

Future meetings

2nd International School on Wood and Charcoals - February 2024

The summer school on Wood and Charcoals will be held in the Department of Agricultural Sciences, University of Naples Federico II, Italy on Feb 19th - 23rd, 2024. The title of the summer school is “Wood and Charcoals in Mediterranean Forest Ecology: anatomical identification and functional traits to interpret past and current climate changes”. It is directed to master thesis students, PhD, Post-docs or early career researchers. Lecturers include Veronica De Micco - University of Naples IT, Gaetano Di Pasquale - University of Naples IT, Paolo Cherubini - WSL CH + University of British Columbia, Claire Delhon - Université Nice Côte d’Azur FR, Fabio Scarciglia - University of Calabria IT, Fabio Marzaioli - University of Campania IT, Angela Balzano - University of Ljubljana SL, Angelo Rita - University of Naples IT, Alessia D’Auria - University of Naples IT, Mauro Bernabei - CNR IT, Georg Von Arx - WSL CH, Elisabeth Wheeler - North Carolina State University | NCSU USA. This summer school will be sponsored by IAWA.

Veronica De Micco, Gaetano Di Pasquale, Italy

IAWA Fossil Wood Symposium in Prague, Czech Republic, Postponed to May 25th – 31st, 2024

The IAWA Fossil Wood Symposium, dedicated to the memories of Prof. Dr. Herbert Süß (1920-2017) and Prof. Dr. Alfred Selmeier (1923-2018), will be organized on May 25th - 31st, 2024, during the XIth IOPC (International Organization of Palaeobotany Conference) held conjunctly with the XVth International Palynological Congress. The IAWA Symposium will be organizing an IAWA Social Hour and supper in the famous Carthusian Monastery (1628) in Melnik, where IAWA has been previously hosted at a European Palaeo-botanical Conference. Detailed information is available by clicking <https://www.prague2020.cz/news.php>.

Jakub Sakala, Czech Republic

IAWA Symposium of XXVI IUFRO World Congress in Stockholm, Sweden on June 23rd - 29th, 2024

The XXVI IUFRO World Congress will be held in Stockholm, Sweden on June 23rd - 29th, 2024. The IAWA-IUFRO Symposium titled “T5.16 IAWA-IUFRO Symposium: Advancing Methods and Applications of Wood Identification” will be organized during the Congress. In total, 12 abstracts have been determined for the oral session and 16 abstracts for the poster session which includes 9 short orals by poster and 7 pure posters. This IAWA-IUFRO symposium aims to present the most recent advances in methods and applications of wood identification for promoting a sustainable supply chain of forest products.

Please visit www.iufro2024.com/ to obtain more information.

XX IBC in Madrid, Spain on July 21st - 27th, 2024

The XX International Botanical Congress (IBC) will be held in Madrid, Spain, July 21st - 27th, 2024. Several wood anatomy relevant scientific sessions including “IAWA Symposium - The contribution of wood in forest: from wood dynamics to trait diversity and carbon gains” proposed by Yafang Yin et al., “Morphological, anatomical, and evolutionary basis of habit transitions in plants” by Marcelo R. Pace et al., “Xylem anatomy as a central hub linking fluid transport processes from the individual plant level to ecosystems” by Steven Jansen et al., and “Bark structure: evolutionary, functional and ecological implications” by Alexei Oskolski et al., are in the collection of abstracts. The abstract deadline for oral presentations is December 8th 2023 and for poster abstracts is February 1st, 2024. As a long-term tradition, IAWA social hour will be organized during the congress.

Please get updated information via <https://ibcmadrid2024.com/>.

The 10th PRWAC in Asahikawa, Japan on September 10th – 14th, 2024

The 10th Pacific Regional Wood Anatomy Conference (10th PRWAC) will be held in Asahikawa, Japan, from September 10th - 14th, 2024. Asahikawa is located in the central part of Hokkaido island and is surrounded by fertile farmland and lush nature. The Asahikawa area is also well-known for distributing wooden furniture and crafts. We are looking forward to your participation in this in-person meeting, which will take place in a city closely connected with wood science, technology, and industry.

Yuzou Sano, Hisashi Abe, Yuzou Sano and Hisashi Abe, Japan

Meeting reports

The 10th IAWA-China Group Annual Meeting in Nanjing, Nov. 10th-12th, 2023, China

The 10th IAWA (International Association of Wood Anatomists) – China Group Annual Meeting was held on November 10th -12th, 2023, sponsored by IAWA – China Group, organized by Nanjing Forestry University (NJFU) and Nanjing Police College, co-organized by Co-Innovation Center of Efficient Processing and Utilization of Forest Resources, College of Materials Science and Engineering, NJFU. The theme of the conference was “Strengthening the fundamental research of wood science and deepening the interdisciplinary construction of forestry and grassland”. The Vice President of NJFU Xinwu Xue, the Director of Science and Technology Division of Nanjing Police College and IAWA Executive Secretary Yafang Yin delivered opening remarks.

More than 240 people from 60 organizations attended the meeting. There were 8 keynote speakers from four countries providing lectures. Professor Wang Shuzhi, researcher of the Institute of Archaeology of the Chinese Academy of Social Sciences gave a keynote lecture entitled "Wood Utilization of Ancient Ancestors - Identification of Timber Remains Unearthed from Archaeological Site". Professor Takao ITOH of Kyoto University delivered a keynote lecture entitled " Significant issues learned from the construction of Chinese wood database" ", Professor Ridwan YAHYA of Bengkulu University of Indonesia provided a keynote lecture entitled “Introduction of extra short fiber in *Acacia mangitm*: Dimensions and quality as raw material for paper manufacture”, Prof. Yaoli Zhang of NJFU delivered a keynote lecture entitled “Research on Wood Identification Methods and Functional Improvements ", Professor Ma Erni of Beijing Forestry University gave a keynote lecture entitled "Research Progress on the Response of Wood Cell Wall Components to Water Based on Molecular Dynamics Simulation", Professor Zhang Junzhou of Lanzhou University delivered a keynote lecture entitled "Interaction Effects of Climatic Factors and Tree Age on the Annual Radial Growth of Trees in the Qilian Mountains", Professor Duc-Thanh Nguyen of Vietnam Academy of Forestry provided a keynote lecture entitled "Evaluation and conservation of world documentary heritage-Woodblocks of Nguyen Dynasty, Vietnam", and Professor Xue Xiaoming of Nanjing Police College delivered a keynote

lecture entitled "Analysis of Law Enforcement Situation and Scientific and Technological Needs from the Perspective of Environmental Resource Protection". After keynote lectures, in total there were 58 oral presenters giving their presentations on xylem formation, dendrochronology, archaeological wood, wood identification, wood properties, new materials derived from wood, wood and bamboo utilization, and functional wood anatomy.

The committee members of the IAWA China group elected 18 qualified graduate students for the Excellent Presentation Awards (EPA) of the IAWA-China Group. Also, 2 excellent posters and 11 excellent wood microscopic pictures were awarded. IAWA-China Group and the local organizer actively built a platform to provide important academic exchange opportunities for scholars and graduate students in the field of wood anatomy to share the latest research progress, and effectively promoted the international and domestic cooperation and development of wood science and technology and related disciplines. This is the second time for NJFU to host the IAWA China Group Annual Meeting since the first annual meeting in 2014.

In 2024, the 11th Annual Meeting of IAWA-China will be held in Yunnan Province, China, co-organized by Southwest Forestry University.

Shan Li, Shengcheng Zhai, Bingwei Chen, China



Photo of participants of the 10th IAWA China group annual meeting

Miscellaneous News

Special Edition of the Carlquist issue is Published as Open Access

As a celebration of the prolific scientific life and achievements of Sherwin Carlquist, arguably the most influential wood anatomist of all time, the IAWA Journal published a special edition with 19 articles covering a broad range of themes that Carlquist dedicated most of his career to. Edited by Carlquist's former student Mark E. Olson, and Marcelo R. Pace, these articles aimed to re-examine and shed light on the strengths, weaknesses, and controversies of key functional wood anatomical structures that Carlquist hypothesized as important in his research. All articles are Open Access and already available to download on website of IAWA Journal: <http://www.brill.com/view/journals/iawa/iawa-overview.xml>.

IAWA Softwood List in Serbian Was Published in September, 2023

With the authorization and help of IAWA, the IAWA list of microscopic features for softwood identification in the Serbian language was compiled by Dr. Milan Gavrilović and Prof. Dr. Pedja Janačković from the Department of Morphology and Systematics of Plants, University of Belgrade - Faculty of Biology, Serbia, and recently published in September 2023.

As IAWA lists (1989, 2004, and 2016) represent an internationally recognized and widely used relevant literature on wood anatomy, it is necessary to complement the existing Serbian literature on wood anatomy by translating all three IAWA lists, starting with the translation of softwood. The main aim of this Serbian edition is to publish internationally recognized terms and definitions in the Serbian language in order to make them accessible and understandable to a wider range of readers. At the beginning of this IAWA list we listed synonyms of all terms that are in use in the available Serbian literature on wood anatomy.

Translated and adapted to Serbian terminology, this IAWA list is primarily intended for students of the Faculty of Biology, University of Belgrade, but also for students of related faculties (Faculty of Forestry, Faculty of Agronomy), as well as experts and specialists who are dealing with various aspects of conifer wood anatomy.

Many thanks to Prof. Dr. Dragica Vilotić and Prof. Dr. Nebojša Todorović from the Faculty of Forestry - University of Belgrade, who did professional proofreading and whose advice and suggestions improved the quality of the translation. Also, many thanks to Serbian proofreader Vesna Kalabić, without whose help this text would not be as it is.



Milan Gavrilović and Pedja Janačković, Serbia

The 1st International Training School in Wood Identification was organized at the University of Suceava

From October 7th - 14th, 2023, the 1st International Training School in Wood Identification was organized at the University of Suceava in Romania. Nine participants from Europe (Romania, Ireland, Poland, Italy) and one from South Africa joined the event. The microscope, wood samples, and a set of slides were provided for each pair of participants. This training also attracted the curiosity of local forestry students and lecturers.

The positive feedback provided by the participants calls for a following edition. The 2nd International Training School in Wood Identification is expected to be held in October 2024.



Alan Crivellaro, Flavio Ruffinatto and Catalin Roibu, Romania

A 2024 Calendar for Wood Anatomists and Paleobotanists

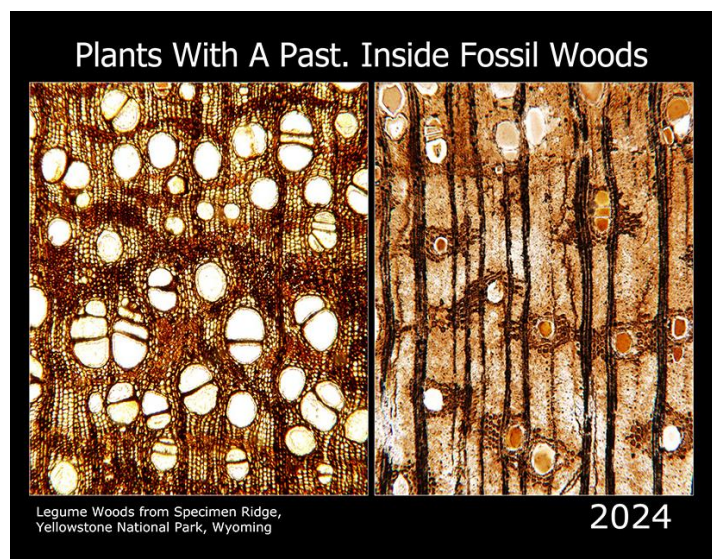
Plants With a Past. Inside Fossil Woods. Each month features multiple photomicrographs of fossil and modern woods. The calendar gives the dates of Arbor Days worldwide, birth dates of I.W. Bailey and C.R. Metcalfe, wood anatomist specific days such as Ring-Porous Day and Vasicentric Parenchyma Day. You'll learn when Chocolate Cake Day, Wombat Day, Lost Sock Memorial Day, and Avoid Procrastination Day occur. Profits go towards supporting InsideWood curation and research on fossil wood.

Available from Lulu Press –a print on-demand publisher. Check Lulu's home page to see if there is a sale. <http://www.lulu.com/home>.

Direct link to a preview of the calendar and order form

<https://www.lulu.com/shop/elisabeth-wheeler/2024-insidewood-plants-with-a-past/paperback/product-45vv9yw.html>.

Elisabeth Wheeler, USA



I.W. Bailey Award 2023

The recipient of the 2023 I.W. Bailey Award is Eunice Romero, Faculty of Science, Department of Physical Geography and Geoecology, Charles University, Czech Republic awarded for her paper entitled: "Wood anatomy of 13 species from a successional tropical dry forest: description and ecological implications" published in IAWA Journal 43 (4), 2022: 372-402 for this year's award.



The judges commented:

"In this paper, authors focused on a valuable scientific question of plant structure and function (potential drought adaptations specified in this study) and set up a convective experimental design with reasonable sampling duplication of TDF (Tropical Dry Forest) successional species, smooth extraction of wood anatomical traits, and very impressive statistical analyses using different methods (e.g., Principal Component Analysis, PCA). The results derived from this work provided supplemented knowledge to explain the mechanisms of woody plants for coping with hydraulic/drought stress using combinations and interactions of wood anatomical features. In addition, the qualified illustrations and tables of wood anatomical traits and statistical data were well shown in this paper."

This work contributes to understanding wood function under stress situations. Tropical dry forests should be much more vulnerable to weather fluctuations. In times of global warming, this work will expand our horizon of wood anatomy.

This investigation provides insight into dry forest ecology using well-illustrated wood anatomical investigation with impressive use of principal component analysis to highlight trends."

I.W. Bailey Award 2024 is calling for Nominations. From 2014 onwards, the I.W. Bailey Award is presented annually for the best original or review paper submitted to the IAWA Journal by graduate and undergraduate students or postdocs up to five years after their PhD defense. The Award consists of a certificate and €1000, sponsored by Brill Publishers. Candidates may nominate their submissions directly to the editors of IAWA Journal: Lloyd Donaldson (lloyd.donaldson@scionresearch.com) and Marcelo Pace (marcelo.pace@ib.unam.mx), together with a one-page cv, and one supporting statement from a senior IAWA Member before September 1st, 2024. The Award Committee will be formed by the Editors and Associate Editors of the IAWA Journal. Please visit <http://www.editorialmanager.com/iawa/> for instructions to authors.

We thank the judges of this year's award, Yafang Yin, and Yoon Soo Kim for their time and effort.

*Lloyd Donaldson & Marcelo Pace
Editors in Chief – IAWA Journal*

Call for Newsletter Items

The IAWA Newsletter keeps the IAWA community actively informed and stimulates members to visit the IAWA website for the latest and detailed news. Please send any news items you wish to share with the whole IAWA community to the newsletter editors Dr. Shan Li (lishan.ecology@hotmail.com) or Dr. Lichao Jiao (jiaolc@caf.ac.cn) of the IAWA Office, Beijing.

Call for Manuscripts of IAWA Journal 2024

The editors of the IAWA Journal would like to encourage new manuscript submissions for volume 45, 2024. A reminder that subscribers/IAWA members can register for 'table of contents alerts on the

IAWA Journal homepage. Vol. 44(1), 44(2) and 44(3&4) are now published and printed copies are currently being sent to subscribers, unfortunately delayed because of problems with Brill Publishing's distribution service. The table of contents for these two issues is included below.

Issue 1

Regular articles

Open Access

Mitigation of cellular collapse during drying of *Eucalyptus nitens* wood using supercritical CO₂ dewatering

Authors: Hamish Pearson, Lloyd Donaldson, and Mark Kimberley

Pages: 1–20

Quantitative anatomy or macroscopic parameters of compression wood of *Picea abies* (L.) H. Karst.? Defining the optimal parameters for dendrogeomorphic purposes

Authors: Kristýna Wiśniewská and Karel Šilhán

Pages: 21–35

Induction of compression wood inhibits development of spiral grain in radiata pine

Authors: Jimmy Thomas et al.

Pages: 36–62

Tracing the world's timber: the status of scientific verification technologies for species and origin identification

Authors: Melita C. Low et al.

Pages: 63–84

Anatomical investigation of wood from two old bridges as part of the historical record of the flora of the Atlantic Forest

Authors: Sabrina Nascimento Silva et al.

Pages: 85–107

Historical woods of traditional Brazilian boats

Author: João Carlos Ferreira de Melo Júnior

Pages: 108–124

Acknowledgment of Reviewers

Pages: 125

Issue 2

Regular articles

Radial growth rate does not affect radial variation of latewood tracheid length in aged trees of *Thujaopsis dolabrata* var. *hondae*

Authors: Ikumi Nezu et al.

Pages: 127–139

Seasonal temperature and precipitation regimes drive variation in the wood of oak species (*Quercus*) along a climatic gradient in western Mexico

Authors: Maribel Arenas-Navarro et al.

Pages: 140–155

Hydraulic architecture of crown in three Brazilian species

Authors: Olívia Pereira Lopes

Pages: 156–169

Simple differential staining method of paraffin-embedded plant sections with safranin-alcian blue

Authors: Shunamit Wolberg et al.

Pages: 170–175

A semi-thin section technique-based approach to quantify the xylem secondary cell wall deposition process

Authors: Tong-Yan Liu et al.

Pages: 176–189

Practical guidelines for quantitative wood anatomy on *Ginkgo biloba* L.

Authors: Weiwei Huang and Yueyi Li

Pages: 190–209

Volumetric imaging by micro computed tomography: a suitable tool for wood identification of charcoal

Authors: Volker Haag et al.

Pages: 210–224

Comparative wood anatomy of 16 Malagasy Dalbergia species (Fabaceae) using multivariate techniques

Authors: Ravo Nantenaina Ramanantsialonina et al.

Pages: 225–252

Wood and bark anatomy of the charismatic Wisteria vines (Leguminosae)

Authors: Rosa Nejapa and Marcelo R. Pace

Pages: 253–265

Corrigendum to: Longitudinal transmittance of visible and near-infrared light in the wood of 21 conifer species (IAWA Journal 43(4) (2022): 403–412, DOI: 10.1163/22941932-bja10103)

Authors: Hisashi Abe et al.

Pages: 266–267

Book review

Author: Lloyd Donaldson

Pages: 268–269

Obituary

Walter Liese (1926–2023)

Pages: 270–271

Issue 3 & 4 Special issue “Tributes to Sherwin Carlquist”

Preface

Tributes to Sherwin Carlquist

Authors: Mark E. Olson and Marcelo R. Pace

Pages: 273–280

Commentary

The vulnerability to drought-induced embolism-conduit diameter link: breaching the anatomy-physiology divide

Authors: Mark E. Olson, Marcelo R. Pace, and Tommaso Anfodillo

Pages: 335–354

‘Paedomorphosis’ and ‘juvenility’ in secondary xylem: (not such) useful constructs?

Author: Cynthia S. Jones

Pages: 509–515

The vascular cambium revisited

Author: Andrew Groover

Pages: 531–538

Regular articles

How Sherwin Carlquist turned long-distance dispersal research into a field of empirical and experimental enquiry

Author: Susanne S. Renner

Pages: 281–286

A skeptic’s guide to Sherwin Carlquist’s inferences of xylem function

Author: Mark E. Olson

Pages: 287–303

Vessel diameter and vulnerability to drought-induced embolism: within-tissue and across-species patterns and the issue of survivorship bias

Authors: Uwe G. Hacke, Anna L. Jacobsen, and R. Brandon Pratt

Pages: 304–319

Vessel diameter polymorphism determines vulnerability-to-embolism curve shape

Authors: Anna L. Jacobsen and R. Brandon Pratt

Pages: 320–334

Carlquist’s indices for vulnerability and mesomorphy of wood: are they relevant today?

Authors: Frank W. Ewers, Anna L. Jacobsen, and Jorge López-Portillo

Pages: 355–367

Comparative anatomy vs mechanistic understanding: how to interpret the diameter-vulnerability link

Authors: Frederic Lens, Sean M. Gleason, Giovanni Bortolami, Craig Brodersen, Sylvain Delzon, and Steven Jansen

Pages: 368–380

On the possible functions of helical thickenings in conductive cells in wood

Authors: Adriana Costa and Alex C. Wiedenhoef

Pages: 381–398

Testing Carlquistian hypotheses on the functional significance of vessel element length

Authors: Alberto Echeverría, Emilio Petrone-Mendoza, Tommaso Anfodillo, Tim Brodribb, Christopher René Torres-San Miguel, José Luis Rueda Arreguín, and Mark E. Olson

Pages: 399–428

Evaluating Carlquist's Law from a physiological perspective

Authors: Kate M. Johnson, Sophie R. Everbach, N. Michele Holbrook, and Mark E. Olson

Pages: 429–438

Imperforate tracheary element classification for studies of xylem structure-function relations

Author: Mark E. Olson

Pages: 439–464

Parenchyma is not the sole site of storage: storage in living fibres

Authors: Lenka Plavcová, Mark E. Olson, Veronika Jandová, and Jiří Doležal

Pages: 465–476

The functional significance of tracheids co-occurring with vessels in xylem of Eudicots suggests a role in embolism tolerance

Authors: R.B. Pratt, V. Castro, and A.L. Jacobsen

Pages: 477–494

The role of imperforate tracheary elements and narrow vessels in wood capacitance of angiosperm trees

Author: Kasia Ziemińska

Pages: 495–508

Raylessness and pedomorphosis: losses and gains of xylem rays en route from procambium to vascular cambium

Authors: Kamil E. Frankiewicz and Alexei A. Oskolski

Pages: 516–530

Carlquist's growth ring classification: a functional approach that reinforces porous and annual rings

Author: Marcelo dos Santos Silva

Pages: 539–556

*Lloyd Donaldson & Marcelo R Pace
Editors in Chief – IAWA Journal*