**IAWA Journal - Volume 14(4)**

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Preliminary material** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | i-iii |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000584](http://dx.doi.org/10.1163/22941932-90000584) |

|  |  |
| --- | --- |
| **Author(s):** | Takao Itoh; Pieter Baas |
| **Title:** | **Honorary IAWA Membership for Professor Ken Shimaji** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 331-331 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000585](http://dx.doi.org/10.1163/22941932-90000585) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 332-332 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000586](http://dx.doi.org/10.1163/22941932-90000586) |

|  |  |
| --- | --- |
| **Author(s):** | J. Ilic |
| **Title:** | **Computer Aided Wood Identification Using Csiroid** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 333-340 |
| **Keywords:** | computer assisted; Wood identification; feature-matching; wood anatomy; best-subsequent-feature; CSIROID |
| **Abstract:** | A new wood identification programme, CSIROID, has been developed to replace the commercial package CARDBOX-PLUS (R). The programme is interactive, completely self contained and is capable of running any suitable identification key using original features. Two-feature states are used and an allowance is made for variable and uncoded features. One unknown sample can be identified at a time. Maximum key size is 500,000 taxa (species) with 2000 features. All communication and data access is performed via pop-up window displays. |
| **DOI:** | [10.1163/22941932-90000587](http://dx.doi.org/10.1163/22941932-90000587) |

|  |  |
| --- | --- |
| **Author(s):** | Sherwin Carlquist |
| **Title:** | **Wood and Bark Anatomy of Aristolochiaceae; Systematic and Habital Correlations** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 341-357 |
| **Keywords:** | storied wood structure; Aristolochiaceae; wood anatomy; vessel restriction patterns; Lactoridaceae; ethereal oil cells; Piperaceae; paleoherbs |
| **Abstract:** | Wood of Aristolochiaceae has vessels with simple petforation plates; lateral wall pitting of vessels alternate to scalariform; tracheids, fibre-tracheids or libriform fibres present; axial parenchyma diffuse, diffuse-in-aggregates, scanty vasicentric, and banded apotracheal; rays wide and tall, paedomorphic, multiseriate only, little altered during ontogeny (new rays originate suddenly as wid~ multiseriate rays); ethereal oil cells present in rays; wood structure storied. All of these features occur in Lactoridaceae and Piperaceae, and support the grouping of Aristolochiaceae with these families and the nonwoody family Saururaceae. Chloranthaceae may be the family next closest to this assemblage. Druses characteristically occur in rays of Aristolochia. Tracheids in Aristolochia may be correlated with the lianoid habit, although Holostylis, a caudex perennial thought close to Aristolochia, also has tracheids. The fibre-tracheids and libriform fibres of Apama and Thottea may be related to the sympodial shrubby habit of those two genera. On the basis of one species each of Apama and Thottea, the genera differ with respect to wood anatomy. The paedomorphic ray structure of all genera of Aristolochiaceae suggests an herbaceous or minimally woody ancestry rather than ancestors with typically woody monopodial habit. Types of bark structure observed in the species surveyed are briefly characterised. Storied wood structure and presence of druses and ethereal oil cells in rays are newly reported for the family. |
| **DOI:** | [10.1163/22941932-90000588](http://dx.doi.org/10.1163/22941932-90000588) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Review** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 358-358 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000589](http://dx.doi.org/10.1163/22941932-90000589) |

|  |  |
| --- | --- |
| **Author(s):** | Tomoko Saitoh; Jun Ohtani; Kazumi Fukazawa |
| **Title:** | **The Occurrence and Morphology of Tyloses and Gums in the Vessels of Japanese Hardwoods** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 359-371 |
| **Keywords:** | ray parenchyma cell; axial parenchyma cell; vessel; Japanese hardwoods; Tylosis; SEM; gum |
| **Abstract:** | The occurrence and morphology of natural tyloses and gums in the vessels of 50 Japanese hardwoods (15 ring-, 34 diffuseand 1 radial-porous woods) were investigated using SEM. Tyloses were present exclusively or predominantly in 23 species (12 ring-, 10 diffuse- and 1 radial-porous woods) and gums in 15 species (3 ring- and 12 diffuse-porous woods). In the pore zones of most of the ringporous woods both tyloses and gums first occurred in an earlier ring number from the bark than in the diffNse- and radial-porous woods. Tyloses and gums originated from both ray and axial parenchyma cells in most species which have pit pairs connecting these cells to the vessels. Except for four species, the maximum and minimum diameters of the inner pit aperture from vessels to parenchyma cells were greater than 5 and 2 µm, respectively, in those species with tyloses, whereas the diameters were less than these values in species having gums. The forms of tylosis blockings in heartwood vessels were closely related to parenchyma patterns. |
| **DOI:** | [10.1163/22941932-90000590](http://dx.doi.org/10.1163/22941932-90000590) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Review** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 372-372 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000591](http://dx.doi.org/10.1163/22941932-90000591) |

|  |  |
| --- | --- |
| **Author(s):** | Robert H. Archer; Abraham E. van Wyk |
| **Title:** | **Wood Structure and Generic Status of Some Southern African Cassinoideae (Celastraceae)** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 373-389 |
| **Keywords:** | Cassine s.l.; Cassinoideae; Systematic wood anatomy; Celastraceae; taxonomy |
| **Abstract:** | Opinions differ on whether to treat Cassine in southern Africa in a wide sense, or to recognise several segregate genera, such as Elaeodendron, Crocoxylon, Lauridia, Mystroxylon and Cassine s. str. A comparative anatomical study was made of mature wood representing 17 southern African species of Cassine s.l., Pleurostylia and the three monotypic genera, Allocassine, Hartogiella and Maurocenia (all members of the subfamily Cassinoideae). The wood structure is described with emphasis on the taxonomic value of quantitative and qualitative characters. Various features were found to be diagnostic at supraspecific level. The presence or absence of scalariform perforation plates, septate fibres, various ray types, and additional quantitative characters could be useful for taxonomic application, especially for generic delimitation. Three principal wood types, of which one encompasses three subtypes, are recognised among the species examined. Wood anatomical evidence tells against a wide generic concept for Cassine, and favours the recognition of segregate genera. |
| **DOI:** | [10.1163/22941932-90000592](http://dx.doi.org/10.1163/22941932-90000592) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 390-390 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000593](http://dx.doi.org/10.1163/22941932-90000593) |

|  |  |
| --- | --- |
| **Author(s):** | Chen Bao Liang; Pieter Baas; Elisabeth A. Wheeler; Wu Shuming |
| **Title:** | **Wood Anatomy of Trees and Shrubs from China. VI. Magnoliaceae** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 391-412 |
| **Keywords:** | Liriodendron; Manglietia; systematic wood anatomy; Magnoliaceae; Kmeria; China; Michelia; wood identification; ecological wood anatomy; Magnolia |
| **Abstract:** | The wood anatomy offive genera of Magnoliaceae (59 native species, 2 introduced species) of China is described. Although the wood anatomy of this family is rather homogeneous, it is possible to identify most specimens to genus. Magnoliaceae wood from China is characterised by diffuse-porosity, scalariform to opposite vessel wall pitting, scalariform perforations with few bars or in some Magnolia species simple perforations, ground tissue fibres with distinctly to minutely bordered pits, marginal parenchyma and heterocellular rays mostly with one marginal row of square/upright cells. Intervessel and vessel-parenchyma pits are almost exclusively opposite in the Liriodendroideae; they are almost exclusively scalariform in the Magnolioideae, except for Magnolia section Rhytidospermum in which pits are predominantly opposite. Although the wood anatomical characters more or less overlap between Magnolia and Manglietia, these genera are wood anatomically distinguishable. Wood anatomy is similar in the evergreen species of Magnolia and Michelia. Kmeria is the only genus in which crystals were observed. Taxa from the tropics to subtropics tend to have longer and wider vessel elements, and a lower vessel frequency than those from temperate provenances; oil cells in rays mostly occur in the taxa from tropical and subtropical provenances. Simple perforation plates are mostly present in the temperate taxa. Counter to trends for the dicotyledons at large, helical thickenings are more common in tropical species than in temperate species, and, when present, are usually not distinct in deciduous species. |
| **DOI:** | [10.1163/22941932-90000594](http://dx.doi.org/10.1163/22941932-90000594) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Announcement ' Special Offer to IAWA Members** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 412-412 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000595](http://dx.doi.org/10.1163/22941932-90000595) |

|  |  |
| --- | --- |
| **Author(s):** | Ingrid de Kort |
| **Title:** | **Relationships Between Sapwood Amount, Latewood Percentage, Moisture Content and Crown Vitality of Douglas Fir, Pseudotsuga Menziesii** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 413-427 |
| **Keywords:** | sapwood amount; maximum moisture content; sapwood moisture content; latewood percentage; Douglas fir; moisture saturation; density |
| **Abstract:** | Relationships between sapwood amount, latewood percentage, moisture content and crown vitality were studied in 171 Douglas firs [Pseudotsuga menziesii (Mirb.) Franco] belonging to different vitality classes. The trees originated from 10 stands in the Netherlands varying in age from 25-70 years. |
| **DOI:** | [10.1163/22941932-90000596](http://dx.doi.org/10.1163/22941932-90000596) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Wood Anatomy News** |
| **Source:** | IAWA Journal, Volume 14, Issue 4 |
| **Publication Year:** | 1993 |
| **Pages:** | 428-430 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90000597](http://dx.doi.org/10.1163/22941932-90000597) |