**IAWA Bulletin New Series - Volume 9(4)**

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| **Author(s):** | Ken Ogata |
| **Title:** | **Wood Anatomy of the Caprifoliaceae of Japan** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 299-316 |
| **Keywords:** | wood identification; Japan; Caprifoliaceae; systematic wood anatomy |
| **Abstract:** | The wood anatomy of 35 species belonging to 6 genera of the family Caprifoliaceae indigenous to Japan is described. Intergeneric or interspecific differences are recognised in various characters, especially vessel distribution, type of perforation plates (simple or scalariform), intervessel and vessel-ray pitting, presence or absence of spiral thickenings in vessels and fibres, ray histology and fibre type (fibre-tracheids or libriform fibres). |
| **DOI:** | [10.1163/22941932-90001089](http://dx.doi.org/10.1163/22941932-90001089) |

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| **Author(s):** | Mitsuo Suzuki; Hideaki Ohba |
| **Title:** | **Wood Structural Diversity among Himalayan Rhododendron** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 317-326 |
| **Keywords:** | Nepal; Rhododendron; Himalaya; wood anatomy; habit |
| **Abstract:** | The wood anatomy of nine species of Himalayan Rhododendron is compared. All share the characters: growth rings present, but indistinct; pores evenly distributed, numerous; intervessel pits alternate; perforation plates scalariform with 10 to 30 bars; wood parenchyma diffuse or diffuse-in-aggregates; rays heterogeneous uniseriate and multiseriate. However, pore size, occurrence of spiral thickenings and frequency of multi seriate rays are variable among the species studied. Our investigation shows that these characters vary according to the habit of plants. The woods of trees have wider vessels, distinct spirals in both vessels and fibre-tracheids, and numerous multiseriate rays, while those of shrubs have narrower vessels with indistinct or restricted spirals and less frequent multiseriate rays. |
| **DOI:** | [10.1163/22941932-90001090](http://dx.doi.org/10.1163/22941932-90001090) |

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| **Author(s):** | T. M. Middleton |
| **Title:** | **Intervessel Pits in the Stem Wood of New Zeal and Nothofagus (Fagaceae)** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 327-331 |
| **Keywords:** | stem wood; vessel elements; Nothofagus; Intervessel pits |
| **Abstract:** | A scanning electron microscopic study was made of intervessel pits in vessel elements of the stem wood in the four species and two varieties of New Zealand Nothofagus namely N. solandri var. cliffortioides (Hook. f.) Poole (mountain beech) and var. solandri (Hook. f.) Oerst. (black beech), N. truncata (Col.) Ckn. (hard beech), N. fusca (Hook. f.) Oerst. (red beech), and N. menziesii (Hook. f. ) Oerst. (silver beech). |
| **DOI:** | [10.1163/22941932-90001091](http://dx.doi.org/10.1163/22941932-90001091) |

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| **Author(s):** | William C. Dickison |
| **Title:** | **Xylem Anatomy Of Diegodendron HumbertΠ** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 332-336 |
| **Keywords:** | wood anatomy; Malvales; Diegodendron; Sphaerosepalaceae |
| **Abstract:** | The first description of the wood of the monotypic Madagascan genus Diegodendron is provided. The xylem of D. humbertii is characterised by short , solitary vessel elements with alternate lateral wall pitting and simple perforation plates, imperforate tracheary elements of the libriform fibre type, nearly all biseriate, imperfectly storied, homogeneous rays composed of procumbent cells only, and diffuse and diffuse-in-aggregates axial parenchyma. The specialised wood anatomy of Diegodendron supports a close alliance with both Sphaerosepalaceae and Malvales. |
| **DOI:** | [10.1163/22941932-90001092](http://dx.doi.org/10.1163/22941932-90001092) |

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| **Author(s):** | Helena Pereira; A. Velez Marques |
| **Title:** | **The Effect of Chemical Treatments on the Cellular Structure of Cork** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 337-345 |
| **Keywords:** | solvent extractions; suberin; Quercus suber; chemical treatments; lignin; cell walls |
| **Abstract:** | The effect of chemical treatments on the cellular structure of cork from Quercus suber L. was studied using SEM. Treatments included successive solvent extractions with petroleum ether, ethanol and water; desuberinisation with NaOCH3 in methanol; and delignification with HNO3 in CH3COOH. |
| **DOI:** | [10.1163/22941932-90001093](http://dx.doi.org/10.1163/22941932-90001093) |

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| **Author(s):** | Thomas Avella; Roger Dechamps; Michel Bastin |
| **Title:** | **Fluorescence Study of 10,610 Woody Species from the Tervuren (Tw) Collection, Belgium** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 346-352 |
| **Keywords:** | identification; wood fluorescence; taxonomy |
| **Abstract:** | Studies of fluorescence in wood have been carried out sporadically for more than sixty years. Recently, the attention of anatomists has been focused on this characteristic as a helpful tool in computer-assisted timber identification. |
| **DOI:** | [10.1163/22941932-90001094](http://dx.doi.org/10.1163/22941932-90001094) |

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| **Author(s):** | K. L. Alvin; R. J. Murphy |
| **Title:** | **Variation in Fibre and Parenchyma Wall Thickness in Culms of the Bamboo Sinobambusa Tootsik** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 353-361 |
| **Keywords:** | fibres; cell wall; parenchyma; Bamboo |
| **Abstract:** | The mid-internodal anatomy of three culms estimated to be less than one, one to two and more than two years old respectively, has been investigated revealing significant increases in average cell wall thickness of the fibres and ground tissue parenchyma. The basic density of the culm also increases. Cortical parenchyma, in contrast, shows no obvious change. Both fibres and parenchyma appear to retain living protoplasts . Progressive thickening of the cell walls over a period of perhaps several years would have important implications for harvesting and utilisation of bamboo culms and would explain reported changes in certain mechanical properties with ageing. |
| **DOI:** | [10.1163/22941932-90001095](http://dx.doi.org/10.1163/22941932-90001095) |

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| **Author(s):** | F.H. Schweingruber |
| **Title:** | **Review** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 362-362 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001096](http://dx.doi.org/10.1163/22941932-90001096) |

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| **Author(s):** | Jennifer Thorsch; Katherine Esau |
| **Title:** | **Ultrastructural Aspects of Primary Phloem. Sieve Elements in Poinsettia (Euphorbia Pulcherrima. Euphorbiaceae)** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 363-373 |
| **Keywords:** | sieve elements; callose; Ultrastructure; protein bodies |
| **Abstract:** | Certain developmental changes of sieve elements in the primary phloem of Euphorbia pulcherrima Willd. ex Klotsch (Poinsettia) were examined in the leaf blade, petiole and young stem. The sieve elements have simple sieve plates and, as seen in transection, each is associated with a single companion cell . Since, as expected, our fixed material showed a deposition of callose in sieve plates and in the sieve areas joining the sieve elements with the companion cells, the course of development and distribution of this callose was recorded. The sieve elements contain two types of proteinaceous inclusions, both cytoplasmic in origin. One is the typical form of P-protein composed initially of tubular units; later, the tubules become striated fibrils by stretching. The second inclusion is a nondispersing protein body, the first distinct feature identifying the differentiating sieve elements as such. It persists during the differentiation of the cell and is present in mature sieve elements. Aggregated endoplasmic reticulum is rather sparse in sieve elements, but the typical stacked form is occasionally observed in mature cells. |
| **DOI:** | [10.1163/22941932-90001097](http://dx.doi.org/10.1163/22941932-90001097) |

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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 374-374 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001098](http://dx.doi.org/10.1163/22941932-90001098) |

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| **Author(s):** | Li Zhengli; Cui Keming |
| **Title:** | **Differentiation of Secondary Xylem After Girdling** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 375-383 |
| **Keywords:** | Girdling; xylem differentiation; Eucommia ulmoides |
| **Abstract:** | Under favourable growth season and by suitable technical means, regeneration and continuous growth of new bark after girdling has been observed in many trees. Differentiation of the secondary xylem varies after arteficial treatment. Thus , the authors consider that (1) under appropriate conditions most trees could be girdled on a large scale with subsequent new bark regeneration and continued growth, (2) after removal of the phloem the living cells of the secondary xylem, i.e., wood parenchyma cells, may function in transporting nutrients from the treecrown downwards, and (3) finally, after girdling or when cultured in vitro, both immature xylem and phloem can dedifferentiate into meristematic tissue that further develops vascular tissue. |
| **DOI:** | [10.1163/22941932-90001099](http://dx.doi.org/10.1163/22941932-90001099) |

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| **Author(s):** | Pieter Baas |
| **Title:** | **Comparative wood anatomy. Systematic, ecological, and evolutionary aspects of Dicotyledon wood. S.Carlquist, x+436 pp., 101 illus ., 1988. Springer Series in Wood Science (ed. T.E. Timell), Springer Verlag, Berlin, Heidelberg, Paris , New York, London, Tokyo. Price : DM 362 (hard cover) .** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 384-388 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001100](http://dx.doi.org/10.1163/22941932-90001100) |

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| **Author(s):** | Pieter Baas |
| **Title:** | **Vascular differentiation and plant growth regulators. L.W. Roberts, P.B. Gahan, and R. Aloni, x + 154 pp., illus., 1988. Springer Series in Wood Science (ed. T.W. Timell), Springer Verlag, Berlin, Heidelberg, New York, London, Paris, Tokyo. Price: DM 158 (hard cover).** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 388-389 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001101](http://dx.doi.org/10.1163/22941932-90001101) |

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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Anatomy of the Dicotyledons Volume I, Second Edition. C.R. Metcalfe ' L. Chalk, 276 pp., text figs. + 18 photoplates, 1988 (1979). Clarendon Press, Oxford. Price:UK£ 25.00 (paperback).** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 389-389 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001102](http://dx.doi.org/10.1163/22941932-90001102) |

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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
| **Source:** | IAWA Bulletin NS, Volume 9, Issue 4 |
| **Publication Year:** | 1988 |
| **Pages:** | 390-394 |
| **Keywords:** |  |
| **Abstract:** |  |
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