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| **Author(s):** | Pieter Baas; Elisabeth Wheeler |
| **Title:** | **Two Innovations: Lay-Out ' Review Papers** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **XX Iufro World Congress 1995** |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **VI Latin American Botanical Congress** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
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| **Author(s):** | Clyde L. Calvin; Carol A. Wilson |
| **Title:** | **Relationship of the Mistletoe Phoradendron Macrophyllum (Viscaceae) to the Wood of its Host** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 33-45 |
| **Keywords:** | mistletoe; Apoplastic continuum; tyloses; Phoradendron; Viscaceae; Juglans; parasitic angiosperm |
| **Abstract:** | The importance of direct tracheary element connections between mistletoes and their hosts is controversial. Direct connections have been reported for four genera within the Viscaceae. In the past such connections were considered essential for the movement of water and nutrients from host to parasite. In contrast, recent authors have suggested that the apoplastic continuum provided by the walls of contiguous host and parasite parenchyma cells is the main pathway for the transfer of water and nutrients, with direct connections playing at best a minor role in uptake. Our analysis of the parasite (Phoradendron)/host(Juglans) interface suggests otherwise. Parenchyma predominates at the interface for both host (71%) and parasite (95%). While direct tracheary element connections are less frequent than other types of connections, they occurred in all sinkers analyzed. Further, direct connections were much more abundant in host latewood (3.6%) than in earlywood (1.8%). This, and other evidence indicates that both pathways of transfer are important. We suggest that the apoplastic continuum provided by parasite parenchyma provides for selective uptake of nutrients, whereas direct connections provide for bulk flow between host and parasite. |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Review** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
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| **Author(s):** | Fukuju Yamamoto; Tsutomu Sakata; Kazuhiko Terazawa |
| **Title:** | **Growth, Morphology, Stem Anatomy, and Ethylene Production in Flooded Alnus Japonica Seedlings** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 47-59 |
| **Keywords:** | cambial activity; Alnus japonica; Flooding; adventitious roots; aerenehyma; ethylene |
| **Abstract:** | Flooding of soil of potted, 24-month-old Alnus japonica seedlings for 24 days altered growth, morphology, stem anatomy, and ethylene production. This species exhibited high adaptability to soil flooding by forming adventitious roots that grew through hypertrophied lenticels. Aerenchyma tissues were observed in the bark of the adventitious roots. Flooding slightly reduced height growth and greatly stimulated diameter growth of submerged portions of stems in comparison with unflooded seedlings. Diameter growth in flooded seedlings was largely due to increases in both the number and size of wood fibres produeed during the flooding period. Flooding did not affect biomass increment of leaves and stems but reduced the total dry weight increment of the root system even though abundant adventitious roots had formed. Ethylene production in the submerged portions of stems was greatly increased by flooding. Morphological and anatomical responses of Alnus japonica seedlings to flooding are discussed. |
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| **Author(s):** | Ben J. H. ter Welle |
| **Title:** | **Association Affairs** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 60-60 |
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| **Author(s):** | Uwe Schmitt; Gudrun Weiner; Walter Liese |
| **Title:** | **The Fine Structure of the Stegmata in Calamus Axillaris during Maturation** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 61-68 |
| **Keywords:** | silica-bodies; maturation; Palmae; stegmata; electron microscopy; rattan; Calamus axillaris |
| **Abstract:** | The maturation process of stegmata in the rattan palm Calamus axillaris Becc. was investigated by electron microscopy. Near the apical meristem immature stegmata contain a dense cytoplasm and a centrally located nucleus, but no silica-bodies. Their cell walls, as weIl as those of adjacent fibres, show primary wall-like characteristics. At the third and fourth internode, silica-bodies form within a vacuole of the still immature stegmata; the nucleus becomes displaced towards the parenchyma side of a stegma. Between the fifth and tenth internode, the stegma walls thicken, first at the cell corners adjacent to fibres with subsequent extension to the fibre side. This part of a stegma wall becomes extremely thick and finally envelopes nearly half of the now fully developed silica-body. Its parenchyma side, however, remains free from additional wall material. After completion of wall thickening, the cytoplasm of a stegma degenerates. |
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| **Author(s):** | Edenise Segala Alves |
| **Title:** | **The Effects of the Pollution on Wood of Cecropia Glazioui (Cecropiaceae)** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 69-80 |
| **Keywords:** | wood anatomy; Pollution; tropical rain forest; Cecropia glazioui |
| **Abstract:** | The wood of nine trees of Cecropia glazioui Sneth. from three different areas of Serra do Mar in São Paulo was quantitatively analysed. One of the areas is highly polluted by petrochemical, chemical, fertilizer and steel industries, another has hardly any pollution, and a third one was intermediate. The modifications found in sampies of the most polluted region were in general in agreement with those present in woods from unfavourable environments, such as water-stressed sites. Since the water is not a limiting factor in the area, pollution is believed to be responsible for the modified wood structure. |
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| **Author(s):** | Ann M. Lewis |
| **Title:** | **A Video Technique for Imaging the Three-Dimensional Architecture of Wood** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 81-86 |
| **Keywords:** | xylem anatomy; Serial sections; xylem architecture; wood anatomy; wood structure; video analysis; xylem structure |
| **Abstract:** | This paper describes a video micrographic technique to image the internal three-dimensional structure of wood. The technique uses high resolution video and an optical disk recorder to give immediate access to noise-free serially-recorded images in both still-frame and motion modes. By using a hydrophilie embedding medium, small woody tissue samples can be successfully embedded, sectioned at thicknesses that are useful for video micrography of the exposed tissue surface, and serially recorded to analyse three-dimensional architecture. The technique can be used by researchers working in wood anatomy, xylem development, and water transport. It also promises to be useful for studying the three-dimensional architecture of small, non-woody structures. Modifications of the technique make it useful for larger woody and non-woody material. |
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| **Author(s):** | Claudia Luizon Dias-Leme; Peter Gasson; Eimear Nie Lughadha |
| **Title:** | **Wood Anatomy of Four Myrtaceae Genera in the Subtribe Myrciinae from South America** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
| **Publication Year:** | 1995 |
| **Pages:** | 87-95 |
| **Keywords:** | Myrcia; South America; Myrtaceae; Marlierea; Gomidesia; Calyptranthes |
| **Abstract:** | The wood anatomy of 31 species representing four genera of subtribe Myrciinae, Myrtaceae, Calyptranthes, Gomidesia, Marlierea and Myrcia is described. In general the wood of subtribe Myrciinae can be characterised by solitary vessels, simple perforations, alternate vestured pits, fibres with bordered and/or vestured pits (fibre-tracheids), parenchyma scanty paratracheal, diffuse and/or diffuse-in-aggregates forming complete or interrupted bands, and heterocellular rays with disjunctive cell walls. The four genera share all these features, but exhibit considerable variation in axial parenchyma patterns and crystal occurrence and distribution. No anatomical features serve to separate the genera, but some, e.g., helical thickenings and crystals, appear to be restricted to species in one genus or another. |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **The vascular cambium: development and structure. P. R. Larson, xv + 725 pp., illus., 1994. Springer Series in Wood Science (ed. T.E. Timell). Springer-Verlag, Berlin, Heidelberg, New York, etc. ISBN 3-540-57165-5 and 0-387-57165-5. Price: DM 428.00 (hard cover).** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Major Timber Trees of Guyana - A Lens Key. M. Brunner, L.I. Kučera and E. Zürcher, 183 pp., illustrated by A. Hirzel, + fold-out datasheets + diskette + scale-slide, 1994. Tropenbos Series 10, Tropenbos Foundation, Wageningen ' Swiss Federal Institute of Technology, Chair of Wood Science, Zürich. Distributed by Backhuys Publishers, P. O. Box 321, 2300 AH Leiden, The Netherlands. ISBN 90-5113-022-8. Price: Dfl. 75.00 (paperback).** |
| **Source:** | IAWA Journal, Volume 16, Issue 1 |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Association Affairs** |
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