

Letter from the Editors: *we want opinions and debate!*

In the last issue of the IAWA Journal (35, page 478) we solicited *Letters* to stimulate discussion and debate and to identify controversial topics that deserve critical studies. So far the letter box has remained empty. Have we reached a stage of complete consensus in wood anatomy and all its applications in tree biology and evolution, climate research, and its potential role in combatting illegal logging? We don't think so. To challenge our readership we just mention two themes which could be the subject of fruitful debate in the IAWA Journal. But there are many others.

Controversies still abound in the functional interpretation of wood structural diversity. Since Hacke *et al.*'s much cited publication in 2001 (*Oecologia* 126: 457–461), the strong correlations between wood density, and especially of vessel wall thickness, with drought and cavitation resistance are widely accepted as indications that thick cell walls protect conducting vessels from implosion. If this is so, why is it that imploded vessels have only been observed in poorly lignified mutants or other abnormal wood and never in normally lignified secondary xylem where vessels are an integral part of a complex tissue, firmly cemented by strongly lignified compound middle lamellae, but yet capable of considerable reversible elastic deformation? However, if implosion risk hardly exists, what could be an alternative driver of the very strong correlations between ecology, cavitation resistance, vessel wall thickness and wood density?

Image analysis and automated pattern recognition ("machine vision") have been widely applied for years in medical diagnoses of certain cell or tissue pathologies and in many other fields, while wood anatomy with its characteristic cell patterns formed by a predictively programmed vascular cambium has only relatively recently embraced this approach to aid timber identification and combat illegal logging (cf. Hermanson & Wiedenhoef 2011. *IAWA J.* 32: 233–250). How will machine vision correct for within-a-tree and infraspecific variability, and how will its resolving power be able to compete with rapidly evolving DNA fragment analysis and other rapid physico-chemical techniques, and with classical microscopy? We expect that there are many IAWA members who would like to be educated by leaders in these fields.

So, please help us in creating the *Letters* category of fast-tracked opinion papers, and thus making the IAWA Journal a true forum for discussion of relevant topics on all aspects of wood and bark (and palm, bamboo and rattan) structure.

Pieter Baas & Elisabeth Wheeler

## WOOD ANATOMY NEWS

### *I.W. Bailey Award 2014 goes to Alexander Scholz*

The Bailey Award 2014 for best paper submitted to the IAWA Journal by an early career wood researcher goes to Alexander Scholz from Ulm University, Germany, for his paper "How drought and deciduousness shape xylem plasticity in three Costa Rican wood plant species" co-authored by A.Stein, B.Choat & S.Jansen, and meanwhile published in *IAWA J.* 35 (4): 337–355.



The Award Committee, composed of 7 editors of the IAWA Journal (Pieter Baas, Lloyd Donaldson, Frederic Lens, Imogen Poole, Uwe Schmitt, Elisabeth Wheeler, and Alex Wiedenhoef) motivated their selection of this paper from 5 submissions as follows: "Scholz et al.'s paper concerns an elegant study on the ecological wood anatomy of two deciduous and one evergreen species from contrasting sites in Costa Rica. Functional wood anatomical traits are comprehensively documented and analysed for site, species, and phenology dependencies. Good use is made of statistics and the results are discussed in a meaningful way, with an emphasis on xylem plasticity and its significance for adaptive strategies in a changing climate. This emphasis on plasticity is quite original in wood anatomical studies, although the sampling in this study is too limited for a truly conclusive answer. It would have been nice to have this study expanded with physiological data, but the discussion includes good recommendations for future research reflecting that the authors are aware of the limitations of this particular study."

The IAWA Award consists of USD 1000 (donated by Royal Brill Publishers) and a certificate.

Runner-up for the award in second place was Haruna Aiso from Utsunomiya University, Japan, for her paper on "Reaction wood anatomy in a vessel-less angiosperm *Sarcandra glabra*" published in IAWA J. 35 (2): 116–126.

## Future Meetings

### WWD 2015 Symposium *Wood and Humanity* in Eskisehir, Turkey

The third World Wood Day Symposium will have as its theme "Wood and Humanity" and will be organised by the International Wood Culture Society in Eskisehir, Turkey from 21 to 23 March. Please refer to the following link for the whole event programme and the symposium (<http://www.worldwoodday.org/2015/symposium.html>). Please feel encouraged to register and present a paper.

### Tropical Forest Ecology/IAWA meeting in Tervuren – a reminder

Wood anatomy will play a central role at the international symposium "Wood science underpinning tropical forest ecology and management" which will be held at the beautiful Royal Museum for Central Africa in Tervuren, Belgium, from 26–29 May 2015, to mark the conclusion of the XYLAREDD project of the United Nations. IAWA member Hans Beeckman is

chief organiser, and the Afro-European Group of IAWA and IUFRO Unit 1.02.00–tropical and subtropical silviculture act as co-organisers of this meeting. The meeting will focus on four topics: 1. Wood anatomy and other identification means for the enforcement of laws and regulations; 2. Wood density analysis to evaluate carbon stocks of tropical forests and woodlands; 3. Age determination, growth analysis and dendrochronology of tropical trees; and 4. Wood anatomical functional traits to study and predict forest dynamics.

For further information on registration and submission of contributed papers and posters, please visit ([http://www.africamuseum.be/research/conferences/xylaredd2015/index\\_html](http://www.africamuseum.be/research/conferences/xylaredd2015/index_html)).

#### World of Wood 2015 – Joint IWCS–IAWA meeting – Call for papers

World of Wood 2015, the annual meeting of the International Wood Collectors Society, this year co-sponsored by IAWA, will be on the campus of the Pennsylvania State University. The programme will run from Monday, July 20th to Thursday, July 23rd. Host and organiser Dr. Chuck Ray writes: Attendees will be able to select from a menu of classes, lectures and events, including microscopic wood identification (how to use the IAWA Hardwood and Softwood Lists and the InsideWood database); principles of wood collection, documentation, and organization; the Penn State wood collection; numerous demonstrations, e.g. wood turning and wood sculpting, etc. Seminars on wood energy, certified wood marketing, wood appreciation, and forest woodlot stewardship are also on the programme. The focus from IAWA is outreach to knowledgeable wood collectors and enthusiasts. There are still time-slots available for contributed papers on wood anatomy and wood science in general. Please contact Chuck Ray ([cdrpsu@gmail.com](mailto:cdrpsu@gmail.com)) and visit the dynamic web page at: <http://extension.psu.edu/natural-resources/forests/woodpro/world-of-wood>

#### IAWS Annual meeting in Québec

The International Academy of Wood Science (IAWS) will hold its annual meeting jointly with the 5th International Scientific Conference on Hardwood Processing (ISCHP 2015) from September 15 to 18, 2015 in Québec City, Canada. Topics covered by ISCHP 2015 will be: Hardwood Forestry Practices & Wood Quality; Hardwood Product Development; Hardwood Processing & Optimization; Hardwood Market & Sustainability; Hardwood on Building material; Hardwood on Composite Product. (Further information at [www.ischp2015.org](http://www.ischp2015.org) and [www.iaws.org](http://www.iaws.org))

#### Addition to Index Xylariorum 4

We received the following information on a new institutional wood collection from IAWA Member Prof. Lazaro Benedito da Silva:

*PJPSw, The Padre José Pereira de Sousa Xylarium, Salvador, Bahia, Brazil*

*Institution and address:* Universidade Federal da Bahia; Departamento de Botânica, Instituto de Biologia; Laboratório de Anatomia Vegetal e Identificação de Madeiras, Rua Barão de Geremoabo, 147, Campus de Ondina, Salvador, Bahia, 40.170-290, Brazil.

*Curator and staff:* Dr. Lazaro Benedito da Silva (Wood identification, wood technology, and ecological wood anatomy); Maria Lenise Silva Guedes MSc; Dr. Kelly Regina Batista Leite; Marcelo dos Santos Silva MSc; Eduardo Reis de Carvalho; Noélia Costa dos Santos; Solange Gonçalves da Silva; Weliton Maik Rodrigues Fernandes; Sheila Oliveira Lima.

*Collection:* 803 specimens; 177 genera.

*Specialisation:* Bahia: Atlantic Forest s.l. Scrub-land, Savannah and Subtropical Savannah; other Brazilian states such as Pernambuco; commercial woods from lumber stores of Bahia.

*Herbarium vouchers:* The collections are associated with the ALCB Herbarium of the Instituto de Biologia, Universidade Federal da Bahia; 34% of wood specimens have vouchers.

*Important collections:* Commercial Woods of Bahia; woods from the Atlantic Forest of Serra da Jiboia (Bahia).

*Wood samples available for research:* 70% of all samples are available for research (30% are for exhibitions).

*Microscope slides:* Yes, 1,018 slides.

*Exchange:* Available woods of Caatinga and Atlantic Forest; slides of species from the Atlantic Forest of Serra da Jiboia.

*Other relevant information:* The name honors Professor Dr. José Pereira de Sousa for initiating wood research in Bahia. Information about the macro- and microscopic characteristics of wood of the PJPSw are being made available in an online catalogue in <http://www.madeirascomerciais.ufba.br>, updated periodically.

Contact: Lazaro Silva; E-mail ([lbsilva2003@yahoo.com.br](mailto:lbsilva2003@yahoo.com.br)).

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