**IAWA Bulletin New Series - Volume 6(2)**

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| **Author(s):** | Pieter Baas |
| **Title:** | **A New Multilingual Glossary of Terms Used in Wood Anatomy?** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 83-83 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000918](http://dx.doi.org/10.1163/22941932-90000918) |

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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Afro-European Regional Wood Anatomy Meeting** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 84-87 |
| **Keywords:** |  |
| **Abstract:** |  |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Pan-American Regional Wood Anatomy Meeting** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 88-96 |
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| **Abstract:** |  |
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| **Author(s):** | Sam. Essiamah; Walter Eschrich |
| **Title:** | **Changes of Starch Content in the Storage Tissues of Deciduous Trees During Winter and Spring** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 97-106 |
| **Keywords:** | starch transformation; reactivation; spring sap; Deciduous trees |
| **Abstract:** | Starch transformation in relation to spring sap production has been investigated in six North European deciduous tree species from fall till the beginning of bud break in spring. The species examined were: Acer pseudoplatanus L., Betula pendula Roth, Alnus glutinosa Gärtn., Fagus sylvatica L., Quercus robur L., and Fraxinus excelsior L. |
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| **Author(s):** | Keiko Kuroda; Ken Shimaji |
| **Title:** | **Wound Effects on Cytodifferentiation in Hardwood Xylem** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 107-118 |
| **Keywords:** | pinning method; wood regeneration; septation; vessels; Populus euramericana; fibres; parenchyma; rays; cell differentiation |
| **Abstract:** | The wound effects on cytodifferentiation in hardwood xylem were studied by means of periodical observation of wound tissue formation after a pin insertion into the stem of poplar. The mitotic reactivation of ray parenchyma cells was similar to that in conifers. These ray cell derivatives easily invaded other cells creating the impression of septate fibres. Conspicuous abnormalities were found in the differentiation of those fusiform cells which were situated in the zone of xylem mother cells at the time of wounding and those originating from cambial initials for several days after wounding. In the former zone, fusiform cells were prevented from differentiating into vessel elements after dividing transversely several times in the zone adjacent to the injury ; fusiform cells in the area extending several millimetres longitudinally were variously modified morphologically after the frequent transverse divisions in the xylem mother cell zone: they showed various transitional patterns from vessel element-like through tracheid-like, and axial parenchyma-cell-like to fibre-like. These observations suggest that the direction of cytodifferentiation is determined in the cambial initials or the neighbouring xylem mother cells, and is controlled by certain substances, which may change in concentration through the wounding stimulus, bringing about the modification in cytodifferentiation. Wound reaction of hardwood (i .e., woody dicotyledons) was thus completely different from the regeneration of vascular system in injured herbaceous dicotyledons. |
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| **Author(s):** | Ricardo Villalba |
| **Title:** | **Xylem Structure and Cambial Activity in Prosopis Flexuosa DC.** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 119-130 |
| **Keywords:** | vessel development; wood anatomy; phenology; climatic factors; cambial activity; Argentina; growth rings; Prosopis |
| **Abstract:** | A description of the wood structure of Prosopis flexuosa DC. (Legum.) is given. It is semiring-porous, shows pores solitary, in multiples and in clusters; small to large-sized vessels with simple perforation plates, and thick vessel walls. Rays multiseriate and homogeneous. Paratracheal axial parenchyma and libriform fibres. The hydraulic tissue seems well adapted to very low rainfall and prolonged dry periods. |
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| **Author(s):** | Nobuo Yoshizawa; Takao Itoh; Ken Shimaji |
| **Title:** | **Helical Thickenings in Normal and Compression Wood of Some Softwoods** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 131-138 |
| **Keywords:** | helical ridges and cavities; Softwood; helical thickenings |
| **Abstract:** | Compression wood in some softwoods having helical thickenings on the inner surface of normal wood tracheids were examined using a scanning electron microscope. Helical thickenings of Taxus, Torreya and Cephalotaxus have narrow bases, and are loosely attached to the innermost layer of the secondary wall, while those of Pseudotsuga, Picea and Larix have broad bases blended tightly with the microfibrils of the S3 layer in normal wood. The transition from normal to compression wood entails a preservation of the thickenings in Taxus, Torreya and Cephalotaxus, while they are replaced by helical ridges and cavities in Pseudotsuga, Picea and Larix. The direction of helical thickenings gradually changes from an S- to a Z-helix, or a Z- to an S-helix in the course of the transition from normal to compression wood, or vice versa in Taxus, Torreya and Cephalotaxus. Helical checks never occur in these species. In Pseudotsuga, however, helical thickenings can be deposited as an additional layer on the helical ridges. The results obtained in the present investigation revealed that the orientation of the thickenings did not always coincide with that of the innermost microfibrils of the secondary wall layers, indicating that helical thickenings may be considered as a layer independent of the secondary wall. |
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| **Author(s):** | J.D. Boyd |
| **Title:** | **The Key Factor in Growth Stress Generation in Trees Lignification or Crystallisation?** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 139-150 |
| **Keywords:** | Growth stress generation; lignification; crystallisation |
| **Abstract:** | A theory - that growth stress generation is primarily the result of dimensional changes imposed on fibre walls, as a consequence of swelling associated with the lignification process - has become widely known and well supported. However, a more recently published paper claimed that the theory could not be justified. An alternative theory - that growth stress generation was the result of continuing crystallisation of micro fibrils, after their initial formation within the fibre wall- was then promoted. |
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| **Author(s):** | E. A. Wheeler; R. G. Pearson |
| **Title:** | **A Critical Review of the Iawa Standard List of Characters Formatted for the Ident Programs** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 151-160 |
| **Keywords:** | multiple entry keys; Computerised wood identification; Oxford/Princes Risborough card data |
| **Abstract:** | This paper critiques the IAWA's 'Standard List of Characters Suitable for Computerized Hardwood Identification.' The IAWA list was designed to fit a series of programs developed by Morse in the early 1970's and has the same number of characters originally used by Morse. Some of these characters are not essential for wood identification and it is suggested that the list be shortened to save storage space and be less formidable to potential users. The original IAWA list does not permit effective use of most existing data from multiple entry keys. Also, the 'best way' to measure quantitative features needs further consideration. It would be advantageous to group the descriptors by anatomical feature, rather than by 'character type'. A revised datasheet with a reduced number of features and showing such an arrangement is presented. The advisability of relying on a single list is discussed, and it is suggested that separate lists with features useful for particular groups, e.g. Eucalypts and Legumes, be created. |
| **DOI:** | [10.1163/22941932-90000926](http://dx.doi.org/10.1163/22941932-90000926) |

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| **Author(s):** | P.J. Rudall |
| **Title:** | **Perforated Ray Cells in Hyptis Hagel - A New Record for Labiatae** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 161-162 |
| **Keywords:** | heterocellular rays; Perforated ray cells; Euonymus europaeus; Hyptis hagei |
| **Abstract:** | Perforated ray cells are recorded for the first time in wood of Labiatae, in Hyptis hagei, a Brazilian species of small trees. It is noted that this phenomenon is often correlated with the presence of heterocellular rays. |
| **DOI:** | [10.1163/22941932-90000927](http://dx.doi.org/10.1163/22941932-90000927) |

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| **Author(s):** | S. S. Bisen; Babulal Sharma |
| **Title:** | **An Unusual Vessel Perforation Plate in Cordia Myxa L. (Boraginaceae)** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 163-164 |
| **Keywords:** | Boraginaceae; vessel perforation plates; crystals; Cordia |
| **Abstract:** | An unusual type of reticulate perforation plate with minute druses, aggregates of minute acicular crystals and very minute cubical crystals is recorded for the first time in Cordia myxa L. Other reticulate and simple perforations which are free from these inclusions also occur. The vessels having reticulate perforation with or without crystals are devoid of tyloses. |
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| **Author(s):** | M. T. M. Bosman |
| **Title:** | **Some Effects of Decay and Weathering on the Anatomical Structure of the Stem of Phragmites Australis Trin. Ex Steud.** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 165-170 |
| **Keywords:** | fungal decay; sclerenchyma; cell wall degradation; UV-radiation; Phragmites australis; Thatch |
| **Abstract:** | Effects of decay and weathering on the stems of Phragmites australis Trin. ex Steud. were studied on material used for thatching. Decay appeared to be mainly a result of fungal attack and ultra-violet radiation. Biological degradation by soft-rot fungi causes a considerable loss of cell wall constituents towards the exposed basal part of the stems. In sclerenchyma and parenchyma (excl. the subepidermal tissues) this effect is visible as diamond-shaped cavities, spirally arranged in the central part of the secondary cell walls (following the microfibrillar arrangement). A second type of fungal attack is observed in stems obtained from a byre. Here the cell walls are thinned from the lumen side towards the external wall layers, showing in longitudinal section cells with locally enlarged lumina. At the exposed parts of the stem superficial weathering by ultra-violet radiation causes degradation of lignin. Thus the middle lamella region disintegrates and the outer cell layers peel off. |
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| **Author(s):** | Pieter Baas |
| **Title:** | **Einheimische Nutzhölzer und ihre Bestimmung nach makroskopischen Merkmalen. H. Sachsse, 160 pp., many half-tone plates, 1984. Pareys Studientexte 44, Paul Parey, Hamburg, Berlin. Price: OM 36 (paper).** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 171-171 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000930](http://dx.doi.org/10.1163/22941932-90000930) |

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| **Author(s):** | Pieter Baas |
| **Title:** | **(Multilingual Glossary of Terms used in Wood Anatomy), Persian version. Parviz Niloufari, 60 pp. text + 33 pages of plates and line-drawings, 1984. Donya Publications, Tehran, Iran. Price unknown (paper).** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 171-171 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000931](http://dx.doi.org/10.1163/22941932-90000931) |

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| **Author(s):** | Pieter Baas |
| **Title:** | **Tropical timbers of the world. Martin Chudnoff, v + 464 pp., illus., 1984. United States Department of Agriculture, Forest Service, Agriculture Handbook Number 607. Available from the Superintendent of Documents, U. S. Government Printing Office, 710 N. Capitol Street, Washington, D.C. 20402, U.S.A. Price: US$ 16.00 (paper).** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 171-172 |
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| **Abstract:** |  |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Holz Aktuell. Issue 5. Ed. by R. Matzek, 78 pp., colour illus., 1985. Available from Karl Danzer Furnierwerke, D-7410 Reutlingen 1, P. O. Box 236, F.R.G. Price unknown.** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 172-172 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000933](http://dx.doi.org/10.1163/22941932-90000933) |

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| **Author(s):** | Pieter Baas |
| **Title:** | **Current Research on Environmental Pollution and Wood Structure I** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 173-175 |
| **Keywords:** |  |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 176-177 |
| **Keywords:** |  |
| **Abstract:** |  |
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| **Author(s):** | Pieter Baas |
| **Title:** | **Association Affairs** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 178-180 |
| **Keywords:** |  |
| **Abstract:** |  |
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| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Association Affairs** |
| **Source:** | IAWA Bulletin NS, Volume 6, Issue 2 |
| **Publication Year:** | 1985 |
| **Pages:** | 181-182 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000937](http://dx.doi.org/10.1163/22941932-90000937) |