

List of technical and other main documents issued by the IRG Secretariat during 1990

Working Group Ia

- Evaluation of bacteria for biological control of wood decay by Riana Benko & T L Highley Document No: IRG/WP/1426
- The effect of added nutrients on growth rate and decay capacity of Serpula lacrymans by J D Thornton & Agnes McConalogue Document No: IRG/WP/1427
- Immunogold labelling of size marker proteins in brown rot-degraded pine wood by E Srebotnik & K Messner Document No: IRG/WP/1428
- Observations on the failure of anti-sapstain treated timber under non-drying conditions by G R Williams Document No: IRG/WP/1437
- Discoloration of pressure impregnated wood caused by Amorphotheca resinae by F Rune & Anne Pia Koch Document No: IRG/WP/1438
- Occurence, prevention and repair of dry rot by Anne Pia Koch Document No: IRG/WP/1439
- Effects of chemical pretreatment of Douglas fir heartwood on efficacy of potential bioprotection agents by B Dawson-Andoh & J J Morrell Document No: IRG/WP/1440
- Immuno-electron microscopic localization of extracellular metabolites in spruce wood decayed by brown-rot fungus Postia placenta by Y S Kim, B Goodell & Jody Jellison Document No: IRG/WP/1441
- Fungal siderophores and their rôle in wood biodegradation by Jody Jellison, B Goodell, F Fekete & V Chandhoke Document No: IRG/WP/1442
- Decay types observed in small stakes of pine and Alstonia scholaris inserted in different types of unsterile soil by T Nilsson & G Daniel Document No: IRG/WP/1443
- Evidence for actinomycete degradation of wood cell walls by T Nilsson, G Daniel & S Bardage Document No: IRG/WP/1444
- Extracellular hydrogen peroxide producing and one-electron oxidation system of brown-rot fungi by A Enoki, S Yoshioka, H Tanaka & G Fuse Document No: IRG/WP/1445
- The production of extra cellular hydrogen peroxide by some brown-rot-fungi by Anne-Christine Ritschkoff, Leena Paaanen & Liisa Viikari Document No: IRG/WP/1446
- The preliminary characterization of  $\beta$ 1,4 - xylanase of the brown-rot fungus Gloeophyllum trabeum by Anne-Christine Ritschkoff, Marjaana Rättö & Liisa Viikari Document No: IRG/WP/1447

- The problem mechanisms of action of boric acid and borates as wood preservatives by J D Lloyd, D J Dickinson & R J Murphy Document No: IRG/WP/1450
- The control and pretreatment decay in air seasoning Scots and Corsican pine poles in England by D J Dickinson, A R Zahora & A P Dodson Document No: IRG/WP/1451
- Degradation of woods by obligately anaerobic fungi by K N Joblin & G E Naylor Document No: IRG/WP/1452
- The effect of Tween 80 on the growth, morphology, and enzyme secretion of Postia placenta by Jessie A Micales Document No: IRG/WP/1456
- Analysis of the degradation of carbohydrates by blue-stain fungi by M Teresa Troya, Angeles Navarrete & E Relaño Document No: IRG/WP/1457
- Antagonism to spore germination in Scots pine by Scarlett M Gray Document No: IRG/WP/1458
- Bacterial degradation of wood cell wall: A review of degradation patterns by A P Singh & J A Butcher Document No: IRG/WP/1460
- Ultrastructure of degraded, CCA-treated Pinus radiata wood from a marine pile by A P Singh & M E Hedley Document No: IRG/WP/1461
- Ultrastructure of the attack of a naturally durable timber of tunnelling bacteria by A P Singh, T Nilsson & G F Daniel Document No: IRG/WP/1462
- Wood decay of Pinus sylvestris L. by marine fungi by M C Escorial, M Teresa Troya & J Garcia de los Rios Document No: IRG/WP/1463
- Microbial tolerance and biodegradation of organic and organometallic biocides by P A Briscoe, G R Williams, D G Anderson & G M Gadd Document No: IRG/WP/1464
- Minutes of the meetings of Working Group Ia 'Biological Problems (Flora)' held in Rotorua, New Zealand during 14-18 May 1990 Document No: IRG/WP/1466

#### Working Group Ib

- The resistance of fifteen Indonesian tropical wood species to the powder post beetle Heterobostrychus aequalis by Jasni & Nana Supriana Document No: IRG/WP/1429
- Subterranean termites of economic importance in suburban Melbourne: wood structures most frequently attacked and damaged by J R J French Document No: IRG/WP/1430
- Termites in Eastern Canada: An updated review and bibliography by J K Grace Document No: IRG/WP/1431

- Eastern subterranean termite responses to three soil pesticides by J K Grace Document No: IRG/WP/1432
- Preliminary evaluation of borate baits and dusts for Eastern subterranean termite control by J K Grace Document No: IRG/WP/1433
- Relationship between the bending strength and the degree of termite attacks on western hemlock by Coptotermes formosanus Shiraki by K Suzuki & T Tanaka Document No: IRG/WP/1434
- Termite control in the post-organochlorine era: How do we advise industry and society by J R J French Document No: IRG/WP/1435
- Assessment of untreated Papua New Guinean timbers against subterranean termites - Progress Report 1 by M Rokova & C Konabe Document No: IRG/WP/1436
- Borate-treated food affects survival, vitamin B<sub>12</sub> content, and digestive processes of subterranean termites by L H Williams, S I Sallay & J A Breznak Document No: IRG/WP/1448
- Major insects attacking timber used for building purposes and a practical approach for their control by V R Sonti & B Chatterjee Document No: IRG/WP/1449
- Insect resistance of preservative treated tropical plywood against *Lyctus* by J van Acker, M Stevens & M Pallaske Document No: IRG/WP/1453
- Isolation and identification of the trail pheromone of the subterranean termite Reticulitermes speratus (Kolbe) (Isoptera: Rhinotermitidae) by M Tokoro, M Takahashi & R Yamaoka Document No: IRG/WP/1459
- Cuticular hydrocarbons for species determination of tropical termites by M I Haverty, Marion Page, Barbara L Thorne & P Escoubas Document No: IRG/WP/1465
- Minutes of the meetings of Working Group Ib 'Biological Problems (Fauna)' held in Rotorua, New Zealand during 14-18 May 1990 Document No: IRG/WP/1467

## Working Group II

- Results of collaborative work on laboratory soft rot testing by Scarlett M Gray & D J Dickinson (1989) Document No: IRG/WP/2341
- A practical method to evaluate the dimensional stability of wood and wood products by J P Hösli Document No: IRG/WP/2342
- IUFRO rating system compares favorably to weight loss for soil-bed testing by P I Morris Document No: IRG/WP/2343

- Studies in an accelerated soil bed facility on the decay susceptibility of U.K. grown spruce and pine poles treated with copper/chrome/arsenic (CCA) by pressurised sap-displacement. 1. Setting up of soil beds and initial soft rot results by A Bruce, S D Hainey, G M Smith & B King Document No: IRG/WP/2344
- Resistance of acrylic paints on wood against growth of the rot fungus Dacrymyces stillatus by J Bjurman Document No: IRG/WP/2345
- A novel solvent penetration assessment technique for wood preservation treatments using water-borne systems by A J Pendlebury, J Coetzee, E Sorfa & A Botha Document No: IRG/WP/2346
- Use of the enzyme linked immunoassay (ELISA) and immunocytochemistry to detect soft rot in preservative treated and untreated wood by G Daniel & T Nilsson Document No: IRG/WP/2347
- Toxic value estimation of wood preservatives by using the probit analysis by J Wazny & K J Krajewski Document No: IRG/WP/2348
- Determination methods of phytotoxic effect of wood preservatives by A Kundzewicz & J Wazny Document No: IRG/WP/2349
- Detection and estimation of Hylotrupes bajulus L. wood damages by ultrasonics by G Prieto Document No: IRG/WP/2350
- Sampling variation in a copper chrome arsenic treated power transmission pole by J Norton Document No: IRG/WP/2351
- The use of plastic meshes in soft rot monoculture testing by Scarlett M Gray Document No: IRG/WP/2353
- Soft rot test of copper-chrome-arsenic treated heartwood of three Malaysian timbers by the vermiculite-burial method by R-D Peek & A H H Wong Document No: IRG/WP/2354
- Detection of termite attack in wood using AE monitoring by Y Fujii, M Owada, M Noguchi, Y Imamura & M Tokoro Document No: IRG/WP/2355
- Early detection of brown-rot decay in southern yellow pine using immunodiagnostic procedures by Carol A Clausen, F Green III & T L Highley Document No: IRG/WP/2356
- Co-operative studies on determining toxic values against wood-destroying basidiomycetes: Progress Report to April 1990 by Janice K Carey & A F Bravery Document No: IRG/WP/2357
- Hole delimitation inside round timber via ultrasonic techniques by G Prieto & F Cancio A Document No: IRG/WP/2358
- European standardization for wood preservation by G Castan Document No: IRG/WP/2359
- Minutes of the meetings of Working Group II 'Fundamentals of Testing' held in Rotorua, New Zealand during 14-18 May 1990 Document No: IRG/WP/2360

Working Group III

Report of the meeting of the Refractory timbers Sub-group, Lappeenranta, Finland on 25 May 1989 by R J Murphy	Document No: IRG/WP/3561
Proposed methodology for the assessment of safety indexes by G Ozanne	Document No: IRG/WP/3562
Disposal of treated wood - Canada by P A Cooper	Document No: IRG/WP/3563
An example of media response to perceived environmental problems with CCA-treated wood by P A Cooper	Document No: IRG/WP/3564
Current models used by the European health authorities to evaluate the volatilization of active ingredients from treated wood used inside dwellings by A Valke & L van Leemput	Document No: IRG/WP/3565
Determination of fixation properties by bioassays. A proposal for the assessment of safety indexes in wood protection by H-W Wegen	Document No: IRG/WP/3566
In search of excellence, a necessary challenge by G Rustenberg	Document No: IRG/WP/3567
The risk assessment process. Point of view of a biocide manufacturer by D Baur	Document No: IRG/WP/3568
Safe handling of solvents in relation to classification and labelling by J Haugaard	Document No: IRG/WP/3569
Composting of waste building up in sawmill dipping basins by Irma Linderborg & U Ek	Document No: IRG/WP/3570
Studies on the mobility of arsenic, copper and chromium in CCA-contaminated soil by J Bergholm	Document No: IRG/WP/3571
Creosote and cancer by S Karlehagen, A Andersen & C-G Ohlson	Document No: IRG/WP/3572
A new preservative - A double edged sword by M Connell, Judith A Cornfield & G R Williams	Document No: IRG/WP/3573
The rôle of communication in the field of environment protection. A case study "Wood protection" by Linda Wöss	Document No: IRG/WP/3574
Point sur la réglementation et contraintes administratives by J H Moneger	Document No: IRG/WP/3575
Modélisation sur maquette du rejet accidentel d'un gaz toxique et inflammable dans l'atmosphère by M Milhe	Document No: IRG/WP/3576
Wood preservation and the environment: A Canadian perspective by J N R Ruddick	Document No: IRG/WP/3577

- Will political initiatives stop the use of preservative-treated wood in Sweden? by J Jermer & Marie-Louise Edlund  
Document No: IRG/WP/3578
- The effect of acid rain on CCA treated timber by R J Murphy & D J Dickinson  
Document No: IRG/WP/3579
- The environment and the timber preservation in the Benelux countries by C de Mey & R Leegwater  
Document No: IRG/WP/3580
- Radical changes in the requirements for more safe pressure impregnation in the Nordic countries in 1988 by B Moldrup  
Document No: IRG/WP/3581
- Canadian code of good practices - Recommendations for design and operation of wood preservation facilities by V N P Mathur & G Das  
Document No: IRG/WP/3582
- Gestion des déchets dans le groupe Rhône-Poulenc by R P Furminieux  
Document No: IRG/WP/3583
- Evaluation of the biocide diffusion from treated wood in indoor air. Bibliographic study by Annick Pichard  
Document No: IRG/WP/3584
- Traitement curatif des bois en place. Hygiène et sécurité by Ph Huré  
Document No: IRG/WP/3585
- Étude de l'impact d'un xénobiotique sur le milieu aquatique: Approche méthodologique by G Blake & G Merlin  
Document No: IRG/WP/3586
- Utility pole recycling and disposal in Eastern Canada by S D Henry  
Document No: IRG/WP/3587
- Surveillance médicale des personels exposés aux produits de préservation du bois by J-C Aubrun  
Document No: IRG/WP/3588
- Le rôle de l'expert dans l'évaluation toxicologique by C Boudene  
Document No: IRG/WP/3589
- Summary report: Symposium "The Challenge - Safety and Environment" by C Coggins, B Hegarty, V N P Mathur & G Ozanne  
Document No: IRG/WP/3590
- Wooden windows, avoidance of damage via constructional measures (video film) by R Gründlinger & K Messner  
Document No: IRG/WP/3591
- Performance of surface-treated hardwoods and softwoods out of ground contact by T L Highley  
Document No: IRG/WP/3592
- Evaluation of the effectiveness of defence anti-stain in the control of sapstain in laboratory and field tests by Gb Rustenburg & C J Klaver  
Document No: IRG/WP/3593
- Fixation of CCA in Pinus sylvestris after kiln drying by P Warburton, Judith Cornfield, D A Lewis & D G Anderson  
Document No: IRG/WP/3594

- The suitability of high pressure sap-displacement for the treatment of U.K. grown spruce and pine by P D Evans, S D Hainey, A Bruce, G M Smith & B King Document No: IRG/WP/3595
- Japanese wood preserving industry by K Tsunoda Document No: IRG/WP/3596
- Preservative effectiveness of medium temperature creosote oil by S Doi, A Yamada & Y Suda Document No: IRG/WP/3597
- Production of preservative-treated wood in some countries by J Jermer Document No: IRG/WP/3598
- The susceptibility to sludging of sulphate and oxide CCA by B T Mutandadzi & P D Evans Document No: IRG/WP/3599
- Proceedings from the wood preservation symposium "The challenge - Safety and Environment" 19-20 February 1990, Cannes, France Document No: IRG/WP/3600
- Difference of CCA efficacy among coniferous wood species by K Yamamoto & M Inoue Document No: IRG/WP/3601
- Biological resistance of phenol-resin treated wood by M Takahashi & Y Imamura Document No: IRG/WP/3602
- Dip-diffusion of dressed timber - Effect of drying by C Konabe Document No: IRG/WP/3603
- Effect of kerfing on performance of Douglas fir utility poles in the Pacific Northwest by J J Morrell Document No: IRG/WP/3604
- Preservative treatment and field test monitoring of spruce pole stock: Pressure and diffusible chemical treatments by B Goodell & A J Pendlebury Document No: IRG/WP/3605
- The use of TCMTB in applications other than sapstain prevention: A review by R van den Eynde Document No: IRG/WP/3606
- Preservative treatment of round bamboos by a new technique - Some further studies - Part I by V R Sonti & B Chatterjee Document No: IRG/WP/3607
- Dimensional stabilization and decay resistance of wood treated with brown-rotted lignin and copper sulfate by Lehong Jin, D D Nicholas & T P Schultz Document No: IRG/WP/3608
- Ground contact performance of wood treated by the MSU process by H M Barnes, T L Amburgey & R W Landers, Jr Document No: IRG/WP/3609
- Effect of aqueous polymer treatments on wood properties. Part I: Treatability and dimensional stability by Z Ashaari, H M Barnes, R C Vasishth, D D Nicholas & D E Lyon Document No: IRG/WP/3610
- Effect of aqueous polymer treatments on wood properties. Part II: Mechanical properties by Z Ashaari, H M Barnes, D E Lyon, R C Vasishth & D D Nicholas Document No: IRG/WP/3611

In ground performance of wood treated with a substituted isothiazolone by L E Leightley & D D Nicholas

Document No: IRG/WP/3612

Effect of double-vacuum and vacuum pressure impregnation with water-borne preservatives on the dimensional characteristics of spruce by J van Acker, M Stevens & Gb Rustenburg

Document No: IRG/WP/3613

Influence of clonal variability on the impregnability of poplar hybrids by J van Acker, M Stevens & C de Haas

Document No: IRG/WP/3614

Dynamics of pressure changes in wood during impregnation by R-D Peek & St Goetsch

Document No: IRG/WP/3615

Treatment of wood based panel products with volatile borates by P Turner, R J Murphy & D J Dickinson

Document No: IRG/WP/3616

Microdistribution of water-borne preservatives in blue gum wood treated by full-cell process by D Reimao & José Maria Palacios

Document No: IRG/WP/3617

The formation of organotin carboxylates in bis(tributyltin) oxide - treated Pinus sylvestris sapwood by S J Blunden & R Hill

Document No: IRG/WP/3618

Preservative treatment and field test monitoring of spruce pole stock: CCA and fumigant treatments by A J Pendlebury & B Goodell

Document No: IRG/WP/3619

Checking of sodium pentachlorophenate fixation in wood by M Lamour & H Sageot

Document No: IRG/WP/3620

Dimensional stability, biological resistance, and mechanical properties of phenol-resin-treated particleboards by Y Imamura & H Kajita

Document No: IRG/WP/3622

Fixation of chromated wood preservatives through technical drying by R-D Peek & H Klipp

Document No: IRG/WP/3623

The effect of treatment temperature on the biological performance of CCA treated wood by Scarlett M Gray

Document No: IRG/WP/3624

Absorption of inorganic salts solutions. Retentions of inorganic salts. Fire retardants by A Garcia & J Navarro

Document No: IRG/WP/3625

Influence of the peeling on the absorption in the sap displacement method by M V Baonza

Document No: IRG/WP/3626

Leachability of active ingredients from some CCA treated and creosoted poles in service - A progress report after 10 years testing by A J Nurmi

Document No: IRG/WP/3627

Effect of treating process on efficacy of CCA in a laboratory decay test by M Hedley, K Nasheri & Jackie van der Waals

Document No: IRG/WP/3628



- Tebuconazole - a new triazole fungicide for wood preservation by R Gründlinger & O Exner Document No: IRG/WP/3629
- Industrial fixation of chromium based wood preservatives by T Christensen Document No: IRG/WP/3630
- Gaseous preservative treatment of wood by R Burton, T Bergervoet, K Nasheri, P Vinden & D Page Document No: IRG/WP/3631
- Thickened boron treatment by P Vinden, Jeanette Drysdale & M Spence Document No: IRG/WP/3632
- Evaluation of termiticides in field trials by M Takahashi, Y Imamura, K Tsunoda, A Adachi & K Nishimoto Document No: IRG/WP/3633
- Tebuconazole, a new wood-preserving fungicide by Bettina Wüstenhöfer, H-W Wegen & W Metzner Document No: IRG/WP/3634
- Detection of trace organics by ion mobility spectrometry by A H Lawrence Document No: IRG/WP/3635
- Changes in transverse wood permeability during the drying of rimu and radiata pine by R E Booker Document No: IRG/WP/3636
- Report of the meetings of the Refractory timbers Sub-group Document No: IRG/WP/3637
- Minutes of the meetings of Working Group III 'Preservatives and Methods of Treatment' held in Rotorua, New Zealand during 14-18 May 1990 Document No: IRG/WP/3638

#### Working Group IV

- A laboratory bioassay method for testing preservatives against the marine borers Limnoria tripunctata, L. quadripunctata (Crustacea) and Lyrodus pedicellatus (Mollusca) by L J Cookson Document No: IRG/WP/4159
- Annotated check-list of the Limnoriidae by L J Cookson Document No: IRG/WP/4160
- A collaborative test to determine the efficacy of polyurethane coatings on wood samples exposed in the marine environment - 2nd Interim Report by R A Eaton Document No: IRG/WP/4161
- Water-borne wood preservatives against marine borers. Results from NWPC marine trials started in 1972 and 1976 by Ö Bergman & Chrinstina Lundberg Document No: IRG/WP/4162
- Marine borers and marine wood protection - Some answers and some outstanding questions - A comment by J E Barnacle Document No: IRG/WP/4163
- Minutes of the meeting of Working Group IV 'Marine Wood Protection' held in Rotorua, New Zealand during 14-18 May 1990 Document No: IRG/WP/4165

**Other Documents**

Members' and Sponsors' Guide 1989 - 90	Document No: IRG/WP/5353
Guidelines for oral presentation	Document No: IRG/WP/5354
Abstracts of some papers received and promised for IRG 21	Document No: IRG/WP/5355
Abstracts of some papers received and promised for IRG 21, Part 2	Document No: IRG/WP/5357
Annual Report 1989	Document No: IRG/WP/5358
Some hints when presenting a paper at IRG-meeting	Document No: IRG/WP/5361
Minutes of the Plenary Meeting held in Rotorua, New Zealand during 14-18 May 1990	Document No: IRG/WP/5366
Members' and Sponsors' Guide 1990-91	Document No: IRG/WP/5367