

U.S.A. (continued)

Koppers Co Inc  
Mooney Chemicals, Inc  
The New Orleans Pest Control Association  
Occidental Chemical Corporation  
Osmose Wood Preserving Company of America Inc  
Rohm and Haas Co  
Troy Chemical Corporation Inc  
University of Minnesota  
Weyerhaeuser Co

Yugoslavia Belinka, Razvojno tehnološki sektor

Western Europe Western European Institute for Wood Preservation

APPENDIX

List of technical and other main documents issued by the IRG Secretariat since the last Annual Report

Working Group Ia

- Antagonistic effect of some mycorrhiza fungi  
as biological control of blue-stain  
by Riana Benko (87-02-11) Document No: IRG/WP/1314
- Effects of air-seasoning on fungal colonization  
and wood strength of Douglas fir poles  
by Jeffrey J Morrell et al (87-02-15) Document No: IRG/WP/1315
- Susceptibility of *Lentinus lepideus* (Fr. ex Fr.) Fr.  
to volatiles produced by spp by Alan Bruce,  
C Johnstone & J A P McVey (87-03-02) Document No: IRG/WP/1316
- Isolation and identification of bacteria from  
CCA-treated eucalypt power transmission poles  
by G A Willoughby, A C Hayward & Liam E Leightley  
(87-03-02) Document No: IRG/WP/1317
- Physical properties of  $\beta$ -1,4-xylanase produced by  
*Postia* (= *Poria*) *placenta*: implications for the  
control of brown rot by Jessie A Micales, F Green,  
C A Clausen & Terry L Highley (87-03-06) Document No: IRG/WP/1318
- Biochemical aspects of white-rot and brown-rot  
decay by Terry L Highley (87-03-18) Document No: IRG/WP/1319
- Influence of variable lignin content on brown  
rot decay of wood  
by Thomas Nilsson & Geoffrey Daniel (87-03-25) Document No: IRG/WP/1320

- Comparative studies on the distribution of lignin and CCA elements in birch using electron microscopic X-ray microanalysis by Geoffrey Daniel & Thomas Nilsson (87-04-13) Document No: IRG/WP/1328
- Pretreatment decay in poles of *Pinus sylvestris* by Hans Lundström & Marie-Louise Edlund (87-03-05) Document No: IRG/WP/1329
- Production, function and neutralization of oxalic acid produced by the dry rot fungus and other rot fungi by J Bech-Andersen (87-04-27) Document No: IRG/WP/1330
- Minutes of the meetings of Working Group Ia 'Biological Problems (Flora)' held at Delawana Inn, Honey Harbour, Ontario, Canada during 18-22 May 1987 (87-07-30) Document No: IRG/WP/1335
- A bibliography of the dry rot fungus, *Serpula lacrymans* by Günther Seehann & Bryan M Hegarty (88-01-14) Document No: IRG/WP/1337
- Bacteria as possible organisms for biological control of blue stain by Riana Benko (88-01-31) Document No: IRG/WP/1339
- Basidiospore structure and germination of *Serpula lacrymans* and *Coniophora puteana* by Bryan Hegarty & Uwe Schmitt (88-02-08) Document No: IRG/WP/1340
- Some physical characteristics of a non-degradative strain of *Postia* (= *Poria*) *placenta* by Jessie A Micales & Terry L Highley (88-02-15) Document No: IRG/WP/1341
- The effect of tunicamycin on production and secretion of extracellular carbohydrate-degrading enzymes by *Postia placenta* by Jessie A Micales & Terry L Highley (88-02-15) Document No: IRG/WP/1342
- Spatial arrangement of lignin peroxidase in pine decayed by *Phanerochaete chrysosporium* & *Fomitopsis pinicola* by Ewald Srebotnik & Kurt Messner (88-02-15) Document No: IRG/WP/1343
- Feasibility of using biological control agents to arrest and prevent colonization of Douglas fir and southern pine by decay fungi by J J Morrell & C M Sexton (88-02-15) Document No: IRG/WP/1345
- The dry rot fungus *Serpula lacrymans*. Examples of attack and remedial treatment by G Buchwald, B Hegarty, W Metzner, R Pospischil, H Sigmund & P Grabow (88-02-19) Document No: IRG/WP/1347
- Fruitbody formation and basidiosporogenesis by the white rot fungus *Pycnoporus cinnabarinus* by Jonny Bjurman (88-02-08) Document No: IRG/WP/1348

- The importance of blue stain attack for the colonization by wood-rotting fungi of wood not in contact with the ground  
by Jonny Bjurman (88-02-10) Document No: IRG/WP/1349
- Properties of cellulose degraded by the brown rot fungus, *Postia placenta* by Terry L Highley, Rebecca Ibach & T Kent Kirk (88-02-16) Document No: IRG/WP/1350
- Partial characterization of inhibitors extracted from Pine (*Pinus sylvestris*) sapwood active against germination of wood-rotting fungi  
by Jonny Bjurman (88-02-24) Document No: IRG/WP/1351
- Detection of methanogenic bacteria in mining timber by Linda D Abraham, Kenneth Westlake, Roderick I Mackie, John F Putterill & Albin A W Baeker (88-02-24) Document No: IRG/WP/1352
- Defining fungal decay types - final proposal  
by Thomas Nilsson (88-02-29) Document No: IRG/WP/1355
- The possible significance of the lignin content and lignin type on the performance of CCA-treated timber in ground contact by Thomas Nilsson, John R Obst & Geoffrey Daniel (88-03-03) Document No: IRG/WP/1357
- Micromorphology of the decay caused by *Chondrostereum purpureum* (Pers.:Fr.) Pouzar and *Flammulina velutipes* (Curt.:Fr.) Singer  
by Thomas Nilsson & Geoffrey Daniel (88-03-04) Document No: IRG/WP/1358
- An electron spin resonance study of manganese changes in wood decayed by the brown rot fungus, *Postia placenta* by Barbara L Illman, D C Meinholtz & Terry L Highley (88-03-04) Document No: IRG/WP/1359
- Generation of hydroxyl radical by the brown-rot fungus, *Postia placenta* by Barbara L Illman, D C Meinholtz & Terry L Highley (88-03-04) Document No: IRG/WP/1360
- Immunolocalization of extracellular metabolites from *Poria placenta* by Barry Goodell, Geoffrey F Daniel, Jody Jellison & Thomas Nilsson (88-03-04) Document No: IRG/WP/1361
- Bacterial staining of samba (*Triplochiton scleroxylon*) by Kurt Hansen (88-03-07) Document No: IRG/WP/1362
- Immunolabelling studies on the detection of enzymes during the degradation of wood by *Phanerochaete chrysosporium* by Geoffrey F Daniel, Thomas Nilsson & B Pettersson (88-03-09) Document No: IRG/WP/1364
- Interactions between soft rot fungi and CCA preservatives in *Betula verrucosa* by Geoffrey F Daniel & Thomas Nilsson (88-03-14) Document No: IRG/WP/1367

- The occurrence of soft rot in creosoted wooden poles by A Wylde & D J Dickinson (88-03-14) Document No: IRG/WP/1368
- The critical moisture and temperature conditions for the growth of some mould fungi and the brown rot fungus *Coniophora puteana* by Hannua Viitanen & Leena Paajanen (88-03-24) Document No: IRG/WP/1369
- Microbiological degradation of wooden piles in building foundations by Leena Paajanen & Hannu Viitanen (88-03-24) Document No: IRG/WP/1370

#### Working Group Ib

- Review of the literature on Lyctidae (Coleoptera) by Erwin Graf (87-02-27) Document No: IRG/WP/1211
- Efficacy of deltamethrin associated with TCMTB and MBT for the temporary protection of timbers immediately following their sawing, in tropical countries by Jean S Duguet & Vincent Dartigues (87-01-30) Document No: IRG/WP/1321
- Effects of methoprene on *Coptotermes formosanus* (Isoptera: Rhinotermitidae) by Susan C Jones (87-03-06) Document No: IRG/WP/1322
- Soil termiticides: A review of efficacy data from field tests by Joe K Mauldin, Susan C Jones & Raymond H Beal (87-03-31) Document No: IRG/WP/1323
- Termite standards questionnaire survey by John R J French & Jeffery P La Fage (87-04-06) Document No: IRG/WP/1324
- Variance in feeding on equivalent wood blocks by the Formosan subterranean termite (*Coptotermes formosanus* Shiraki) by Jeffery P La Fage & Keith S Delaplane (87-04-10) Document No: IRG/WP/1325
- Poplar wood and its damages in Iran by Davoud Parsapajouh & Parviz Niloufari (88-04-30) Document No: IRG/WP/1332
- Termites in Eastern Canada: A brief review and assessment by J Kenneth Grace (87-05-07) Document No: IRG/WP/1333
- Data sheet on woodboring insects. *Ptilinus pectinicornis* (Linnaeus) by (the late) Siegfried Cymorek & Marie-Madeleine Serment (87-05-20) Document No: IRG/WP/1334
- Minutes of the meetings of Working Group Ib 'Biological Problems (Fauna)' held at Delawana Inn, Honey Harbour, Ontario, Canada during 18-22 May 1987 (87-08-05) Document No: IRG/WP/1336

- Preference of the Formosan subterranean termite for wood previously damaged by conspecifics by J P La Fage & K S Delaplane (88-01-18) Document No: IRG/WP/1338
- Suppression of termite feeding by Sudan Red 7B by K S Delaplane, L A Bourg & J P La Fage (88-02-15) Document No: IRG/WP/1344
- Justification for use of mirex in termite control by J R J French (88-02-19) Document No: IRG/WP/1346
- Evaluation of the population of a mound colony of *Coptotermes lacteus* (Froggatt) by D M Ewart & J R J French (88-02-24) Document No: IRG/WP/1353
- Termites standards questionnaire survey - First Report by J R J French & J P La Fage (88-02-24) Document No: IRG/WP/1354
- Effects of chemicals used for groundline protection of hardwood poles on termite attack by R S Johnstone & R W Eldridge (88-03-02) Document No: IRG/WP/1356
- Screening potential termiticides: some thoughts and suggestions on methodology by J R J French (88-03-07) Document No: IRG/WP/1363
- Peniochra fasciata* (Stephens) (Col. Cerambycidae) a pest in wood materials by Anna Gambetta & Elisabetta Orlandi (88-03-09) Document No: IRG/WP/1365
- A behavioural assay for measuring feeding deterrence of a slow-acting biocide, A-9248, against the Formosan subterranean termite (Isoptera: Rhinotermitidae) by Nan-Yao Su & Rudolph H Scheffrahn (88-03-14) Document No: IRG/WP/1366

## Working Group II

- Co-operative research project on L-joint testing. Sampling after 4 years exposure by Janice K Carey & A F Bravery (88-02-03) (issued only to Sub-group 2 participants) Document No: IRG/WP/2274
- Detection of incipient brown rot decay in wood by Fourier transform infrared spectrometry by Darrel D Nicholas & T P Schultz (86-12-11) Document No: IRG/WP/2275
- Basidiospore production by *Lentinus lepideus* in vitro by Jonny Bjurman (87-02-26) Document No: IRG/WP/2276
- Sampling rates and the probability of detecting defective treatment in the sampling of preservative treated timber by M J Kennedy & Liam E Leightley (87-03-02) Document No: IRG/WP/2277

- The use of low cost X-ray fluorescence instruments in the determination of copper, chromium and arsenic in preservative treated wood  
by Jack Norton & Liam E Leightley (87-03-02) Document No: IRG/WP/2278
- A novel method for evaluating the performance of water repellents by Alan R Moffat (87-03-02) Document No: IRG/WP/2279
- Ultra-structural observations on the degradation of wood surfaces during weathering  
by Philip D Evans & S Thein (87-03-04) Document No: IRG/WP/2280
- A technique for the rapid assessment of wood surface degradation during weathering  
by P D Evans, D Abbott & S Thein (87-03-04) Document No: IRG/WP/2281
- The mathematical study of test plot data  
by Winslow H Hartford (87-03-04) Document No: IRG/WP/2282
- The effect of aqueous leaching on moisture uptake by CCA-treated blocks during soil burial by Carol A Green, George M Smith & Bernard King (87-03-04) Document No: IRG/WP/2283
- The movement of iron into field test stakes  
by John N R Ruddick & Paul I Morris (87-03-25) Document No: IRG/WP/2284
- Computerized axial tomography - a non-destructive method for three-dimensional wood density/moisture content measurements by Owe Lindgren (87-04-01) Document No: IRG/WP/2285
- Copper based water-borne preservatives: The use of a thin section technique to compare the protection of wood by copper based preservatives against soft-rot and bacterial decay  
by A M Wayles & David J Dickinson (87-04-06) Document No: IRG/WP/2286
- Report of activity of CEN/TC 38 Test Methods for Wood Preservatives by Gérard Castan (87-04-16) Document No: IRG/WP/2287
- Evaluation of the decay caused by *Chaetomium globosum* Kunze, in the course of time  
by M T de Troya & Angeles Navarrete (87-04-22) Document No: IRG/WP/2288
- Comparison between two laboratory test methods for determining the effectiveness on wood preservatives against blue stain in fresh wood  
by Angeles Navarrete & M T de Troya (87-04-22) Document No: IRG/WP/2289
- A technique for determining the efficacy of water diffusible preservative plugs for implanting in joinery in service by Janice K Carey & Anthony F Bravery (87-05-05) Document No: IRG/WP/2291
- Final proposals for collaborative work on laboratory soft rot testing by David J Dickinson & Scarlett M Gray (87-05-11) Document No: IRG/WP/2292

- A non-destructive testing technique for wood poles  
by M W Murphy, D E Franklin & R A Palylyk  
(87-05-15) Document No: IRG/WP/2293
- Inspection of tropical hardwood window frames in  
Nigeria for decay presence by Michael A Odeyinde,  
M A Amakiri, E B Lucas, J O Eyenike & S Akanni  
(87-04-29) Document No: IRG/WP/2294
- Studies on the permeability of Norway spruce  
(*Picea abies*) by Ingvar Johansson & Katarina  
Nordman-Edberg (87-05-11) Document No: IRG/WP/2295
- Minutes of the meetings of Working Group II  
'Fundamentals of Testing' held at Delawana Inn,  
Honey Harbour, Ontario, Canada during 18-22 May  
1987 (87-08-21) Document No: IRG/WP/2296
- Determination of toxicity data for preservatives  
against Basidiomycetes by measuring the reduction  
in compression strength of wood  
by Jerzy Ważny & John D Thornton (87-12-03) Document No: IRG/WP/2297
- Permeability measurements on surface layers for  
detecting wood with abnormally high permeability  
by J B Boutelje & G Hägglund (88-01-27) Document No: IRG/WP/2298
- Japanese standardized method for evaluating  
effectiveness of anti-sapstain and anti-mold  
chemicals by Kunio Tsunoda & Koichi Nishimoto  
(88-01-29) Document No: IRG/WP/2299
- The influence of timber species and preservative  
treatment on spore germination of some  
wood-destroying basidiomycetes by Bryan Hegarty &  
Gustav Buchwald (88-02-08) Document No: IRG/WP/2300
- Effect of angle of exposure on degradation of  
Radiata pine during weathering trials  
by P D Evans (88-02-09) Document No: IRG/WP/2301
- Non-destructive detection of the presence and  
behaviour patterns of wood-destroying insects  
by Michael Pallaske (88-02-15) Document No: IRG/WP/2302
- Evaluation and approval of wood preservatives in  
Japan by Kunio Tsunoda (88-02-15) Document No: IRG/WP/2303
- New technique to analyse impregnation processes  
by J P Hösli (88-02-15) Document No: IRG/WP/2304
- Performance of water-borne pressure treated fence  
posts - A practical application of the new  
Canadian field test data base  
by E E Doyle, R Dubois & J P Hösli (88-02-15) Document No: IRG/WP/2305

A direct basidiomycete test methodology. Report on an EWPM ring test by Bjørn Jensen (88-02-16) Document No: IRG/WP/2306

Use of immunoblotting for the analysis of wood decay Basidiomycetes by J W Palfreyman, H Glancy, D Button, A Vigrow, A Score & B King (88-02-26) Document No: IRG/WP/2307

An attempt to evaluate wood resistance against fungal decay in non-sterile conditions by measuring the variation of resistance to bending test by Lucien N Trong (88-02-29) Document No: IRG/WP/2308

A technique for assessing the preventive efficacy against decay fungi of preservative treatments applied to wood by Janice K Carey & A F Bravery (88-03-04) Document No: IRG/WP/2309

Evaluation and approval of wood preservatives - unification of wood preservatives by Jöran Jermer (88-03-15) Document No: IRG/WP/2310

Evaluation and approval of wood preservatives in the Nordic countries by Björn Henningsson & Jöran Jermer (88-03-17) Document No: IRG/WP/2311

Design of a laboratory method for evaluating the effectiveness of soft rot preservatives by M Teresa Troya & Angeles Navarette (88-03-16) Document No: IRG/WP/2312

### Working Group III

Some tests on ES - AS 11, a novel anti-sapstain formulation, and its properties by Udo Straetmans (86-12-11) Document No: IRG/WP/3399

The efficacy of boron preparations by Mr J T de Jonge (86-12-30) Document No: IRG/WP/3400

Risk of pulmonary damage as a result of an evaporation of ca. 50 ppb = 42 ug HF, evaporated from wood treated by difluoride by H F M Nijman (87-01-07) Document No: IRG/WP/3401

Field evaluation of antisapstain products by Maria Cristina Rose & Augusto Bedoya (87-01-20) Document No: IRG/WP/3402

Some characteristics of *Pinus radiata* wood from trees subjected to resin extraction by Maria Cristina Rose, José Navarrete, Gonzalo Sandoval, Augusto Bedoya & Roberto Zurita (87-01-20) Document No: IRG/WP/3403

Wood preservation in Uruguay by Gustavo Baillod (87-02-09) Document No: IRG/WP/3404

Notes on a wood preservation industry in Medan  
North Sumatera, Indonesia  
by Nana Supriana & Abdul Murad (87-02-10) Document No: IRG/WP/3405

Environmental aspects of wood preservation  
by Harry Greaves (87-02-11) Document No: IRG/WP/3406

Waterborne DNBP wood preservatives - Preparation  
and performance  
by W E Conradie & A Pizzi (87-02-17) Document No: IRG/WP/3407

Low-toxicity DNBP wood preservatives by A Pizzi,  
W E Conradie, A Jansen & R Vosloo (87-02-17) Document No: IRG/WP/3408

Effectiveness of Busan 30 in a soil medium  
by H C Konabe (87-02-18) Document No: IRG/WP/3409

Effectiveness of Busan 30 treated birch blocks  
in a soil medium by H C Konabe (87-05-18) Document No: IRG/WP/3409  
(revised)

Movement of chloropicrin, Vapam, and  
methylisothiocyanate in southern pine and Douglas  
fir timbers by Terry L Highley (87-02-19) Document No: IRG/WP/3410

Effect of wrapping on movement of chloropicrin,  
Vapam, and Vanicide TH in southern pine timbers  
by Terry L Highley (87-02-19) Document No: IRG/WP/3411

Dimensional stability of wood with dimethylol  
compounds by D D Nicholas & A D Williams  
(87-02-23) Document No: IRG/WP/3412

Effect of post-treatment drying schedule on the  
modulus of elasticity of CCA-treated southern  
pine dimension stock using non-destructive methods  
by H M Barnes & Scott Moore (87-02-23) Document No: IRG/WP/3413

The compatibility of tributyltin fungicides and  
synthetic pyrethroid insecticides as wood  
preservatives by S J Blunden & R Hill (87-02-24) Document No: IRG/WP/3414

Effects of the sulfuric acid modification of  
CCA treating solution by Roger F Fox, Harry J Fry,  
Eugene A Pasek & Alan S Ross (87-02-18) Document No: IRG/WP/3415

Commercially available anti-sapstain chemicals in  
New Zealand - un update by Jeanette A Drysdale  
(87-02-26) Document No: IRG/WP/3416

A field trial of water repellents as anti-sapstain  
treatment additives by Jeanette A Drysdale &  
David V Plackett (87-02-26) Document No: IRG/WP/3417

A case study on quality control on telephone poles  
as a cost saving tool in Tanzania  
by K K Murira (87-03-02) Document No: IRG/WP/3418

- Chemical and biological studies of organotin treated and painted wood stakes after outdoor exposure by Marie-Louise Edlund & Björn Henningsson (87-03-02) Document No: IRG/WP/3419
- Fungicidal effectiveness of amended alkylammonium compounds by Kunio Tsunoda & Koichi Nishimoto (87-02-26) Document No: IRG/WP/3421
- The interaction of polyflavonoid tannins with CCA in *Pinus radiata* by K G Ryan & D V Plackett (87-03-02) Document No: IRG/WP/3422
- The examination of preservative-treated radiata pine using electron spin resonance spectroscopy by D V Plackett, E W Ainscough & A M Brodie (87-03-02) Document No: IRG/WP/3423
- Supply of wooden transmission and telephone poles in Tanzania: Problems and possible solutions by K K Murira & S A Diwani (87-03-04) Document No: IRG/WP/3424
- Discussion of diiodomethyl p-tolyl sulfone (Amical® 48) as a fungicide for wood preservation by J M Stamm, K J Littel, F M H Casati & M B Friedman (87-03-04) Document No: IRG/WP/3425
- Fungicidal combination products by Horst A B Landsiedel (87-03-06) Document No: IRG/WP/3426
- Preservation of coppice wood for the fabrication of glued beams or panels by Gérard R Y Déon & R Schwartz (87-03-06) Document No: IRG/WP/3427
- The treatability of five Indonesian wood species with BFCA preservatives by Nana Supriana & Totok Kartono Waluyo (87-03-06) Document No: IRG/WP/3428
- The antifungal efficacy of guayule resin by J D Bultman, R L Gilbertson, T L Amburgey, J E Adaskaveg, S V Parikh & C A Bailey (87-03-09) Document No: IRG/WP/3429
- The influence of wood moisture content on the fungitoxicity of methylisothiocyanate in Douglas fir heartwood by A R Zahora & J J Morrel (87-03-10) Document No: IRG/WP/3430
- Fluoride woodpill by Jan W P T van der Drift & Karel J M Bonsen (87-02-01) Document No: IRG/WP/3431
- The efficacy of remedial treatments for controlling fungal decay in window millwork used in the United States by Mark G Dietz & Elmer L Schmidt (87-03-04) Document No: IRG/WP/3432

- Leaching from CCA-impregnated wood to food,  
drinking-water and silage  
by Fred G Evans (87-03-12) Document No: IRG/WP/3433
- Some relationship between physical characteristics  
and treatability of Bolivian woods  
by Silverio Viscarra A (87-03-13) Document No: IRG/WP/3434
- Preservative treatment of *Pinus elliottii*  
by P Vinden & L Carter (87-03-16) Document No: IRG/WP/3435
- A field evaluation of modified and unmodified  
alkylammonium compounds  
by J N R Ruddick (87-03-16) Document No: IRG/WP/3436
- Diffusion treatment of gauged radiata pine timber  
using "Boracol 20" by David Page, Peter Vinden &  
Steve Retter (87-03-16) Document No: IRG/WP/3437
- Strength losses associated with steam conditioning  
and boron treatment of radiata pine framing  
by M J Collins & Peter Vinden (87-03-16) Document No: IRG/WP/3438
- Steam/hold/APM boron treatment - treatability  
trials with green gauged radiata pine  
by Peter Vinden (87-03-19) Document No: IRG/WP/3439
- Movement of water through quaternary ammonium  
treated wood  
by Peter Hayward & Jean Duff (87-03-09) Document No: IRG/WP/3440
- Accelerated decay tests on DNBP-treated *Pinus*  
*patula* and *Eucalyptus grandis* by L D Abraham &  
Albin A W Baecker (87-03--24) Document No: IRG/WP/3441
- Fungus cellar and stake tests with tall oil  
derivatives. Progress Report after 5 years'  
testing by Jöran Jermer, Östen Bergman & Thomas  
Nilsson (87-03-26) Document No: IRG/WP/3442
- Kiln drying of CCA-treated wood - Some safety  
and environmental considerations  
by Jöran Jermer & Björn Lundberg (87-03-26) Document No: IRG/WP/3443
- Glulamined poles - Progress report after 7  
years' testing  
by Jöran Jermer & Östen Bergman (87-03-26) Document No: IRG/WP/3444
- A suggestion for the improvement of the chemical  
protection of wooden poles  
by Henning Friis-Hansen (87-03-30) Document No: IRG/WP/3445
- Water-based water repellents for treatment of wood  
by I Gunilla Svensson, Göran Hägglund, Ingvar  
Johansson (Sweden) & W Bart Banks (87-03-30) Document No: IRG/WP/3446

- A report on the development of "Technical Recommendations Document for the Canadian Wood Preservation and Protection Facilities" by Gautam Das & Vishwa N P Mathur (87-03-30) Document No: IRG/WP/3447
- Artificial drying of impregnated wood by Marie-Louise Edlund (87-03-31) Document No: IRG/WP/3448
- Application of oscillating pressure to improve treatability of refractory species by Rolf-Dieter Peek (87-04-06) Document No: IRG/WP/3449
- Washboard effect: a surface deformation of spruce resulting from vacuum-pressure impregnation with water-borne preservatives by Hubert Willeitner & Richard J Murphy (87-04-06) Document No: IRG/WP/3450
- Copper based water-borne preservatives : the biological performance of wood treated with various formulations by Scarlette M Gray & David J Dickinson (87-04-06) Document No: IRG/WP/3451
- Copper-based water-borne preservatives: copper adsorption in relation to performance against soft rot by Patrick M S Rennie, Scarlette M Gray & David J Dickinson (87-04-06) Document No: IRG/WP/3452
- A bioassay of remedially treated pole material by John N R Ruddick & L Parker (87-04-09) Document No: IRG/WP/3453
- Simulation test of subchronic inhalation toxicity of TBTO vapours in the air by V Skubic, S Kobal, J Stupar, R Ajlec, J Koroščin & G Pečenko (87-04-13) Document No: IRG/WP/3454
- Pinus* and *Eucalyptus* fenceposts treated with creosote and solvex tar by hot and cold open-tank process by M V Baonza (87-04-22) Document No: IRG/WP/3455
- Raising of the grain and deformation of Scots pine (*Pinus sylvestris*) treated with water-based preservatives by Göran Hägglund & Tommy Sebring (87-04-22) Document No: IRG/WP/3456
- Practical experiments with Boracol 10 Rh used as a fungicide in the repair process after attack by the dry rot fungus (*Serpula lacrymans*) by J Bech-Andersen (87-04-27) Document No: IRG/WP/3458
- An investigation into the stability of TBTO in LOSP-treated radiata pine by Kevin Archer & Roger Meder (87-07-08) Document No: IRG/WP/3459
- Minutes of the meetings of Working Group III 'Preservatives and Methods of Treatment' held at Delawana Inn, Honey Harbour, Ontario, Canada during 18-22 May 1987 (87-09-09) Document No: IRG/WP/3460

- A study of salt imbalances observed in recycled copper/chrome/arsenic preservative solutions in commercial practice by V R Sonti, Suraj Sonti & B Chatterjee (87-10-26) Document No: IRG/WP/3461
- Wood preservation research in Tanzania: Priorities and challenges by Karanja K Murira & Ron Cockcroft (88-01-25) Document No: IRG/WP/3462
- Service life of pressure treated deckings of spruce in direct contact with the ground by J B Boutelje & T Sebring (88-02-01) Document No: IRG/WP/3463
- Evaluating possibilities of leaching of deltamethrin and TCMTB (insecticide and fungicide for protecting wood) by rain water or by soaking in water by J S Duguet & V Dartigues (88-02-03) Document No: IRG/WP/3464
- Failure of overhead power transmission and telecommunication poles in Tanzania: Causes, preventive and remedial measures by Karanja K Murira (88-02-10) Document No: IRG/WP/3465
- Preliminary modelling of methylisothiocyanate movement through Douglas fir transmission poles by A R Zahora, P E Humphrey & J J Morrell (88-02-12) Document No: IRG/WP/3466
- Recent developments in North American industrial wood preservation plants by John F Bridge (88-02-12) Document No: IRG/WP/3467
- Improvement in dimensional stability against water of the main Spanish timbers impregnated with water repellent organic protectors by José A Rodriguez Barreal (88-02-12) Document No: IRG/WP/3468
- Comparison of the anti-fungal efficacy of Cobra with drill perforation on oscillating pressure treated spruce transmission poles - Laboratory test by Erwin Graf & Bruno Zraggen (88-02-15) Document No: IRG/WP/3469
- A study on the pressure impregnation of *Eucalyptus globulus* fence posts with CCA preservatives by Dario Reimão & Lina Nunes (88-02-15) Document No: IRG/WP/3470
- The potential of high pressure pulsation processes to treat white spruce lumber with water-borne preservatives by J P Hösli & J N R Ruddick (88-02-18) Document No: IRG/WP/3471
- In search of alternative anti-sapstain chemicals for use in Papua New Guinea by Andrew Oteng-Amoako (88-02-19) Document No: IRG/WP/3472

Wood preservation in the Australian beekeeping industry  
by P J Robinson & J R J French (88-02-19) Document No: IRG/WP/3473

Diffusion and interaction of components of water-borne preservatives in the wood cell wall  
by P A Cooper (88-02-22) Document No: IRG/WP/3474

Penetration and absorption of water-borne preservatives in conifers from the Western United States: a preliminary report  
by S Kumar & J J Morrell (88-02-22) Document No: IRG/WP/3475

Accelerated ageing of preservatives in treated wood by Marie-Louise Edlund, Björn Henningsson, Björn Jensen & Carl-Erik Sundman (88-02-24) Document No: IRG/WP/3476

Kerfing reduces checking in ACA-treated Western white spruce poles  
by John N R Ruddick (88-02-26) Document No: IRG/WP/3477

A report on the technical recommendations documents for the Canadian wood protection and preservation facilities and an environmental study of storm water runoff from anti-sapstain treatment plants  
by Gautam Das & V N P Mathur (88-02-29) Document No: IRG/WP/3478

A new vacuum/pressure plant system by Claude Dalois, René Schwartz & Gérard Déon (88-02-29) Document No: IRG/WP/3479

Facts or feelings to decide on wood preservation  
by H Willeitner (88-03-01) Document No: IRG/WP/3480

Remedial ground-line treatment of CCA poles in service. A progress report after 28 months' testing by Björn Henningsson, Henning Friis-Hansen, Aino Käärik & Marie-Louise Edlund (88-03-04) Document No: IRG/WP/3481

Borate diffusion in wood from rods and liquid product. Application to laminated beams  
by Danièle Dirol (88-03-04) Document No: IRG/WP/3482

Fundamentals on steam fixation of chromated wood preservatives by R-D Peek & H Willeitner (88-03-07) Document No: IRG/WP/3483

Disproportionate absorption of different constituents of CCA salts by V R Sonti, Suraj Sonti & B Chatterjee (88-03-10) Document No: IRG/WP/3484

The secondary treatment of creosoted electricity poles with fused boron rods by D J Dickinson, P I Morris & Brian Calver (88-03-14) Document No: IRG/WP/3485

Creosoted radiata pine by non-pressure methods  
by M V Baonza and C de Arana (88-03-16) Document No: IRG/WP/3486

- Less pollution due to technical approaches on accelerated steam fixation of chromated wood preservatives  
by H Willeitner & R-D Peek (88-03-14) Document No: IRG/WP/3487
- Creosote immersion treatments in fence posts of *Castanea sativa*, *Pinus nigra* and *Pinus halepensis*  
by C de Arana & Angeles Navarette (88-03-16) Document No: IRG/WP/3488
- Hot and cold treatment in fence posts of *Eucalyptus globulus*, *Castanea sativa*, *Pinus nigra* and *Pinus pinaster*  
by C de Arana & Angeles Navarette (88-03-14) Document No: IRG/WP/3489
- The effect of pretreatment on the impregnation of air-dried Belgian spruce  
by Joris van Acker & Marc Stevens (88-03-25) Document No: IRG/WP/3490
- Working Group IV
- Chemical analyses of IRG/COIPM international marine test samples by Liam E Leightley (87-03-17) Document No: IRG/WP/4114
- IRG/COIPM INTERNATIONAL MARINE TEST. The effect of timber substrate on the effectiveness of different preservatives in sea-water - Final report of a collaborative field trial  
by Rodney A Eaton (87-02-16) Document No: IRG/WP/4133
- Trust in the durability of preserved wood during and after the reclamation of the Zuiderzee  
by Herman Visscher (87-02-21) Document No: IRG/WP/4134
- Sphaeroma terebrans* Bate: A note on distribution and preservative tolerance in Florida coastal waters by Bruce R Johnson, Ernest D Estevez & Stanley A Rice (87-02-26) Document No: IRG/WP/4135
- Micromorphological and chemical changes of archaeological woods from wrecked ship's timbers  
by Yoon Soo Kim (87-03-02) Document No: IRG/WP/4136
- Marine testing of selected waterborne preservatives by John N R Ruddick (87-03-16) Document No: IRG/WP/4137
- Information from COIPM Wood Group. Summary from John R DePalma (U.S.A.) (87-06-01) Document No: IRG/WP/4139
- Minutes of the 14th Joint Meeting with the COIPM Wood Group held at Delawana Inn, Honey Harbour, Ontario, Canada during 18-20 May 1987 (87-08-28) Document No: IRG/WP/4140
- Summary of development of pile wrapping in Los Angeles Harbour by George Horeczko (87-08-20) Document No: IRG/WP/4141

Species pairs in the Teredinidae by Ruth D Turner  
& C B Calloway (87-08-28) Document No: IRG/WP/4142

Procedure for a collaborative study of leaching  
from CCA-treated timber in the sea by S M Cragg,  
J E Barnacle, J D Bultman, R A Eaton, B R Johnson,  
L E Leightley & K D Singh (88-02-29) Document No: IRG/WP/4143

Natural resistance of twenty-six Guianese wood  
species against marine borers  
by Lucien N Trong (88-02-29) Document No: IRG/WP/4144

A collaborative test to determine the efficacy of  
polyurethane coatings on wood sampls exposed in the  
marine environment. 1st Interim Report  
by R A Eaton (88-03-07) Document No: IRG/WP/4145

Information from the COIPM Wood Group  
by Anna Gambetta (88-03-11) Document No: IRG/WP/4146

#### Other Documents

Abstracts of some papers promised for IRG 18  
(87-02-09) Document No: IRG/WP/5279

IRG Foundation Fund Report for 1986 by Björn  
Henningsson & Henning Friis-Hansen (87-03-02) Document No: IRG/WP/5281

IRG Secretariat Financial Statement for the year  
ending 31 December 1986  
by Henning Friis-Hansen (87-03-25) Document No: IRG/WP/5282

The Sixteenth Report of the International  
Research Group on Wood Preservation 1986-1987  
by R Cockcroft (87-03-31) Document No: IRG/WP/5283

Abstracts received for Poster Sessions at IRG 18  
Meeting (87-04-14) Document No: IRG/WP/5285

Minutes of the Plenary Meetings held at Delawana  
Inn, Honey Harbour, Ontario, Canada during 18-22  
May 1987 (87-07-21) Document No: IRG/WP/5304

IRG and its Members and Sponsors  
(87-10-01) Document No: IRG/WP/5306

Abstracts of some papers promised for IRG 19  
(88-01-08) Document No: IRG/WP/5310

Abstracts received for Poster Sessions at IRG 19  
Meeting (88-03-15) Document No: IRG/WP/5320

IRG Foundation Fund Report for 1987  
by Björn Henningsson & Henning Friis-Hansen  
(88-03-16) Document No: IRG/WP/5321

IRG Secretariat Financial Statement for the year ending 31 December 1987 by Henning Friis-Hansen (1988-04-12)

Document No: IRG/WP/5323

IRG Statutes, Members and Sponsors (21 June 1988) (In the press)

Document No: IRG/WP/5337

Addendum Documents either in the press or awaiting distribution

Working Group Ia & Ib

Northern oak wood and its damages in Iran by Davoud Parsapajouh & Parviz Niloufari (1988-04-24)

Document No: IRG/WP/1377

Working Group Ib

Preventive insecticidal activity against the house longhorn beetle by Jean-Brice Simonin & Damien Radtke

Document No: IRG/WP/1373

Tunnelling ability of subterranean termites through termiticide-treated soil by Susan C Jones (1988-04-25)

Document No: IRG/WP/1375

Field evaluation of several bait toxicants for subterranean termite control: a preliminary report by Susan C Jones (1988-04-25)

Document No: IRG/WP/1376

Working Group II

Co-operative research project on L-joint testing Progress Report to March 1988 by Janice K Carey & A F Bravery (1988-06-14)

Document No: IRG/WP/2315

Proposals for further co-operative studies on determining toxic values against wood-destroying basidiomycetes (1988) by Janice K Carey & A F Bravery (1988-06-14)

Document No: IRG/WP/2316

Some observations on miniaturised soil/block tests by Janice K Carey (1988-06-14)

Document No: IRG/WP/2317

A study of the colonization of wood blocks in a laboratory unsterile soil test by M T de Troyes, S M Gray & D J Dickinson (1988-04-18)

Document No: IRG/WP/2318

A new method for the study of microbiological decay of wood in a strictly anaerobic environment by G M Rogers & A A W Baecker (1988-04-18)

Document No: IRG/WP/2319

A technical note on the limitations of atomic absorption spectrophotometric analysis of copper/chrome/arsenic solutions according to BS 4072 (1974) and BS 5666: Part 3 (1979) by A J Pendlebury & J A Petty (1988-05-27)

Document No: IRG/WP/2320

### Working Group III

A new approach to the maintenance of wooden railway sleepers (Second Report) by William Beauford, Paul I Morris, Anthony M Brown & David J Dickinson (1988-04-24)

Document No: IRG/WP/3492

Report of field test results for dichloro-n-octyl-isothiazolone; a potential new wood preservative by David E Greenley & Bryan M Hegarty (1988-04-24)

Document No: IRG/WP/3495

Relative performances of DNBP and CCA wood preservatives in accelerated decay tests by W H Schnippenkoeter, L D Abraham & A A W Baecker (1988-04-18)

Document No: IRG/WP/3496

Accelerated tests to investigate postulated effects of tannins on CCA efficacy in wood by U L Scherer & A A W Baecker (1988-04-18)

Document No: IRG/WP/3497

Preservative treatment of wood by diffusion processes - simulation of commercial treatment processes by Peter Vinden (1988-04-29)

Document No: IRG/WP/3498

Steam conditioning of partially dried radiata and Corsican pine roundwood by Peter Vinden, David Page & Korosh Nasheria (1988-04-29)

Document No: IRG/WP/3499

Factors affecting the sorption of preservative during diffusion treatment of wood by Peter Vinden (1988-04-29)

Document No: IRG/WP/3500

IRG Secretariat  
Drottning Kristinas väg 47C  
S - 114 28 Stockholm  
Sweden

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