THE INTERNATIONAL RESEARCH GROUP ON WOOD PRESERVATION

IRG DOCUMENTS 1998

List of technical and other main documents issued in 1998.

Section 1 Biology

IRG/WP 98-10245

Detection of the dry rot fungus Serpula lacrymans by amplified ribosomal DNA restriction analysis O Schmidt, U Moreth

IRG/WP 98-10246

In vivo growth study on two gymnosperms and four angiosperms for REB wood poles A K Lahiry

IRG/WP 98-10247

A survey to assess the current and future usage of timber in British port structures G S Sawyer, S E M Plaster

IRG/WP 98-10248

Utilisation of carbohydrates by stain fungi in agar culture J Snow, P Vinden, S M Read

IRG/WP 98-10249

Ponding of Radiata pine (*Pinus radiata*) 2. The effect of ponding on coating penetration into wood A P Singh, S S Gallagher, U Schmitt, B S Dawson and Y S Kim

IRG/WP 98-10250

Influence of felling time on the natural durability of Norway spruce (*Picea abies* (L) Karst) M Hirmke, K Messner, J Fellner, A Teischinger, R Wimmer

IRG/WP 98-10251

Characterization of tropical wood-decaying fungi by RFLP analysis of PCR amplified rDNA A Zaremski, M Ducousso, Y Prin, D Fouquet

IRG/WP 98-10252

Assessment of the biocontrol potential of a *Trichoderma viride* isolate in a field trial H L Brown, A Bruce

IRG/WP 98-10253

Soft-rot in *Tabebuia* sp wood used in water cooling tower: identification and degradation capacity of the fungi S Brazolin, M Tomazello F, I H Schoenlein-Crusius

IRG/WP 98-10254

Screening of fungal strains for wood extractive degradation

J Dorado, M J Martinez-Iñigo, T A van Beek, F W Claassen, J B P A Wijnberg, R Sierra-Alvarez

IRG/WP 98-10255

Resistance of borate-treated lumber to subterranean termites in the field K Tsunoda, A Adachi, T Yoshimura, T Byrne, P I Morris, J K Grace

IRG/WP 98-10256

Attractive factors of steam-treated larch wood to termite feeding S Doi, Y Kurimoto, W Ohmura, M Aoyama, S Ohara

IRG/WP 98-10257

Copper storage in the digestive caecae of Limnoria tripunctata and Limnoria quadripunctata (Crustacea: isopoda) tunnelling in CCA treated and untreated wood in laboratory cultures C Wykes, A J Pitman, S M Cragg

IRG/WP 98-10258

Degradation features of waterlogged archaeological compression wood Y S Kim, A P Singh

Temperature tolerance of *Botryodiplodia theobromae* causing sapstain on rubber wood E J M Florence, J K Sharma, R Gnanaharan

IRG/WP 98-10260

Sapstain fungi associated with softwood species in Kerala, India E J M Florence, J K Sharma, R Gnanaharan

IRG/WP 98-10261

An alternative method for the determination of lignocellulolytic enzymatic activities of white rot fungi D Muñoz-Mingarro, F Llinares, F Rubio, M Yuste, C Rodriquez-Borrajo, J Jiménez, M T Troya

IRG/WP 98-10262

Laboratory aquaria evaluation of CDDC (copper dimethyldithiocarbamate) against marine borers L J Cookson, C R McIntyre, D K Scown

IRG/WP 98-10263

The fungal degradation of quaternary ammonium compounds in wood J W Dubois, J N R Ruddick

IRG/WP 98-10264

A novel chemical barrier system, KORDON® TMB, for the protection of buildings against subterranean termites using a synthetic matrix as carrier for the chemical M Lenz, P Morrow, S Runko

IRG/WP 98-10265

Ponding of Radiata pine (*Pinus radiata*) 1. The effect of bacteria on wood A P Singh, Y S Kim, U Schmitt, B S Dawson

IRG/WP 98-10266

Variable tolerance of *Ophiostoma* spp and *Diplodia pinea* to commercial antisapstain products D Eden, C Chittenden, B Kreber, J Van der Waals, R Wakeling, R Farrell, T Harrington

IRG/WP 98-10267

Degradation of polycyclic aromatic hydrocarbons by laccase S Böhmer. E Srebotnik. K Messner

IRG/WP 98-10268

The use of immunofluorescence labelling for detecting *Ophiostoma piceae* in Radiata pine Y Xiao, B Kreber, Colette Breuil

IRG/WP 98-10269

Growth of sapstain fungi in Scots pine and the effect of timber ageing N J Strong, J F Webber, R A Eaton

IRG/WP 98-10270

Occurrence of termite species on decaying heartwood specimens exposed 18 to 23 years at an Australian site J W Creffield, J D Thornton, G C Johnson

IRG/WP 98-10271

A study of decay type variability in variously treated *Fagus sylvatica* and *Pinus radiata* field test stakes exposed at a vineyard for 30 - 45 months

R N Wakeling, A P Singh

IRG/WP 98-10272

Visualising bacteria in wood using confocal laser scanning microscopy (CLSM) Y Xiao, A P Singh, R N Wakeling

IRG/WP 98-10273

Confocal laser scanning microscopy (CLSM) of decayed wood Y Xiao, R N Wakeling, A P Singh

IRG/WP 98-10274

Screening of lignin peroxidase from white-rot fungi I Momohara

IRG/WP 98-10275

Results on termite resistance of building materials against *Coptotermes formosanus* by choice test K Suzuki, K Hagio

Enhanced biodegradation of cocopeat by soft rot fungi

P Y Yau, R J Murphy

IRG/WP 98-10277

Natural durability of Tamarack (Larix laricina (Du Roi), K Koch)

U Srinivasan, A Taylor, P A Cooper

IRG/WP 98-10278

Susceptibility of CCA treated North American hardwoods to Chaetomimum globosum decay

U Srinivasan, Y T Ung, P A Cooper

IRG/WP 98-10279

Detection of wood decay fungi in wood using a PCR-based analysis

C Jasalavich, A Ostrofsky, J Jellison

IRG/WP 98-10280

Termite resestance of Malaysian and exotic woods with plantation potential: laboratory evaluation

J K Grace, A H H Wong, C H M Tome

IRG/WP 98-10281

Breakdown of cellulose derivatives by cellulolytic enzymes I. Action of fungal β -glucosidases toward substituted

PNP β-D-glucopyranosides

T Nishimura, I Momohara, M Ishihara

IRG/WP 98-10282

Degradation of lignin model compounds with coordinated copper in the presence of peroxide

K Koller, K Messner, T Watanabe

IRG/WP 98-10283

The influence of gaseous oxygen concentration on fungal growth rates, biomass production and wood decay

S M Kazemi, D J Dickinson, R J Murphy

IRG/WP 98-10284

Resistance of painted wood to mould fungi. Part 3. The effect of weathering, wood substrate and fungicides on

mould growth

H Viitanen, P Ahola

IRG/WP 98-10285

Which fungi cause sapstain in Canadian softwoods?

A Uzunovic, D-Q Yang, P Gagné, C Breuil, L Bernier, A Byrne

IRG/WP 98-10286

Degradation of the normal fibre walls of rubberwood (Hevea brasiliensis) by the tropical blue-stain fungus

Botryodiplodia theobromae

AHH Wong, AP Singh

IRG/WP 98-10287

Decay resistance of Siberian larch wood against brown rot fungi. Part 2. The effect of genetic variation

H Viitanen, L Paajanen, T Nikkanen, P Velling

IRG/WP 98-10288

Differential susceptibility of living and dead timber to colonisation by sapstain and mould fungi

J R Williams, D J Dickinson, J F Webber

IRG/WP 98-10289

Termite resistance of Malaysian and exotic woods with plantation potential: field evaluation

AHH Wong, JK Grace, LG Kirton

IRG/WP 98-10290

Reinfestation of consolidated ancient wood by analysis

W Unger, A Unger, U Schiessl

IRG/WP 98-10291

Uptake of copper by mycelium of wood decay fungi growing on copper S-substituted thioglycolate containing

nutrient media

M Humar, M Petric, F Pohleven, P Kalan

IRG/WP 98-10292

Eradication of wood decay fungi by means of radio frequencey

F Pohleven, J Resnik, A Kobe

dokument 1997.doc

IRG/WP 98-10293 Programme Section 1, Biology IRG Secretariat

IRG/WP 98-10294

Genetic engineering in tree breeding

J Van Doorsselaere, H Beeckman, M Van Montagu, W Boerjan

IRG/WP 98-10295

The natural durability assessments of secondary hardwood species - Laboratory tests J K Carey, S J Hendry

IRG/WP 98-10296 Report of Section 1 1998 IRG Secretariat

IRG/WP 98-10297

The natural durability assessments of secondary hardwood species - Field tests E D Suttie, R J Orsler

Section 2

IRG/WP 98-20130

Patterns of long-term performance - how well are they predicted from accelerated tests and should evaluations consider parameters other than averages R C De Groot, J W Evans

IRG/WP 98-20131

Method of embedding and staining of wood after biological testing to support the identification of decay type A O Rapp

IRG/WP 98-20132

Comparison of three methods for assessing the in-ground termite resistance of treated timber, durable timber and plastics at sites in Australia, USA and Thailand - first results

M Lenz, A F Preston, J W Creffield, K Archer, B M Kard, C Vongkaluang, Y Sornnuwat

IRG/WP 98-20133

Influence of the nature of the substrate and the method of inoculation on the degradative activity of soft rot fungi M T Troya, A Navarrete, F Rubio, J Jiménez, D Muñoz-Mingarro, C Rodriguez-Borrajo, F Llinares, M Yuste

IRG/WP 98-20134

Sampling and analysis of NeXgen-treated timber M J Kennedy, D F Ferlazzo, T L Woods, M H Freeman

IRG/WP 98-20135

Determination of total fluoride and boron in preservative-treated wood - fluoride by ion selective electrode without steam distillation, and boron colorimetrically using azomethine-h P A Collins, M J Kennedy

IRG/WP 98-20136

Effects of the specimen position on fungal colonization and wood decay by EN 113 test fungi G Kleist, M-T Lenz, R-D Peek

IRG/WP 98-20137

The non-uniform uptake of chromium and copper during the impregnation of wood using the example of a CCB-salt

P Jüngel, E Melcher, R-D Peek

IRG/WP 98-20138

Acoustic technique for assessing decay in preservative treated wood L Machek, M-L Edlund, R Sierra-Alvarez, H Militz

IRG/WP 98-20139

A dynamic approach to assess the modulus of elasticity in wood decay testing L Machek, H Militz, R Sierra-Alvarez

IRG/WP 98-20140

Glued laminated poles - Progress report efter 18 years' testing Ö Bergman, J Jermer

Laboratory testing of wood natural durability in soil-bed assay

R Sierra-Álvarez, I Le Bayon, J Carey, I Stephan, J Van Acker, M Grinda, G Kleist, H Militz, R-D Peek

IRG/WP 98-20142

The effect of wood preservatives on the relation between the electric resistance and moisture content in Scots pine (*Pinus sylvestris* L) sapwood

W J Homan, B W Holleboom

IRG/WP 98-20143

Moisture content development in lap-joints of different wood species in outside exposure trials H Militz, M Broertjes, C J Bloom

IRG/WP 98-20144

Criteria for basidiomycete testing and ways of defining natural durability classes

J Van Acker, M Stevens, J Carey, R Sierra-Alvarez, H Militz, I Le Bayon, G Kleist, R-D Peek

IRG/WP 98-20145

Blue stain resistance of exterior wood coatings as a function of their typology

J Van Acker, M Stevens, C Brauwers, V Rijckaert, E Mol

IRG/WP 98-20146

The accelerated L-joint test method for determination of the out of ground natural durability J Van Acker, C Brauwers, M Stevens

IRG/WP 98-20147

International standardisation: a hypothetical case study with stand-alone borate wood preservatives M W Schoeman, J D Lloyd

IRG/WP 98-20148

Programme Section 2, Test methodology and assessment

IRG Secretariat

IRG/WP 98-20149

Comparison of different methods for assessing the performance of preservatives in the BAM fungus cellar test I Stephan, M Grinda, D Rudolph

IRG/WP 98-20150

Conforming to European standards on preservative treatment

E D Suttie, R J Orsler

IRG/WP 98-20151

How best to specify retentions of preservative treatments: kg/m³ or % (m/m)

J K Carey

IRG/WP 98-20152

Report of Section 2

IRG Secretariat

Section 3

IRG/WP 98-30165

Protection of rubberwood with modified creosote

H C Nagaveni, H S Ananthapadmanabha, G Vijayalakshmi, M N Sharma, K H Shankaranarayana

IRG/WP 98-30166

The effect of different concentrations of Polesaver rods on the survival of selected decay fungi in liquid culture M A Powell, T Deldot, C McEvoy

IRG/WP 98-30167

Albumin borate - A new non-toxic, wide-spectrum, long-term wood preservative

M F Thévenon, A Pizzi, J P Haluk

IRG/WP 98-30168

Boron treatment methods for Lyctid susceptible hardwoods growing in Tasmania

L J Cookson, D K Scown, K McCarthy

IRG/WP 98-30169

A new wood preservative based on polymerized complexes of aminotriazole with copper acetate K J Krajewski, A Lukasiewicz, J Wazny

dokument 1997.doc

Evaluation of the leach resistance and preservative efficacy of novel biocides as surface treatments applied by brush to spruce (*Picea abies*)

I M Tierney, A Bruce, D C R Sinclair, T Yeates

IRG/WP 98-30171

Water-based wood preservatives for curative treatment of insect-infested spruce constructions E Graf, P Manser, B Lanz

IRG/WP 98-30172

Synergistic combination of an antioxidant and wood preservative: a preliminary study T P Schultz, D D Nicholas, J Minn, K D McMurtrey, T H Fisher

IRG/WP 98-30173

CCA component distribution in the heartwood of treated Lodgepole pine and White spruce Y An, J N R Ruddick, P I Morris

IRG/WP 98-30174

Efficacy of anhydrides as wood protection chemicals II. Performance against soft rot fungi S C Forster, M D Hale, G R Williams

IRG/WP 98-30175

Laboratory evaluation of chlorothalonil formulation for stain and mold control on rubberwood and maple J Mingliang, T Highley, L Ferge, T L Woods

IRG/WP 98-30176

Assessing the leachability of chlorothalonil and methylene bis thiocyanate from antisapstain treated Radiata pine B Kreber,T Woods

IRG/WP 98-30177

Losses of pyrethroids from treated wood due to photodegradation J D Lloyd, M W Schoeman, F Brownsill

IRG/WP 98-30178

Borates and their biological applications J D Lloyd

IRG/WP 98-30179

Development of threshold values for boron compounds in above ground exposures: preliminary trials J J Morrell, C Freitag, S Unger

IRG/WP 98-30180

Fungicidal efficacy of some dimethyldithiocarbamates, dimethylaminopropionitrile and some salts of S-substituted thioglycolic acid M Petric, F Pohleven, M Humar, U Kol an

IRG/WP 98-30181

Movement of borates in a range of timber species at various moisture contents M W Schoeman, J D Lloyd, M J Manning

IRG/WP 98-30182

Protection of *Ochroma pyramidale* from fungal decay with N,N napthaloylhydroxylamine F Green III, T Highley

IRG/WP 98-30183

Antifungal mechanism of dichloro-N-octylisothiazolone J S Chapman, M A Diehl, K B Fearnside, L E Leightley

IRG/WP 98-30184

Programme Section 3, Wood protecting chemicals IRG Secretariat

IRG/WP 98-30185

Decrease of the antidecay resistance of beech wood treated with organotin fungicides after its natural ageing L Reinprecht

IRG/WP 98-30186

Report of Section 3

IRG Secretariat

IRG/WP 98-30187

Evaluation of chlorpyrifos and fungicides alone and in combination for control of insects and fungi in wood and wood composite M P Tolley, P E Laks, R Fears

Section 4

IRG/WP 98-40103

300 years water-logged wood: treatability with CCA-C

S N Kartal, N Yilgör

IRG/WP 98-40104

Preservative treatment of common timbers and bamboos of Bangladesh for rural electrification infrastructure A K Lahiry

IRG/WP 98-40105

An optimum schedule for treating Radiata pine

R Gnanaharan, D Page

IRG/WP 98-40106

Improved preservative penetration of spruce after pre-treatment with selected fungi II. Creosote treatment, analysis and strength testing

E Tucker, A Bruce, H J Staines, B Rosner, K Messner

IRG/WP 98-40107

Biological resistance of wood treated with waterbased resins and drying oils in a mini-block test M Sailer, A O Rapp, R-D Peek

IRG/WP 98-40108

Curing conditions for a low formaldehyde etherficated melamine resin

D Lukowsky, R-D Peek, A O Rapp

IRG/WP 98-40109

Time dependent over-uptake of etherficated melamine resins

D Lukowsky, R-D Peek

IRG/WP 98-40110

A new process for *in situ* polymerization of vinyl monomers in wood to delay boron leaching M K Yalinkilic, A Dwianto, Y Imamura, M Takahashi

IRG/WP 98-40111

Development of a novel treatment process and its applications

T Arakawa, M Funato, A Hoshino, T Muraki

IRG/WP 98-40112

Waterborne preservative treatability of Tamarack (Larix laricina (Du Roi) K Koch)

A Taylor, Y T Ung, P A Cooper

IRG/WP 98-40113

Some aspects of testing water repellents

D Lukowsky, M Farnow, T Rypstra

IRG/WP 98-40114

Multiple-phase pressure (MPP) process: one-stage CCA treatment and accelerated fixation process 3. Effect of process variables on sapwood treatment and CCA fixation

H Pearson, K Nasheri, J Drysdale, G Durbin, M Hedley

IRG/WP 98-40115

Multiple-phase pressure (MPP) process: one-stage CCA treatment and accelerated fixation process 4. MPP compared with other processes for achieving acceptable treatment of Radiata pine heartwood

K Nasheri, J Drysdale, G Durbin, M Hedley

IRG/WP 98-40116

The effect of felling time of year on CCA fixation rate and quality of selected hardwoods

Y T Ung, A Taylor, P A Cooper

IRG/WP 98-40117

Improved preservative penetration of spruce after pre-treatment with selected fungi I. Fungal pre-treatment of pole sections

B Rosner, K Messner, E Tucker, A Bruce

IRG/WP 98-40118

Fungal resistance of smoke-dried Cryptomeria japonica wood

K Yamamoto, I Momohara, T Nishimura

Influence of concentration, catalyst and temperature on dimensional stability of DMDHEU modified Scots pine M E Van der Zee, E P J Beckers, H Militz

IRG/WP 98-40120

Decay resistance of high performance biocomposites based on chemically modified fibres V Rijckaert, J Van Acker, M Stevens

IRG/WP 98-40121

Influence of a dipping preservative treatment on the performance of wood finished with waterborne coatings M de Meijer, J Creemers, W Cobben, P Ahola

IRG/WP 98-40122

The decay resistance of chemically modified aspen composites to the white rot fungus Coriolus versicolor (L.) Quelet

M C Timar, A Pitman, M D Mihai

IRG/WP 98-40123

Thermal modification of non-durable wood species 1. The PLATO technology: thermal modification of wood M J Boonstra, B F Tjeerdsma, H A C Groeneveld

IRG/WP 98-40124

Thermal modification of non-durable wood species 2. Improved wood properties of thermally treated wood B F Tjeerdsma, M Boonstra, H Militz

IRG/WP 98-40125

The kinetics of anhydride modification reactions of wood. Experimental results and theoretical modelling C A S Hill, J G Hillier

IRG/WP 98-40126

Programme Section 4, Processes

IRG Secretariat

IRG/WP 98-40127

Local preservation with difluoride pills: life-time of preservative

W Homan, C Blom, B Hollebom

IRG/WP 98-40128

Report of Section 4

IRG Secretariat

Section 5 Environmental aspects

IRG/WP 98-50101

Proceedings from the 4th international wood preservation symposium The Challenge-Safety and Environment IRG Secretariat

IRG/WP 98-50102

A discussion on causes, effects and remedies of arsenic pollution of groundwater in Bangladesh A K Lahiry

IRG/WP 98-50103

Non leachability of arsenic, copper and chromium from 15 years old CCA-C treated Southern pine poles used in brackish water as jetty piles in Bangladesh

A K Lahiry

IRG/WP 98-50104

Rapid analytical methods for wood waste - an overview

A Peylo, R-D Peek

IRG/WP 98-50105

How to determine what is a realistic emission from treated wood - basic reflections H Willeitner, $\mathsf{R}\text{-}\mathsf{D}$ Peek

IRG/WP 98-50106

Wood preservation sites polluted by CCA. Is potassium diphosphate incubation a catalyst for the electrodialytic remediation of these soils

A B Ribeiro, G Bech-Nielsen, A Villumsen, A Réfega, J Vieira e Silva

IRG/WP 98-50107 Solvent extraction of CCA-C from out-of-service wood K M F Kazi, P A Cooper

IRG/WP 98-50108

Leaching of components from CCF treated timber in ground contact E Melcher

IRG/WP 98-50109

Effect of post-treatment processing on leachability of ACZA-treated Douglas-fir lumber J J Morrell, C S Love, S Kumar, C Freitag

IRG/WP 98-50110

An appraisal of methods for environmental testing of leachates from salt-treated wood (2) H-W Wegen, A Platen, G Van Eetvelde, M Stevens

IRG/WP 98-50111

Effect of soil chemistry and physical properties on wood preservative leaching J-H Wang, D D Nicholas, L S Sites, D E Pettry

IRG/WP 98-50112

Bioassays for rapid assessment of heavy metal toxicity in seawater C J Brown, R L Fletcher, R A Eaton

IRG/WP 98-50113

Proposal for a method aiming at the quantification of the impact of wood extraction in life cycle assessment P Esser, E Van der Voet

IRG/WP 98-50114

Aquatic toxicity research of structural materials G Van Eetvelde, S De Geyter, P Marchal, M Stevens

IRG/WP 98-50115

An appraisal of methods for environmental testing of leachates from salt-treated wood; Part 1 G Van Eetvelde, M Stevens, F Mahieu, H-W Wegen, A Platen

IRG/WP 98-50116

Effects of CCA treatment on settlement and growth of barnacles under field conditions S M Cragg, C Brown, R M Albuquerque, R A Eaton, P Goulletquer

IRG/WP 98-50117

Comparative life cycle assessment of Swiss railroad sleepers T Künniger, K Richter

IRG/WP 98-50118

Recovery of copper, chromium and arsenic from old CCA treated commodities D P Kamdem, W Ma, J Zhang, J Zyskowski

IRG/WP 98-50119

Programme Section 5, Environmental aspects IRG Secretariat

IRG/WP 98-50120

Biological detoxification processes. A check list for assessments H Leithoff, R-D Peek

IRG/WP 98-50121

Determination procedure for wood preservatives in waste wood - statistics of sampling and analysis P Stolz, J Krooss, U Thurmann, R D Peek, H Giese

IRG/WP 98-50122

The content and mobility of copper, chromium and arsenic in the soil of a wood preserving plant using CCA N Erdin, S N Kartal, A Dilek Dogu, M Osman Engür

IRG/WP 98-50123 Report of Section 5 IRG Secretariat

Other documents

IRG/WP 98-60093 Annual Report 1997 IRG Secretariat

IRG/WP 98-60094 Abstracts of some papers promised for IRG 29 IRG Secretariat

IRG/WP 98-60095 Agenda Plenary Meeting 1998 IRG Secretariat

IRG/WP 98-60096
Comparison between actual income and expenditure and the budget for 1997
IRG Secretariat

IRG/WP 98-60097
Reporting minutes of the Plenary Meeting in 1998
IRG Secretariat

IRG/WP 98-60098 IRG documents 1998 IRG Secretariat

IRG/WP 98-60099 Budget for 1999 IRG Secretariat

IRG/WP 98-60100* Agenda Finance Committee Meeting 1998 IRG Secretariat

IRG/WP 98-60101*
Agenda Scientific Programme Committee Meeting 1998
IRG Secretariat

IRG/WP 98-60102* Agenda Executive Council 1998* IRG Secretariat

IRG/WP 98-60103*
Reporting minutes of the Finance Committee Meeting 1998
IRG Secretariat

IRG/WP 98-60104*
Reporting minutes of the Executive Council Meeting 1998
IRG Secretariat

IRG/WP 98-60105*
Reporting minutes of the Scientific Programme Committee Meeting 1998
IRG Secretariat

IRG/WP 98-60106 International Directory of Members and Sponsors 1998-1999 IRG Secretariat

* restricted circulation