

We are sad to pass on the news of the death of Dmitry Gromyko on November 15, 2024.

Dmitry (Dima) Gromyko was one of the longest serving of the laboratory of Palaeobotany of the Komarov Botanical Institute RAS (BIN RAS), where he worked since 1980. The main scientific interests of Dmitry were related to the anatomy of fossil woods, mainly Cretaceous and Tertiary, and palaeoclimate. He published around 25 papers about palaeobotany (see below) and about scientists studying paleobotany, and has also contributed to two books: Fossil Flowering Plants of Russia and Adjacent Countries (Budantsev L.Yu. (ed.): 1994, vol. 3 and 2005, vol. 4).



Dmitry took part in numerous palaeobotanical expeditions to the Russian Far East, Abkhazia, Antarctica, Armenia, Kazakhstan, Uzbekistan, and curated a collection of fossil woods in BIN RAS. Dmitry always supported and helped students and postgraduates with practical advice in everything. His love of fossil wood inevitably meant he was a member of the International Association of Wood Anatomists (IAWA). He was a participant in the international program for the study of the Neogene climates of Eurasia "Neclime".

As well as contributing directly to scientific research, Dmitry was also committed to supporting his colleagues through taking on administrative roles. From 2022, he worked as the head of the expert center in BIN RAS, in 2023 he became the director of the foundation "Botanical Garden of the 21st Century".

He was the ideologist and organizer of the creation of the unique complex paleobotanical exhibition “Paleo Garden”, which opened this summer in the Botanical Garden of BIN RAS in St. Petersburg. It includes sculptural reconstructions of plants from different geological periods, large-sized specimens of fossil woods, as well as living relict plants.

Dmitry was an erudite, kind and sympathetic person, always ready to help everyone. He was fun to be with and generous with his time to other researchers. In BIN RAS, everyone liked and respected him, sentiments that extended worldwide among his fellow palaeobotanists. Our palaeobotanical community will miss Dmitry Gromyko, but he will be remembered fondly.



Dmitry with fossil woods for “Paleo Garden”



### List of the main publications of Dmitry Gromyko:

**Gromyko D.V.** 1982. Comparative anatomical study of the wood in the family Taxodiaceae. *Botan. Zh.* 67(7). 898-906.

**Gromyko D.V.**, 1990. A comparative and anatomical study of cross field pits in the wood of taxodiaceae species using scanning electron microscopy. *Botan. Zh.* 75(7): 973-978.

Snigirevskaya N.S., **Gromyko D.V.**, Mogucheva N.K., 1999. Stem remains of *Septomedullocaulon putoranicum* gen. et sp. nov. (?Podocarpaceae s. l.) from volcanic deposits of Tunguska Basin (Middle Siberia, Lower Triassic). *Botan. Zh.* 84(11). 125-137.

Snigirevskaya N.S., **Gromyko D.V.**, 2000. Scanning electron microscopy as a key to the recognition of the cross-field types in fossil coniferous woods from Arctic. *Acta Palaeobot.* 40(1). 39-42.

Philippe M., **Gromyko D.**, 2007. The putative Jurassic Angiosperm wood *Suevioxylon zonatum* revisited. *IAWA Journal* 28(1). 95-100.

Ablaev A.G., Wang Yu-Fei, Zhilin S.G., Li Cheng-Sen, **Gromyko D.V.**, 2007. Discovery of the new species of *Pteroceltis* (Ulmaceae) from the Early Paleogene Wuyun flora, north-east CHINA. *Botan. Zh.* 92(7). 1066-1070.

Philippe M., Jiang H., Kim K., Oh C., **Gromyko D.**, Harland M., Paik I., Thevenard F., 2009. Structure and diversity of the Mesozoic wood genus *Xenoxylon* in Far East Asia: implications for terrestrial palaeoclimates. *Lethaia* 42. 393-406.

Guo W.Y., Yang J., Li C.S., **Gromyko D.**, Ablaev A.G., Wang Q., 2010. First record of *Cercidiphyllaxylon* (Cercidiphyllaceae) from the palaeocene of Fushun, NE China. *Journal of Systematics and Evolution.* 48(4). 302-308.

Suvorova E.B., **Gromyko D.V.**, Stolbov N.M., Skvortsov E.G. 2010. New finds of cretaceous and jurassic woods on Franz-Josef Land Archipelago. Geological and geophysical characteristics of the lithosphere of the Arctic region. *Tr. VNIIOkeangeologiya.* 218(7). 118-121.

Popova S., Utescher T., **Gromyko D.V.**, Bruch A.A., Mosbrugger V., 2012. Palaeoclimate Evolution in Siberia and the Russian Far East from the Oligocene to Pliocene. Evidence from Fruit and Seed Floras. *Turkish Journal of Earth Sciences* 21. 315–334.

Popova S., Torsten U., **Gromyko D.**, Mosbrugger V., Herzog E., Francois L., 2013. Vegetation change in Siberia and the Northeast of Russia during the Cenozoic cooling: a study based on diversity of Plant Functional Types. *PALAIOS* 28. 418–432.

Popova S., Utescher T., **Gromyko D.**, Bruch A. A., Mosbrugger V., 2017. Cenozoic vegetation gradients in the mid- and higher latitudes of Central Eurasia and climatic implications. *Palaeogeograph, Palaeoclimatology, Palaeoecology* 467. 69-82.

- Popova S., Utescher T., **Gromyko D.**, Mosbrugger V., François L., 2019. Dynamics and evolution of Turgay-type vegetation in Western Siberia throughout the early Oligocene to earliest Miocene — a study based on diversity of plant functional types in the carpological record. *Journal of Systematics and Evolution* 99. 1–13.
- Ryazanov K.P., Tsybul'skaya A.E., Afonin M.A., **Gromyko D.V.**, 2020. New data on the Triassic Lestanshor formation (South-Western part of the Pay-Khoy ridge). *Bulletin of the Komi Scientific Center of the Ural Branch of the Russian Academy of Sciences* 41(1). 35-42.
- Afonin M., **Gromyko D.**, 2021. First record of *Ginkgoxylon* (Ginkgoales) fossil wood in the Lower Cretaceous of the Arctic region. *Cretaceous Res.* 125. 104868.
- Afonin M., Philippe M., **Gromyko D.**, 2022. New data on the geographic and stratigraphic range of the Mesozoic fossil wood genera *Protocedroxylon* and *Xenoxylon* in the Arctic region. *Rev. Palaeobot. Palynol.* 302. 104667.
- Afonin M., **Gromyko D.**, 2023. *Xenoxylon* (Coniferales) fossil woods from the Lower Cretaceous deposits of the Franz Josef Land Archipelago. *Bot. Zh.* 108(6). 588-596.

*Natalya Nosova, Svetlana Popova*  
*Komarov Botanical Institute of the Russian Academy of Sciences*  
*St. Peterburg, Russia*

## News from members

Dr. **Gabriella Rossetto-Harris** is the new Paleontologist at Florissant Fossil Beds National Monument (FLFO) in the Rocky Mountains of Colorado, USA. FLFO is part of the US National Park Service and was established in 1969 to preserve and protect the diverse and exceptionally preserved Eocene (34 Ma) fossil lake deposit and giant petrified redwood stumps. The site has a rich history of study over the last 150 years and over 1,700 fossil species from Florissant have been described, including abundant leaves, fruits, and insects.



While pursuing a B.A. in Geology at Colorado College (USA), Dr. Rossetto-Harris completed an internship at FLFO (2014), which first exposed her to paleontology. She then spent two years immersed in the Denver Museum of Nature & Science (Denver, CO, USA) as a paleontology field and research intern and later promoted to a collections assistant in paleobotany (2015-2017). Dr. Rossetto-Harris fulfilled her dream of doing research in her father's homeland of Argentina with the completion of a M.Sc. (2019) and Ph.D. (2023) in Geosciences at Penn State University (USA), advised by Dr. Peter Wilf, where she had the opportunity to study Eocene-Oligocene Patagonian fossil floras with collaborators at the Museo Paleontológico Egidio Feruglio (Trelew, Chubut, Argentina) and the Museo Paleontológico Bariloche (Bariloche, Río Negro, Argentina). Following her doctoral studies, Dr. Rossetto-Harris was awarded a National Science Foundation (USA) Postdoctoral Research Fellowship in Biology to investigate the rainforest affinities of fossils from the Paleocene Castle Rock flora in Colorado, primarily working with Dr. Fabiany Herrera while affiliated with the Denver Museum of Nature & Science, Denver, Colorado, and the Field Museum, Chicago, Illinois.



Dr. Rossetto-Harris is now thrilled to be returning to FLFO as the successor to Dr. Herbert Meyer, Emeritus Paleontologist, who in his 28 years of service to the Monument built the paleontology collection to over 13,200 specimens and established the strong internship program. As the paleontology program manager and museum curator at FLFO, she welcomes researchers, future interns and postdocs, and classes to visit the Monument and collaborate on future projects utilizing the paleobotanical collections. Her email address is [grharris@nps.gov](mailto:grharris@nps.gov) and recent publications include:

- Rossetto-Harris, G.** and Wilf, P. 2024. Reassessing floral diversity at Río Pichileufú, earliest middle Eocene of Río Negro, Argentina. *Palaeontologia Electronica*, 27:1-3.
- Andruchow-Colombo, A., **Rossetto-Harris, G.**, Brodribb, T. J., Gandolfo, M. A., and P. Wilf. 2023. A new fossil *Acmopyle* with accessory transfusion tissue and potential reproductive buds: Direct evidence for ever-wet rainforests in Eocene Patagonia. *American Journal of Botany*, 110:e16221.
- Rossetto-Harris, G.**, Stiles, E., Wilf, P., Donovan, M.P, and X. Zou. 2022. Rapid character scoring and tabulation of large leaf-image libraries using Adobe Bridge. *Applications in Plant Sciences* 10(6): e11500.
- Rossetto-Harris, G.**, Wilf, P., Escapa, I. H., and A. Andruchow-Colombo. 2020. Eocene *Araucaria* Sect. *Eutacta* from Patagonia and floristic turnover during the initial isolation of South America. *American Journal of Botany* 107:806-832.

*Gabriella (Gabi) Rossetto Harris, PhD  
Physical Scientist -Paleontologist  
Florissant Fossil Beds National Monument  
15807 Teller CR 1 (FedEx/UPS)/ PO Box 185 (USPS)*

## News from IOP members in Guatemala

In the IOP 133 newsletter, we have mentioned "Guatemala's First Petrified Forest: Dead Trees and the Stories They Tell" as part of a multidisciplinary project led by Dr. [Markus Eberl](#) from Vanderbilt University and introduces Guatemala's first paleobotanist and new IOP member, Osmín Jared Vásquez. This year from October 16 to 23, our international multidisciplinary team continued our fieldwork in Guatemala. The sites yielded monocots with secondary growth, along with dicots and conifers. We are also in the process of identifying fossil wood and dating rock samples to place this petrified forest in geological time. This journey was not just about research; it was an enriching experience focused on educational outreach for university students and local communities. The highlight was a photo exhibition at Agua Blanca Municipality by Dr. [Gabby Salazar](#) and [Ross Donihue](#), which captivated local audiences. The community expressed gratitude for this inspiring showcase of photographs and illustrations, which highlighted the beauty of their natural heritage and provided information in English and Spanish. It was the first fossil wood exhibit in Agua Blanca!



*Team members from left to right: Markus Eberl (archaeologist), Nareerat Boonchai (paleo-xylotomist), Gabby Salazar (conservation photographer and environmental social scientist), Omar Schwendener (archaeologist), Ross Donihue (cartographer), Carlos Velazco (field biologist), and Oswaldo López (school teacher).*

While in Guatemala, we surveyed additional fossil sites and documented biodiversity around the fossil wood localities. We invited Dr. [Carlos Velazco](#), a field biologist and Citizen Science Advocate, to join us and train both high school and undergraduate students in the field using iNaturalist as a tool to document biodiversity. This work would not have been possible without the dedication and support of Oswaldo, a local school teacher, and his family, and Arturo Aguirre, the land owner. The local mayor also supported our project and kindly let us measure and study petrified wood specimens at his house!



*A 10-meter fossil dicot wood at El Salitre (left), an image from the photo exhibition created by the team (top right) and Gabby explaining the story of petrified wood to Agua Blanca's municipal staff in Spanish (bottom right).*

*Nareerat Boonchai*

**Story by Osmín Jared Vásquez**

The Geology Department of the Northern University Center of the University of San Carlos de Guatemala is the only place in Guatemala teaching paleobotany. As a paleobotany lecturer, I try to ensure that the class goes beyond simple bibliographic review and laboratory specimen observations, to have direct experience in the field. This sparks my students' interests in plant diversity and evolution. I want to show them how the plant fossils found in our country



can be used as a tool to help us understand past environment and climate. To achieve this goal, it is extremely important to take my students to the field so they can integrate and apply all the knowledge they have learned from me.

Our two-day paleobotany field trip was an inspiring experience for the students. On the first day, the students examined lake sediments and discovered numerous leaf imprints. On the second day, in Las Crucitas, Jalapa, they observed numerous fragments of petrified wood and collected some samples in the field, accompanied by a multidisciplinary team of researchers, including Dr. Nareerat Boonchai. This has been an extraordinary and extremely enriching experience. Dr. Nareerat Boonchai, not only transmitted her knowledge about the identification of wood from its anatomical characteristics, but also about the diversity of plants at different elevations, the reconstruction of trees from fragments with branching systems, and the paleoecological and paleoclimatic interpretations using fossil woods. Through her dedication and enthusiasm, she also inspired my students to dedicate themselves to this branch of science.

It is possible that among the students who attended this field trip, there are the future paleobotanists of Guatemala!



Team members and sophomore Students from the Coban campus of Guatemala's University of San Carlos at a fossil wood site in Las Crucitas . Photo credit: Gabby Salazar.

The project is funded by the National Geographic Society

## **Congratulations to Dr. Nicolas Gentis!**

On November 4th, Nicolas Gentis, successfully defended his Ph.D. thesis at the Muséum National d'Histoire Naturelle in Paris, France. His dissertation, titled “Evolution of vegetation and climate in the Bay of Bengal during the Cenozoic: contributions from the study of fossil wood” was completed under the supervision of Anaïs Boura, Dario De Franceschi, and Alexis Licht. Some of you may have met Nicolas or his supervisors this year at the [XI IOPC](#) in Prague or at other conferences. For anyone seeking his expertise in fossil wood or exploring collaborative research opportunities, feel free to connect with him at [nicolas.gentis@edu.mnhn.fr](mailto:nicolas.gentis@edu.mnhn.fr).



Nicolas and his office with the wall covered with synthetic identity cards for each fossil wood.

### **A bit about Nicolas in his own words:**

Growing up in the Cognac region of France, I hesitated for a long time about studying art and filmmaking, before finally settling on general biology at the La Rochelle University, where I obtained my bachelor's degree. It took me a year of reflection in New Zealand to decide on my next move. I never really wanted to put storytelling aside, so I decided to move to Paris, and one discipline in particular allowed me to tell stories and study nature sciences: palaeontology. I started a joint master's degree between Sorbonne University and the Muséum National d'Histoire Naturelle (MNHN), which I obtained in 2019. My interest in plant science came about a little by chance, mainly via internship opportunities. I discovered rainforests during my bachelor's degree, with an internship on Amazonian wood anatomy in French Guiana. I continued later at the MNHN with those who became my thesis supervisors.

As my subject was fairly exploratory, I was able to familiarize myself with the anatomy of wood from many different families. Although taxonomy was my basic training, I became very



interested in the evolution of tropical lineages and their biogeography, particularly in relation to the India-Asia collision. Maybe some of you have seen my presentation in Prague at the last IOPC. Now that my thesis is finished, I hope to be able to continue developing the links between the study of wood, phylogeny, climate and biogeography.

I've always felt warmly welcomed and encouraged in the palaeobotany community. I hope to stick around for many years to come.

*Nicolas Gentis*

### **Testimonial from advisors and thesis's committee members**



Anaïs Boura presents Nicolas, at the end of his defense, with the traditional trophy (of the MNHN palaeobotanists), here specially composed of a polished slice of juniper root wood (*Juniperus oxycedrus*), a ring of eucalyptus wood, and a dipterocarp fruit. (as Nicolas has studied many Dipterocarps during his thesis).

*“Much more than just a newly minted Doctor of Science, Nicolas is now a true expert in wood science. Curious, dedicated, and hardworking, he has been an exceptional colleague during these past years in the lab. He has also stood out for his communication skills, whether in presenting his research or mentoring students. You can hear him in action (in French) here: <https://www.youtube.com/watch?v=WLKJrYoWFuM> (starting at 00:34:14)”.*

*Anaïs Boura & Dario De Franceschi*

*“The PhD Thesis by Nicolas is composed of two already published papers and one being almost ready to be published, so an important part of its contents was already reviewed. Consequently, the report was rather about my personal feelings and I can only say his work is really fine, complex and detailed, and some parts as very complete anatomical descriptions, nice photos and*

*well done drawings in Geodiversitas paper can become one of the standard publications for fossil legume and dipterocarp woods”. —JS*

*“Nicolas’ thesis writing and presentation not only embody science but also artistry. It is one of the most aesthetically impressive dissertations and beautifully delivered presentations I have seen. It was an honor and a great pleasure to attend Nicolas’ thesis defense as a member of his jury and to reunite with fossil wood friends and colleagues. Many thanks to Anaïs, the colleagues, and students at the Muséum National d’Histoire Naturelle for their kind hospitality”.—NB*



Nicolas’s thesis committee from left to right: Jean-Yves Dubuisson, Anaïs Boura, Alexis Licht, Margareta Tengberg, Séverine Fauquette, Dario De Franceschi, Hans Beeckman, Jakub Sakala, and Nareerat Boonchai

You can read some of his publications as part of dissertation at

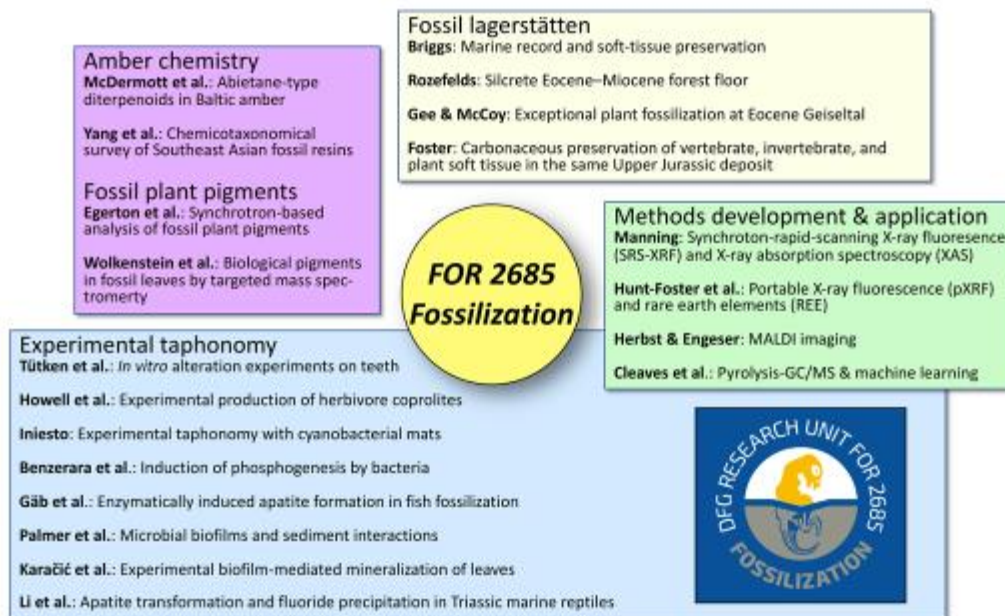
- Gentis et al. (2022) Fossil wood from the lower Miocene of Myanmar (Natma Formation): palaeoenvironmental and biogeographic implications.  
<https://sciencepress.mnhn.fr/en/periodiques/geodiversitas/44/28>
- Gentis et al. (2024) First fossil woods and palm stems from the mid Paleocene of Myanmar and their implications for biogeography and wood anatomy.  
<https://doi.org/10.1002/ajb2.16259>



## Meeting Reports

### International Workshop on Fossilization at the University of Bonn, June 14–17, 2024

The International Workshop on Fossilization sponsored by DFG Research Unit FOR 2685 was held at the University of Bonn from June 14 to 17, 2024. Specialists on the fossilization of plants and animals, as well as on cutting-edge methods applied to elucidate fossilization, were featured in a series of 20 talks over the long weekend. Experts came from all corners of the globe, but the meeting also showcased the work of early-career scientists.



At the end of the workshop, two round-table discussions were held. The topic of the first session was Microbes, Biofilms, and Fossilization, led by Brianne Palmer, while the second session on Fossilization of Dinosaur Hard and Soft Tissues was moderated by Phillip Manning.

Below is a list of topics, speakers, and titles of the exciting talks on fossilization. All talk abstracts were published in the journal *Terra Nostra*, and the open-access abstract volume is available online at: [http://www.geo-union.de/fileadmin/downloads/TERRA\\_NOSTRA/Terra\\_Nostra\\_2024\\_1\\_Abstract\\_volume\\_Int\\_Workshop\\_Fossilization\\_Univ\\_Bonn\\_June\\_2024.pdf](http://www.geo-union.de/fileadmin/downloads/TERRA_NOSTRA/Terra_Nostra_2024_1_Abstract_volume_Int_Workshop_Fossilization_Univ_Bonn_June_2024.pdf)

### **Welcome to Bonn**

- DFG FOR 2685 Speaker Carole Gee

### **Fossil lagerstätten** [Moderator: Thomas Tütken]

- Derek E. G. Briggs: Exceptional fossils—The marine record
- Andrew C. Rozefelds: Sub-basaltic silcrete permineralisation of Eocene-Miocene forest floor in eastern Australia
- Carole T. Gee and Victoria E. McCoy: Exceptional plant fossilization in the middle Eocene lignites of the Geiseltal fossil lagerstätte, Germany
- John R. Foster: Carbonaceous preservation of vertebrate, invertebrate, and plant soft tissue in a single fossil deposit in the Late Jurassic Morrison Formation, USA

### **Methods development and application** [Moderator: Marianne Engeser]

- Phillip L. Manning and Victoria M. Egerton: Impossible fossils
- ReBecca Hunt-Foster, Alan Titus, David Polly, and Celina Suarez: Geochemical fingerprinting using portable X-ray fluorescence and rare earth elements of Late Jurassic fossils from the Colorado Plateau, USA
- Marius Herbst and Marianne Engeser: MALDI imaging—A possible application for fossils?
- H. James Cleaves II, Grethe Hystad, Anirudh Prabhu, Michael L. Wong, George D. Cody, Sophia Economon, and Robert M. Hazen: A robust, agnostic molecular biosignature based on machine learning

### **Experimental taphonomy** [Moderator: Derek E. G. Briggs]

- Thomas Tütken, Michael Weber, Katrin Weber, Anna Kral, Sven Brömme, Hubert Vonhof, Tina Lüdecke, Alfredo Martinez-Garcia, Thorsten Geisler, and Michael Wiedenbeck:  
In vitro alteration experiments on teeth: Effects on in vivo isotope compositions
- Mariah M. Howell, Carole T. Gee, and Karl-Heinz Südekum: Experimental production of herbivore coprolites: What's left after digestion?
- 

### **Preservation & fossilization through microbial mediation** [Moderator: Gabriele Bierbaum]

- Karim Benzerara, Fériel Skouri-Panet, Elodie Duprat, Emmanuel Letavernier, and Julie Cosmidis: The induction of phosphogenesis by bacteria—Who and how?
- Fabian M. Gäb, Sabina Karačić, Richard Wirth, Gabriele Bierbaum, and Christoph Bultmann: Enzymatically induced apatite formation as a key mechanism in fish fossilization: An experimental study
- Miguel Iniesto: Experimental taphonomy with cyanobacterial mats: Unveiling the role of these communities in fossilization
- Brianne Palmer, Sabina Karačić, Gabriele Bierbaum, and Carole T. Gee: Microbial biofilms and sediment interactions: Key factors in the early stages of leaf decay and preservation

- Sabina Karačić, Brianne Palmer, Jesenko Karačić, Esther Sib, Fabian Gäb, Carole T. Gee, and Gabriele Bierbaum: Experimental biofilm-mediated mineralization of leaves
- Qiang Li, Jun Liu, Fabian Gäb, and P. Martin Sander: Fossilization and low-grade metamorphism of Triassic marine reptiles from southwest China: A continuum of apatite transformation and fluorite precipitation

#### **Amber chemistry and fossil plant pigments** [Moderator: Christa Müller]

- Connor M. McDermott, Parker L. Flanders, and Elizabeth A. Ambrose: Paleopharmaceuticals—Analysis and identification of abietane-type diterpenoids in Baltic amber samples as potential drug scaffolds
- Tzu-Ruei Yang, Yun-Ru Chen, Yao-Chang Lee, Chun-Chieh Wang, and Liang-Jian Shiau: A chemotaxonomical survey of Southeast Asian fossil resins and its taphonomical implications for their fossilization processes
- Victoria M. Egerton, Phillip L. Manning, and Roy Wogelius: Synchrotron-based analysis of fossil plant pigments
- Klaus Wolkenstein, Christa E. Müller, Marianne Engeser, and Carole T. Gee: Detection and quantification of biological pigments in fossil leaves by targeted mass spectrometry

#### **Closing remarks**

- DFG FOR 2685 Speaker: Carole T. Gee

The Research Unit on Fossilization will continue for another year and will come to a close on December 31, 2025.

*Carole Gee, University of Bonn, Germany*

### **32. International Plant Taphonomy Workshop, November 8–10 2024, Berlin**

The workshop was organized as joined meeting with the German Palaeobotanical and Palynological Working Group (APP) by the palaeobotanical team of the Museum of Natural History Berlin, Germany. Palaeobotany has been an integral part of the museum's collections and its research since the very beginnings. The origins of the collection date back to 1770 with the founding of the Royal Prussian Mining Academy. Since then, the collection has grown steadily to around 300,000 specimens today, covering the history of plants from the Lower Devonian to the present day. A herbarium with around 45,000 specimens is also part of the collection and mainly used for comparison with fossil taxa. Thanks to extensive work by important scientists such as Christian E. Weiss, Henry Potonié, Walther Gothan, and Winfried Remy, the collection has a large number of types and figured specimens. The Palaeobotany working group is existing in its current form since 2021 and dedicates its scientific research efforts to the reconstruction of late Palaeozoic, late Mesozoic and Cenozoic vegetation communities.



28 colleagues from Austria, China, Czech Republic, Germany, and Italy participated in person and about 10 colleagues from Germany, Greece, Poland, Spain and USA participated online, among them Dimitra Mantzouka from Athens, Greece with her high school class.



Group photo of workshop participants in front of the museum (taken by Eva-Maria Sadowski)



Lecture hall in the Museum of Natural History Berlin.

**Scientific program:**

*Oral presentations plant taphonomy workshop:*

Brianne PALMER, Sabina KARAČIĆ, Gabrielle BIERBAUM & Carole T. GEE: The role of biofilms and exopolymeric substances in the microbe-mediated preservation of *Metasequoia*, *Podocarpus*, and *Araucaria* leaves.

Mahdieh MALEKHOSSEINI, Hans-Jürgen ENSIKAT, Alexander BLANKE & Jes RUST: Do Calcium oxalate crystals protect the plants against larvae? How insects deal with mechanical barriers in plants.

Zbyněk ŠIMŮNEK, Jana DRÁBKOVÁ & Marcela SRÁRKOVÁ: The new discovery of flora, palynomorphs and dispersed cuticles from the Upper Palaeozoic of the Železné Hory Mountains, Czech Republic.

Ludwig LUTHARDT, Lorenzo MARCHETTI, Robert NOLL & Hans KERP: New insights and perspectives on callipterid peltasperms of central Europe: key elements to reconstruct (seasonally-) dry ecosystems of the late Paleozoic?

Michael LAAß, Ludwig LUTHARDT, Steffen TRÜMPER, Angelika LEIPNER, Norbert HAUSCHKE, Ronny RÖßLER: What is *Asteronomus*? New insights into plant anatomy and taphonomy of *Autunia conferta*.

Ronny RÖßLER: A sizable unusual calamitalean encased by a pyroclastic density current.

Philipp HILLER, Katharina ENDT & Benjamin BOMFLEUR: Depositional setting of a peculiar fossil-rich lake deposit in northern Victoria Land, Antarctica.

Carole T. GEE: Taphonomy of a spectacular 150-million-year-old log assemblage: The Upper Jurassic Petrified Forest in Escalante, Utah, USA.

Lutz KUNZMANN, Dimitra MANTZOUKA & Helmut KNOLL: The preservation modes of plant fossils in the Late Cretaceous Aachen Formation.

Mengxiao WU, Tao SU, Zhekun ZHOU, Lutz KUNZMANN: Gone with the wind in the early Oligocene.

Vera GRIESSER, Martina DOLEZYCH, Kurt KROEPELIN, Karl WIMMER, Gerhard HELLE & Ludwig LUTHARDT: Reconstructing a middle-Miocene landscape of southern Germany from xylitic wood samples of the Bunte Trümmersmassen (Nördlinger Ries Impact Crater).

*Poster session plant taphonomy workshop (short oral presentations in front of posters):*

Lydéric PORTAILLER & Ludwig LUTHARDT: Xper3: Identifying Medullosan stem taxa with an interactive identification key.

Eva-Maria SADOWSKI & Josephine FRANKE: Towards a holistic reconstruction of the 'Baltic amber forest' – angiosperm diversity and its palaeoecological implications.

Miriam SLODOWNIK & Robert S. HILL: The Austral Antarctic Forest during the Early Eocene Climatic Optimum – biogeography, diversity and the fate of polar lineages.

Sophia KHAMSEH & Ludwig LUTHARDT: Morphotypes of fossil roots in the late Paleozoic.

*Oral presentations annual meeting German Arbeitskreis Palaeobotany and Palynology:*

Hans KERP, Hendrik BOEDIGE, Jörg W. SCHNEIDER & Benjamin BOMFLEUR: Plant debris from the Zechstein of Gera-Trebnitz, eastern Thuringia.

Miriam SLODOWNIK, Elke SCHNEEBLI-HERMANN & Evelyn KUSTATSCHER: Introducing WETTEST – When an Exceptional Triassic climate change (CPE) triggers plant evolution in the (Sub)Tropics.

Mariah M. HOWELL, Ronny ROESSLER & Carole T. GEE: Axis length matters for the phyllotaxis of *Araucaria mirabilis* seed cones from the Middle Jurassic Jaramillo Petrified Forest of Patagonia, Argentina.

Robert NOLL: Wie sitzen die Patagonischen Araucarienzapfen an den Ästen an?



In the afternoon of November 9, the palaeobotanical group of the museum organized a guided tour through the palaeobotanical collection in the museum branch in Berlin-Moabit. Over drinks and snacks, highlights of the collection were presented and questions about collection management were discussed.



Left: Ludwig Luthardt demonstrates collection highlights. Right: autumn aspect in the botanical garden Berlin-Dahlem.

On November 10, workshop participants visited the botanical garden at Freie Universität Berlin in Berlin-Dahlem. Palaeobotanist Clément Coiffard from the university led a guided tour through the garden and its greenhouses.

*Ludwig Luthardt, Eva-Maria Sadowski, Lydéric Portailier, Simon Beurel, Catrin Puffert, Vera Grießer on behalf of organizing group,*

## Book announcement

### ***Rooted in Time***

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## ABOUT THE AUTHORS



**Carole T. Gee** is a paleobotanist, botanist, and associate professor of paleontology at the University of Bonn in Germany. She is the editor of *Plants in Mesozoic Time: Morphological Innovations, Phylogeny, Ecosystems*, and the lead editor of *Fossilization: Understanding the Material Nature of Ancient Plants and Animals*.

*Understanding the Material Nature of Ancient Plants and Animals*.

**Channing Redford** is an architect who studied botanical art and illustration at the New York Botanical Garden.

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## Upcoming meetings

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### **42nd Mid-Continent Paleobotanical Colloquium (MPC), Saturday May 17, 2025, at Wesleyan University in Middletown, Connecticut, USA**

Paleobotany enthusiasts:

Please save the date for the 42nd MPC! We are excited to welcome you to the Hartford Basin, home to sediments that record the aftermath of the end-Triassic mass extinction.

The main MPC program (talks / posters / dinner) will be on the 17th at Wesleyan. An optional field trip to the revamped Yale Peabody Museum will be on the 18th. If you are looking to link the meeting with other nearby activities, Yale is about 30 minutes away and New York and Boston are each about 2 hours away, depending on traffic.

We will launch the MPC website in early 2025 with information about registration, hotels, etc. I will send out a second and final email blast in advance of the website launch.

We hope to see you in Middletown next year!

Wesleyan organizing committee: Dana Royer & Xiaoqing Zhang

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### **12th European Palaeobotany and Palynology Conference, 2026, Münster, Germany**

#### Disclaimer:


Newsletter edited by Lutz Kunzmann & Steven Manchester.

The views expressed in the newsletter are those of its correspondents, and do not necessarily reflect the policy of IOP.

Newsletters are regularly issued in February, June and October every year.

Please send us your contributions for the next edition of our newsletter (136) until end of March 2025.

Contributions should be sent to [Lutz.Kunzmann\(at\)senckenberg.de](mailto:Lutz.Kunzmann(at)senckenberg.de).

 Homepage: [www.palaeobotany.org](http://www.palaeobotany.org)



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