**IAWA Bulletin New Series - Volume 11(3)**

|  |  |
| --- | --- |
| **Author(s):** | C.A. LaPasha; E.A. Wheeler |
| **Title:** | **Resin Canals in Pinus Taeda: Longitudinal Canal Lengths and Interconnections Between Longitudinal and Radial Canals** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 227-238 |
| **Keywords:** | Pinus; Resin canals; epithelium; tylosoids; P. elliottii; P. taeda; wood anatomy; suberised walls |
| **Abstract:** | Lengths of longitudinal resin canals in Pinus taeda (loblolly pine) wood were determined by 1) peeling offthe bark and measuring the canals, visible as white lines along the surface, to the nearest mm, and 2) photographing aseries ofcross sections (4000) ofknown thickness with a movie camera, and sub sequently using a film editor and frame counter to ca1culate lengths. The values yielded by the. two methods were not significantly different and indicate that the less time-consuming method of peeling and measuring lengths is as reliable as the cinematographic technique. |
| **DOI:** | [10.1163/22941932-90001180](http://dx.doi.org/10.1163/22941932-90001180) |

|  |  |
| --- | --- |
| **Author(s):** | Takeshi Furuno |
| **Title:** | **Bark Structure of Deciduous Broad-Leaved Trees Grown in the San'in Region, Japan** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 239-254 |
| **Keywords:** | phloem fibres; fibre-sclereids; bark identification; bark anatomy; crystalliferous cells; Tissue arrangement; Japan |
| **Abstract:** | The bark anatomy of 55 deciduous broadleaved tree species from the San'in Region is described. Anatomical features of ray and axial parenchyma cells, phloem fibres, and sclereids are tabulated. Individual species have their own characteristic bark structure. The diversity in tissue arrangement in the secondary phloem could be classified according to the following types: 1a. Phloem fibres in concentric bands alternating with bands ofaxial parenchyma devoid of crystals and sieve elements; 1b. Fibre-sclereids (sclerotic fibres) in concentric bands; 2. As 1a, but fibre bands f1anked by chambered crystalliferous parenchyma; 3a. Broad rays sclerified and extending fanwise or with a very large clump of sclereids; 3b. In species with only narrow wood rays, part of the rays dilated to produce fanwise extensions; 4. Aggregate rays with fanwise extensions; 5. Phloem fibres in round or spindle-shaped clusters or irregular, short bands; 6. Phloem sclereids in round or spindle-shaped clusters or irregular, short bands; 7. Diffuse distribution of all phloem elements; 8. Convergence ofrays towards the cortex. |
| **DOI:** | [10.1163/22941932-90001181](http://dx.doi.org/10.1163/22941932-90001181) |

|  |  |
| --- | --- |
| **Author(s):** | Michael Pendleton; Peter Warnock |
| **Title:** | **Scanning Electron Microscope Aided Wood Identification of a Bronze Age Wooden Diptych** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 255-260 |
| **Keywords:** | boxwood; Archaeology; Bronze Age; scanning electron microscopy; diptych |
| **Abstract:** | A broken wooden diptych was found in 1986 on the 14th century B.C. Ulu Burun, Turkey, shipwreck, with only minute fragments available for anatomical study using scanning electron microscopy. Previously, the earliest known diptychs, considered the oldest books in existence, had been found at Assyrian Nimrud and were constructed of walnut. Using observed features from the wood fragments a computerised wood identification program generated Buxus as a probable candidate. Boxwood (Buxus) is frequently mentioned in historical references, including Assyrian texts, as a wood used for small, durable objects. Comparison of the diptych wood features with those of Buxus sempervirens convinces us that the diptych was constructed from boxwood (Buxus sp.). |
| **DOI:** | [10.1163/22941932-90001182](http://dx.doi.org/10.1163/22941932-90001182) |

|  |  |
| --- | --- |
| **Author(s):** | Sergio R. S. Cevallos-Ferriz; Ruth A. Stockey |
| **Title:** | **Vegetative Remains of the Rosaceae from the Princeton Chert (Middle Eocene) of British Columbia** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 261-280 |
| **Keywords:** | Middle Eocene; Rosaceae; Prunus; fossil wood; Maloideae; Prunoideae |
| **Abstract:** | Several anatomieally preserved twigs, a branehing speeimen and the wood of a large axis with affinities to Rosaeeae are deseribed from the Prineeton ehert (Middle Eoeene) of British Columbia, Canada. Speeimens are eharaeterised by a heteroeellular pith with a peri-medullary rone of thiek-walled oval eells and semi-ring-porous seeondary xylem with vertieal traumatie duets, fibres with eireular bordered pits, and mostly seanty paratracheal and oeeasionally apotracheal parenehyma. Ray to vessel pitting is similar to the alternate intervaseular pitting. Seeondary phloem is eomposed of tangentially oriented diseontinuous bands of alternating fibres and thinwalled eells. Seeondary eortical tissues are represented by a phelloderm eharaeterised by rectangular eells and phellern with rectangular eoneave eells. Anatomical variation between speeimens can be related to age of the woody axes. Juvenile and mature wood of this speeies differ in vessel arrangement and presenee of scanty paratracheal parenchyma in mature wood. Vessel elements are arranged in radial multiples, oeeasional clusters as well as solitary vessels. Tyloses and dark cellular contents are present mainly in mature wood. Some twigs have a heterocellular pith with a few scattered cells with dark contents or, occasionally, short irregular rows of these cells. In the branching specimen eells of this type also are organised in longer rows. Together, these anatomical features suggest that all specimens belong to the same taxon, Prunus allenbyensis Cevallos-Ferriz ' Stockey n. sp. Anatomy of this plant reinforces the interpretation of a subtropical to temperate climate during the time of deposition. |
| **DOI:** | [10.1163/22941932-90001183](http://dx.doi.org/10.1163/22941932-90001183) |

|  |  |
| --- | --- |
| **Author(s):** | Ryo Funada; Takafumi Kubo; Masami Fushitani |
| **Title:** | **Early- and Latewood Formation in Pinus Densiflora Trees with Different Amounts of Crown** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 281-288 |
| **Keywords:** | Pinus densiflora; early- and latewood formation; crown proportion |
| **Abstract:** | The seasonal process of early- and latewood formation at different stern heights was examined in 20-year-old Pinus densiflora trees having different crown proportions. The initiation of tracheid production did not appear to vary among trees or within sterns; however, the transition to latewood formation and cessation of tracheid production began earlier at the lower stern. This tendency was more obvious in trees with smaller crowns. The duration and rate of tracheid production in early- and latewood also differed among trees with different crown proportions and within sterns. It is suggested that the quantitative distribution of latewood along the trunk are attributable not only to the date of transition from earlywood to latewood, but also to the duration and rate of latewood tracheid production. |
| **DOI:** | [10.1163/22941932-90001184](http://dx.doi.org/10.1163/22941932-90001184) |

|  |  |
| --- | --- |
| **Author(s):** | Simcha Lev-Yadun; Roni Aloni |
| **Title:** | **Polar Patierns of Periderm Onfogeny, Their Relationship to Leaves and Buds, and the Control of Cork Formation** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 289-300 |
| **Keywords:** | cork differentiation; ethylene; Auxin; bark morphology; periderm ontogeny; phellogen initiation. |
| **Abstract:** | Patterns of periderm ontogeny were studied in vigorously growing branches and leaders of Calotropis procera (Ait.) Ait. f., Carissa grandiflora A. DC., Ficus elastica Roxb., Ficus religiosa L. and Melia azedarach L. In all of these five woody species the periderm develops in clear polar patterns, with inhibitory zones, in which periderm formation is delayed, just beneath leaf bases and around dormant buds. A high rate of periderm production is induced by high sun irradiation in Calotropis procera. The polar patterns of periderm formation with retardation regions around leaves and buds probably indicate auxin involvement in the control mechanism of periderm differentiation. The role of both auxin and ethylene in periderm formation is discussed, as weIl as a proposed mechanism for rhytidome initiation. |
| **DOI:** | [10.1163/22941932-90001185](http://dx.doi.org/10.1163/22941932-90001185) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Iawa-Iufro Wood Anatomy Symposium 1990** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 301-304 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001186](http://dx.doi.org/10.1163/22941932-90001186) |

|  |  |
| --- | --- |
| **Author(s):** | Michael Trockenbrodt |
| **Title:** | **Report from the 3rd Afro-European Regional Wood Anatomy Symposium in Zürich. Switzerland** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 304-306 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001187](http://dx.doi.org/10.1163/22941932-90001187) |

|  |  |
| --- | --- |
| **Author(s):** | Ben J. H. ter Welle |
| **Title:** | **Recommendations from the IAWA-IUFRO Symposium held in Zürich, Switzerland, July 1990.** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 306-308 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001188](http://dx.doi.org/10.1163/22941932-90001188) |

|  |  |
| --- | --- |
| **Author(s):** | E.A. Wheeler |
| **Title:** | **Anatomie europaischer Holzer. Anatomy of European woods. - Fritz Hans Schweingruber, 802 pp., illus., 1990. Publication of the Swiss Federal Institute for Forest, Snow and Landscape Research. Available from Buchhandlung Paul Haupt, Falkenplatz 14, CH-3OO1 Bern, Switzerland. Price: SFr. 140.00, DM 160.00, US$ c. 100.00.** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 309-309 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001189](http://dx.doi.org/10.1163/22941932-90001189) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Dendrophysica - Wissen über die Baum-Natur. Versuch einer dialektischen Darstellung. Hans Heinrich Bosshard, 230 pp., 1990. Birkhäuser Verlag, Basel, Boston, Berlin. Price DM 54.00, SFr. 48.00 (hardback).** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 309-310 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001190](http://dx.doi.org/10.1163/22941932-90001190) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Étude de la variabilité de quelques propriétés physiques et anatomiques du bois de rejets de taillis de Chataigner (Castanea sativa Mill.). Application à l'étude de la roulure. B. Chanson, 154 pp. with an appendix of 122 pp., illus., 1988. Thesis, Université des Sciences et Techniques du Languedoc (available on request from: Laboratoire de Mécanique Générale des Milieux continus - Recherche Physique, Université des Sciences et Techniques de Languedoc, Bat. 13, Place E. Bataillon, 34095 Montpellier Cedex 2, France).** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 310-310 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001191](http://dx.doi.org/10.1163/22941932-90001191) |

|  |  |
| --- | --- |
| **Author(s):** | E.A. Wheeler |
| **Title:** | **The CSIRO macro key for hardwood identification. J. Ilic, 125 pp., illus., 1990. CSIRO Publications, PO Box 89, 314 Albert Street, East Melboume, Victoria 3002, Australia. Price: $A 50.00 (in Australia), $US 50.00 (outside of Australia), price includes surface mailing, add $US 10.00 for airmail (paperback).** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 310-311 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001192](http://dx.doi.org/10.1163/22941932-90001192) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Anatomia de Maderas de Mexico: Especies de una selva baja caducifolia. Josefina Barajas-Morales and Calixto León Gómez, 123 pp. + 4 col. plates + 36 halftone plates, 1989. Instituto de Biologia, UNAM, Mexico, Special Publ. 1. Price unknown (paperback, available from Secretaria Técnica del Inst. de Biol., UNAM, Ap. Postal 70-233, Mexico 04510 D.F., Mexico).** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 311-312 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001193](http://dx.doi.org/10.1163/22941932-90001193) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Forschungen zur Umweltgeschichte der Ostsahara. R. Kuper (ed.), 343 pp., illus., 1989. Africa Praehistorica 1, Heinrich Barth Institut, Jenerstrasse 8, D-5000 Köln 30, F.R.G. Price DM 76.00 (hardback).** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 312-312 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001194](http://dx.doi.org/10.1163/22941932-90001194) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Multilingual Vocabulary ofForest Management (English, German, French, Spanish, Italian, Russian). IUFRO World Series Vol. 1. R.M. Schmid-Haas (ed.), 312 pp., 1990. IUFRO Secretariat Vienna (for the address, see below). Price: US$ 75.00.** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 312-312 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001195](http://dx.doi.org/10.1163/22941932-90001195) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Forest Decimal Classification. Trilingual short version (English, German, French). IUFRO World Series Vol. 2. R. Schenker, M. Zorn, D. Vishmgir and M.-J. Lionnet (eds.), 140 pp., 1990. IUFRO Secretariat Vienna. Price: US$ 45.00.** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 312-312 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001196](http://dx.doi.org/10.1163/22941932-90001196) |

|  |  |
| --- | --- |
| **Author(s):** | Editors IAWA Journal |
| **Title:** | **Association Affairs** |
| **Source:** | IAWA Bulletin NS, Volume 11, Issue 3 |
| **Publication Year:** | 1990 |
| **Pages:** | 313-314 |
| **Keywords:** |  |
| **Abstract:** |  |
| **DOI:** | [10.1163/22941932-90001197](http://dx.doi.org/10.1163/22941932-90001197) |