

Future meetings

1st International Training School on Wood Identification, Suceava, Romania on October 8th - 14th, 2023

We are pleased to announce our first International Training School on Wood Identification, organized on 8-14 October 2023 at the Forest Biometrics Laboratory, Faculty of Forestry, "Stefan cel Mare" University of Suceava (Romania). We aim to provide all participants with knowledge of the wood structure, its identification, and the methods to support the identification process. The course will offer a unique opportunity to learn and practice microscopic and macroscopic wood identification. The training school costs 400€, including meals, accommodation, and course material. Feel free to contact the organisers Catalin C. Roibu (catalinroibu@gmail.com) and Alan Crivellaro (alancrivellaro@gmail.com) in case you need more information.

Alan Crivellaro, UK

The 10th IAWA-China Group Annual Meeting in Nanjing, China on November 10th - 12th, 2023

The 10th IAWA-China Group Annual Meeting will be held in Nanjing, Jiangsu Province, China, on November 10th – 12th, 2023, organized by the International Association of Wood Anatomists (IAWA) China Group and sponsored by Nanjing Forestry University and Nanjing Police College together. IAWA-China Group was officially established in 2014 and the 1st Annual Meeting of China Group was held in Nanjing. This is the first time back to the same city again for the annual meeting after nine years. The theme of this meeting will be “Strengthening basic research in wood science and deepening interdisciplinary construction in forestry and grassland”. The following scientific sessions will be included: (1) Domestic and foreign research progress on wood anatomy; (2) New technologies and approaches to wood identification; (3) Identification and conservation of archaeological wood artifacts; (4) Wood formation and dendrochronology; (5) Construction of wood herbarium for national species; (6) How can wood anatomy play a role in the national ecological security and timber safety; (7) The structure and application of bamboo and rattan. The call for abstracts for the 10th IAWA-China Group Annual Meeting and the submission will remain until Oct 15th, 2023. Please send the registration form and abstract to cbw@njfu.edu.cn.

Bingwei Chen & Biao Pan, China

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 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" is organized by Yafang Yin, Gerald Koch and Tereza Pastore during the Congress. By the deadline of June 15th, 2023, IAWA Symposium has received twenty-eight relevant abstracts from more than ten countries. The review process of abstracts will be completed by August 18, 2023. 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.

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 to 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, Japan

Meeting reports

Anatomy of Secondary Plant Tissues Course, July 11th-21st 2023, Botucatu, Brazil

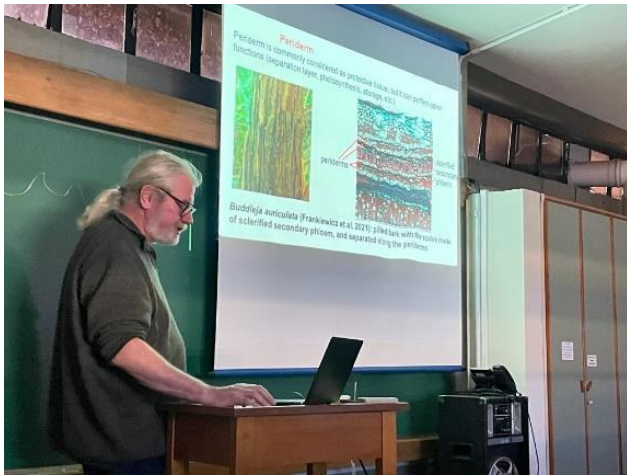
A recent Anatomy of Secondary Plant Tissues Course was took place at São Paulo State University (UNESP), Botucatu, from July 11th to 21st, 2023. The course organized and instructed by Carmen Marcati (UNESP), Alexei Oskolski (University of Johannesburg), André Lima (UNESP) and Kamil Frankiewicz (CAPES, UNESP), turned out to be a great success.

The first week focused on wood structure and cambial activity, and the second on bark anatomy. The course started with an introduction to wood structure and wood cell diversity by Alexei and was followed by training in the identification of anatomical traits according to the IAWA List by Kamil. Over the next days, participants practiced wood identification using the IAWA List and InsideWood Database (Alexei) and learned about cambial activity and seasonality (André), as well as the differences and similarities between primary and secondary growth (Alexei). The woody part of the course ended with a focus on lianescent growth syndrome (André), and the possible effect of lignin composition on habit and habitat evolution (Kamil).

The second half of the course started with an introduction to the microscopic structure of phloem, periderm, and secondary structures by Carmen and a brand-new theory about the relationship between micro- and macroscopic bark features by Alexei. The participants spent ample time preparing anatomical descriptions of barks from various, mostly Brazilian species. The course ended with an analysis of different architectures of secondary vascular tissues represented by cambial variants (André).

The organizers are particularly pleased about the diverse background of our participants, which ranged from agronomy and taxonomy to plant anatomy and even ornithology. The sight of a

woodpecker pecking on a tree has an all new anatomical dimension now! Each participant shared an engaging presentation on selected wood anatomical topics and beautifully illustrated bark descriptions. We hope the course will allow our students to introduce an anatomical slant to their research in whatever discipline they decide to specialise.



Alexei lecturing about bark structure



The four organizers of the course in the middle of the photo surrounded by participants

Carmen Marcati, Alexei Oskolski, André Lima & Kamil Frankiewicz

Miscellaneous News

Open Call for Nominees for the Next IAWA Council (2024-2026)

Please consider nominating one or more colleagues to the IAWA Council. We have a number of Council members who are reaching their term by the end of 2023 and whose vacancies will have to be filled according to the IAWA Constitution (amended version, 2007). Members serve a three-year term, with the possibility to be re-elected to a second consecutive term. The Executive Secretary and current Council will solicit brief vision statements from those who accept nomination-these statements will be collected and made available to all IAWA Members prior to or at the time of ballot distribution. Please send your nominations to Deputy ES Hisashi Abe (abeq@affrc.go.jp). The deadline for submission is September 20, 2023.

Special Edition of the Carlquist issue will be Open Access and is Coming Soon

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 is in the final process of completing 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 most are already available to download on our website right away.

Below follows a list of the titles of our special edition (organized alphabetically):

- Costa & Wiedenhoef. On the possible functions of helical thickenings in conductive cells in wood
- Echeverría et al. Testing Carlquistian hypotheses on the functional significance of vessel element length
- Ewers et al. Carlquist's indices for vulnerability and mesomorphy of wood: are they relevant today?

- Frankiewicz & Oskolski. Raylessness and paedomorphosis: losses and gains of xylem rays *en route* from procambium to vascular cambium
- Groover. The vascular cambium revisited
- Hacke et al. Vessel diameter and vulnerability to drought-induced embolism: within-tissue and across-species patterns and the issue of survivorship bias
- Jacobsen & Pratt. Vessel diameter polymorphism determines vulnerability-to-embolism curve shape
- Johnson et al. Evaluating Carlquist's Law from a physiological perspective
- Jones. 'Paedomorphosis' and 'juvenility' in secondary xylem: (not such) useful constructs?
- Lens et al. Species with wider vessels are not necessarily more vulnerable to drought-induced embolism
- Oskolski. Standing on Carlquist's shoulders: wood structural diversity in fynbos, chaparral, and maquis
- Olson. A skeptic's guide to Sherwin Carlquist's inferences of xylem function
- Olson. Imperforate tracheary element classification for studies of xylem structure-function relations
- Olson et al. The vulnerability to drought-induced embolism-conduit diameter link: breaching the anatomy-physiology divide
- Plávcova et al. Parenchyma is not the sole site of storage: storage in living fibres
- Pratt et al. The functional significance of tracheids co-occurring with vessels in xylem of Eudicots suggests a role in embolism tolerance
- Renner. How Sherwin Carlquist turned long-distance dispersal research into a field of empirical and experimental enquiry
- Silva. Carlquist's growth ring classification: a functional approach that reinforces porous and annual rings
- Ziemińska. The role of imperforate tracheary elements and narrow vessels in wood capacitance of angiosperm trees.

VOLUME 41 13–41 2023

iawa journal



International Association of Wood Anatomists

BRILL

A teenage Sherwin Carlquist showing early signs of the interest in plant anatomy that would characterize his scientific career

APEC Supports Xylaria Networking to Promote Integration of Wood Scientific Database in Asia and the Pacific

"Planting trees is regarded as an act of charity." Not just planting, identifying wood harvested and traded are also pivotal to curbing that forestry crime. With wood identification technologies, known as [forensic timber tools](#), timber legality can be identified as its genus, species, origin, and age. That contributes to settling illegal logging and associated trade throughout the global timber supply chain. But, the presence of skilled human resources, standardized methods, [xylaria](#), databases, finance, and technologies are still challenging.

Motivated by the problems to overcome, Ratih Damayanti and her colleagues from Research Centre of Biomass and Bioproducts, National Research and Innovation Agency ([BRIN](#)) and Ministry of Environment and Forestry the Republic of Indonesia (MoEF) received the grant from the [APEC Experts Group on Illegal Logging and Associated Trade \(EGILAT\)](#). With the support from Thailand, People's Republic of China, New Zealand, United States of America, and Chile, as co-sponsoring Economies, they preside over [the Project of Developing Integrated Timber Data to Enhance Legal Timber Trade of the APEC through Xylaria Networking within a 2023-2024 year implementation](#). IAWA secretariat was involved from the beginning in giving insight and spirit.

The project concerns more on database enhancement and integration and forensic skills enhancement and benefits Asia and the Pacific economies, including officials, researchers, and the private sector. With an ending outcome to develop Xylaria Networking, an integrated forensic timber database will be expected to concatenate with each of the APEC Economies' [Timber Legality Assurance System \(TLAS\)](#). The team will also stocktake different wood identification technologies, from wood anatomy, computer vision, to DNA analysis, based on their feasibility, cost-efficiency, cost-effectiveness, and accuracy. With the existence of Xylaria Networking, one of the forensic timber burdens in database presence can be surmounted, especially in Asia and the Pacific Region.

Satriana Oktarita Nugraha & Achmad Solikhin, Indonesia

IAWA Symposium on Wood Identification organized during IUFRO Division 5 Conference in Cairns, Australia on June 4th - 8th, 2023

The All-Division Conference of IUFRO Division 5 - Forest Products was held in Cairns, Australia on June 4th - 8th, 2023. During the conference, the IAWA-IUFRO Symposium titled "Session 21 Promoting Data-driven Methods for Species and Origin Identification of Forest Products" organized by IAWA and IUFRO (5.16.00) were held on June 4th. More than 50 representatives from over 20 related universities and research institutes attended this symposium. There were three oral presentations presenting their research progress on xylaria networking development, wood collection digitizing and wood identification using sub- μ CT. On the same morning, IAWA also co-sponsored Session 22&23 entitled "Application and Prospects of Interdisciplinary Forest Product Identification and Traceability Approaches".

For more details, please go to <https://www.iufro-div5-2023.com/>.



Oral presentation experts and parts of representatives of Session 21



Oral presentation experts and chairs of Session 22&23

Lichao Jiao, China

The 2022 impact factor of IAWA Journal is released

The impact factor of IAWA Journal, sponsored by the International Association of Wood Anatomists, is 1.9 in 2022 (data source: Clarivate). The past impact factors were 2.987(2021), 2.308 (2020), 1.627 (2019), 3.182 (2018), 1.903 (2017), 0.403 (2016), 1.043 (2015) and 2014 (1.074). Besides, IAWA Journal is 11 out of 20 from the Google Scholar journal ranking for “Wood Science”, which is an improvement compared with last year (12/20). Also, an h-index of 57 (data source: Scimago report) makes IAWA Journal the second from top on the wood science list.

I.W. Bailey Award 2023 - Call for Nominations

I.W. Bailey Award 2023 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. 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, 2023. 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.

Technical problems at BRILL

Herewith an update on the situation at BRILL Publishers. As you know by now, our distributor went out of business last September and we are doing everything we can to process and properly set up the IAWA Journal subscription renewals. We are not quite there yet, but fortunately there is now light at the end of the tunnel.

This huge project is almost complete and we are now hard at work registering all IAWA journal subscriptions.

For all IAWA members we have ensured that access to the journal will be open as normal for the current year 2023, this is still a workaround now but it will remain in place at least until the end of October. Before then, we expect to be amply able to register and straighten out all subscriptions so that access will also be available again.

BRILL Publishers

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 (ljiao@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) and 44(2) 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 *Thujopsis 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

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