FROM THE PRESIDENT

Excruciating (but painless) health problems and particularly an extended ban on driving, have forced my President to leave much of the business of the Institute and particularly the conference last April to the care of the Vice President and the other Hon Officers and staff. Our thanks are due to them for stepping into the breach so ably.

The presidential mind seems somewhat nostalgic. Perhaps it is this temporary disablement. Perhaps it is the destruction by fire last week of the old Venables sawmill here at Stafford.

Great grandfather built that sawmill in 1883. Brick built in three stories with massive arches, iron columns and pitch pine beams, it must, when it was first fitted out, have been the last word in current industrial technology. The great boiler with its massive chimney (they knocked the chimney down yesterday), 140 ft tall, drove the old steam engine which, through a system of belts and pulleys in the cellars, drove the machinery of the sawmill on the ground floor above. On the first floor in the joiners shop they produced finished woodwork for a hundred different markets. In the tidying from the main line of the then Lennion and North Western Railway the legs for the sawmill were unloaded on to the sawmill deck. At the rear of the mill was a second deck from which the timber was loaded to tracks on a second siding from the old Great Northern Branch.

And they knew their timber in those days. Elm for salt rums and coffins and barrel sides. Ash for shafts and the spoken and felled for a thousand different house cars and carriages. Sycamore for stocking boxes or pantry boards. Oak for strength and length of life in heavy wagon stringings or timbers for ship building, in posts and beams, and for panelling and well loved furniture and for up-market coffins. Pine, the stable easy working wood, for doors and windows and all domestic woodwork. Yes, they knew their wood and didn’t they use it well?

In town last night I walked past an 80 year old chapel. The bottom half of a graceful old schoolroom window had been replaced with scruffy white plastic! Why? Why? Why? I ask myself. There are many good joiners in town. (Many served their apprenticeships with Henry Venables Ltd). Why did the plastic man get the job? A better product? I don’t for one minute suppose that it will still be there in eighty years time but if it is I shudder to think what it will look like. Was it because it was cheaper? I don’t think so. This is a large chapel well supported and otherwise well maintained. I think it was because it seemed easier; because replacing wood with plastic is believed by the thoughtless multitude to be the thing to do. Perhaps it’s because we, the present day timber people, don’t understand and believe in our products and their uses in the way that great grandfather did.

Certainly we timber people are missing out in today’s market place. Is it our material’s fault or is it ours?

Well, so much for the presidential nostalgia. “Silly old codger!”, I can hear you all say. “It’s time we had a new president!” I’m sure you’re right. I am sure that my successor will keep your feet firmly on the ground and keep your gaze focused sharply on the Institute’s business of teaching people about wood. Long may it prosper!

Thank you all for your good wishes and support.

Richard Venables AFWsc (President)

THE PRESIDENT ELECT CORNERED

At the next Annual General Meeting, the IWSc will elect a new President, but who is the President-elect? An endeavour to answer the question, I coerced this knight errant on his home territory in Merseyside.

Keith Percelli, AFWsc, a family man who lives on the Wirral, has been involved with the commercial timber trade for 26 years where he has gained experience of all aspects of the business. His wife, Alison, works for the Botany Department of the University of Liverpool.

The seed having been sown (figuratively) some years previously, our sapling, as he then was, was self planted into the world of agencies. Feeling the need to increase his knowledge in this chosen profession, he started on what, at that time, was a five-year Institute course at night school. By attending three nights a week, Keith was able to complete and gain his Association in three years. The bright lights of trading beckoned and our tree spread its branches into the world of softwood importing where before long he joined the old established firm of Evans Bellhouse where he rose through the ranks of representatives to become a Director and eventually Managing Director. Some three years ago the opportunity arose for Keith and a fellow colleague, Roger Holf, to purchase the company in the guise of a management buy-in. Evans Bellhouse Limited came into existence as a softwood importer servicing the North West and North Wales, since which time it has achieved BS5750 status and has moved into new, larger premises in Liverpool.

Keith has been a member of the Institute of Wood Science for twenty-four years as an active member of the Liverpool and District Branch. For the last eighteen years, he has sat on the Branch Committee in various roles such as Treasurer, Vice-Chairman and Chairman. In this

Thank You Jean

It is sad to have to report to all readers of the Newsletter that Jean Taylor has decided to hand over its editorship. It was through her enthusiasm that the Newsletter was first launched in March ’89 fulfilling a need for which the Journal was unsuited. The Newsletter is now well established and much read, for which we say “Thank you Jean!”. Last year she took on the role of Domestic Sales and Marketing Manager for a company in the Henley area. This year she has taken on the role of Sales Manager for a company in the North East. It is said that a new leaf is being turned. We wish her well in all her new roles.

latter role he made it his business to attend Council of Management meetings on a regular basis. He has now sat on Council for some ten years.

During his term of office, it is Keith’s intention to visit as many of the Institute’s branches as possible and to promote, wherever possible, the benefits of being a member. It is a source of disappointment to our President-elect that the IWSc does not receive more support from the Trade.

Having talked at length to Keith, I came away certain that we have in our President-elect a person who will not rush headlong into change for change’s sake, but a person who has the best interests of the IWSc at heart and will guide us along the inevitable route of change with great care, maintaining our traditional role as well as expanding towards the future.

Roger Drake, CMIFWsc
EDUCATION AND TRAINING

NEW COURSES FROM THE INSTITUTE OF WOOD SCIENCE

A new course, leading to Certificate membership of the Institute (CMIFWSc) is being introduced. Broadly based and covering both technology and commerce, it provides a training programme, for those concerned with the processing, marketing and use of wood and wood products. It is expected to provide the underpinning knowledge required with the introduction of NVQs.

At first, the course will be either college-based or company-based with training provision. Later, planned for September 1993, it will be available as a self-taught course, though candidates using this method will be required to register with a college or other training organisation. The course comprises five units each, given a training provision, requiring 30 hours of class contact and 30 hours of distance study and associated work. Thus, with training provision, the full course can be completed in a year with a shorter period away from work than is required for the presently available Institute course. While it is hoped that whenever possible those pursuing the course will have training support, where this is not so, candidates will be able to complete the course however convenient if this is done for them.

Progress with each unit will be monitored by a comprehensive work programme which each candidate must follow. Special work booklets, with an emphasis on factual compilation and the interpretation of observational and work data, will be used. The assessment of a candidate’s performance will be based on his completion of the work book and an end-of-course examination.

The recommended entry requirement for new staff to the course is a minimum of 4 GCSE’s at Grade C or completion of the Timberbest programme with an acceptable level of performance. Employment for at least a year in the timber industry has been shown to add significantly at this level. More mature staff to be accepted if they have a demonstrable level of competence and likelihood of satisfactory completion of the course.

Candidates who successfully complete the Certificate course will be eligible to proceed to an Associateship course. This will require the completion of five units from a wide range of options, but to include one compulsory technical topic, one practical project (commercial or technical) of relevance to the candidate's field of work, and three other units, technical or commercial, as required by the candidate or his employer.

Completion of the course can be either by formal teaching or self-taught means, but candidates must be registered with a training organisation.

The compulsory technical topic requires 30 hours of class contact but otherwise there is no formal attendance requirement and the course can be completed over a time scale acceptable to the candidates and the training organisation with whom he is registered.

Award of an Associateship will be on the basis of the satisfactory completion of five units based on the submission of the work undertaken. The compulsory technical unit and the practical projects are essential requirements; for other units, successful completion of advanced courses run by others, particularly in management, commerce, etc., and having an assessed award on their completion, may qualify for acceptance.

J.D. Bruizer FFWSc

FOREST EDUCATION INITIATIVE

A major campaign to improve teacher’s and schoolchildren’s understanding of the forest environment has been announced in an initiative led by the Timber Trade Federation.

The Forestry Education Initiative was launched at a meeting (16 January 1992) involving representatives from 30 different organisations associated with forests, timber and conservation, including: Timber Growers UK; the Forestry Commission; British Furniture Manufacturers Association; FWSc; organisations from the forest industries of British Columbia, Eastern Canada, Sweden and Finland; the Countryside Commission; and the Worldwide Fund for Nature.

Under the campaign, a comprehensive education resource pack for teachers and students will be created to work within the National Curriculum. In addition, the campaign will help children and teachers gain access to woodlands for detailed study and project work on trees and forestry, and their contribution to conservation.

The education initiative will be administered on a day to day basis by the Forestry Trust for Conservation and Education, a charitable Trust.

The meeting was called by Terence Mullinson, a Forestry Commissioner and Chairman of the Environment and Promotion Committee of the Timber Trade Federation who said: ‘The TTF had targeted the education sector as a major area for 1992 and we had already agreed to produce two schools wallcharts, on wood science and wood technology.’

“We wished to develop other education projects and knew that other bodies were also keen to work with schools.”

“We felt it would be more productive to pool our resources into one major programme, just as we initiated the Forest Forever campaign on the environmental issue.”

“Forestry and timber have always had a major impact on man’s environment, and we believe the study of temperate and tropical forests is basic to environmental education.”

“We will be looking at all aspects of the forest from the life cycle of the tree, to the use man makes of timber, the implications for the landscape and wildlife and we will be featuring the issue of sustainable forest management in both tropical and temperate forests.”

“We are concerned that teachers and children understand and appreciate the intrinsic importance of forests and timber in our lives and that is why we are also keen to include access to woodlands for practical project work.”

“We want to see generations of children growing up to understand and value forests and trees.”

For more information on the Forest Education Initiative please contact the Timber Trade Federation.

Michael James FFWSc

THE TEACHING OF TIMBER IN COLLEGES OF ARCHITECTURE

From time to time, in both the trade press and at public events like the FWSc conference, mention has been made of the dismal state of timber education in the schools of engineering and architecture. At the last two FWSc conferences the engineering schools were discussed and there seems to be some hope of a teaching package to assist lecturers on the horizon.

It is debatable whether, as potential specifiers it is more important for the engineering student or the architectural student to have the benefit of a good grounding in timber whilst at college. Ideally it should be both. Over the last few months I have had contact with a number of the architectural colleges and with one or two exceptions the picture remains bleak. At one school that I visited to lecture to a second year group I was disturbed to find that it was their first lecture on timber!

It has nevertheless been a rewarding experience to be involved in the lecture presentations on timber and its applications in building at a number of schools and to have contact with some 250 students. In particular it has been the level of interest, not just at a superficial level because I was a visitor, but at a level that has been coupled with a real curiosity and hunger for knowledge. There is no doubt that the current times, despite the arguments put forward by the environmentalists, demonstrate an undiminished enthusiasm for the use of natural materials.

If the lecturing has been a rewarding experience because of the interest generated, it has also been something of an alarming one when one considers the weight of responsibility, all in the space of a morning or afternoon, to put across a case for timber, how to use it and guidance on specification. This is really an impossible task and all that one can hope to do is set out the ground rules. After that it is very much up to the individual student to develop his own line of enquiry and expertise.

Even this modest crusade would not have been possible without the generous support of sponsorship since the spending restrictions in the higher education sector mean that there is a more pitance available to fund outside speakers. In some cases this does not cover the train fare.

Thanks are therefore due to Messrs. Arnold Laver & Co. Ltd., J. Axford Ltd. and the BIFOR for their help in some of the presentations. On the occasions when directors of the companies have been present I think they will agree that some very substantial and potentially fruitful links have been made with the schools, the staff and above all, the students.

The target now is to be able to extend the scheme to more of the colleges to meet the requirements and fulfill the urgent need. David Woodbridge FFWSc.
EDUCATION AND TRAINING

A TEACHING PACKAGE FOR STRUCTURAL TIMBER

In a paper entitled "Timber Engineering - UK Prospects for the 90's", presented at the Institute's 1992 Conference, the writer described the urgent need for a consolidated set of teaching material which lecturers could use to educate prospective specifiers of structural timber, such as Engineers and Architects, during their training.

Following subsequent discussions resulting from this paper and another such paper published by the UK Timber Engineering Group in the "Structural Engineer", a post-European bid was recently made to the European Commission for partial funding for a Structural Timber Education Programme (STEP).

Industry funding to the tune of £215k, and in-kind support from Universities to the tune of £380k had already been pledged from 27 organisations in 8 European countries, and in June the Commission confirmed they would add a further £175k, opening the way for the 3-year project to begin in September 1992.

The STEP initiative will provide an extensive multi-media teaching and training package on the design and detailing of timber structures. When it is complete, in 1995, it will form an invaluable source of reference from which seminars can be run for practising engineers and architects, and which lecturers at university and sub-university level can use to form their own lecture programmes.

The intention is that STEP will continue beyond the end of the 3-year project through funds diversed from courses and seminars run using the training material. By renewing a proportion of profits in this way, it is hoped that the package can be continually updated and expanded.

A similar teaching package on structural steel is already being developed in Europe, and this new initiative should now ensure that structural timber can compete on the same basis in the future.

L.R.J. Whole FFIWSc.

MSC IN FOREST INDUSTRIES TECHNOLOGY AT UNIVERSITY OF WALES, BANGOR

Bangor's one year masters course in Forest Industries Technology is now in its sixth year and over 60 students have successfully completed the course. The 12 month programme consists of 7 months of taught courses followed by a five month period in which each student completes a dissertation. In the taught programme the materials science of wood is covered in a series of core courses and students select a further five out of nine option courses mainly concerned with the technologies of wood processing and wood use. Additional courses in forestry can also be fitted into the programme. The course is recognised by the Science and Engineering Research Council. Students on the course have been sponsored by U.K. companies and various international aid agencies and governments. Students can also follow an alternative stream in which they progress to an M.Sc in Paper Science at the University of Manchester after spending one term in Bangor.

Graduates from the course are employed in the wood processing industries, the timber trade and several have obtained research posts in universities in the U.K. and North America.

Applicants should either have a degree in science, engineering or technology or have several years practical industrial experience in the timber or associated industries. The university has access to sources of funding to meet students' fees and contribute to their subsistence.

R.J. Cooper AFIWSc.

IWSc AWARD FOR BUCKINGHAMSHIRE COLLEGE STUDENTS

The Institute of Wood Science has awarded first prize in its annual awards to Buckinghamshire College BSc Timber Technology students, Leon Skidmore and Danila Goygo. The joint winners were presented with their cash prizes at the recent Graduation ceremony.

Leon and Danila, and the other entrants for the award, were judged on their third year specialisation project. Leon's project was a study of the Application of some Failure Models by means of Tension, while Danila's chose to research the Application of Environmental Assessment Techniques to Local Timber Processing Industry.

Both prize winners passed the Buckinghamshire College BSc Timber Technology course with distinction. This three year, full-time course provides students with advanced and in-depth knowledge of wood-based products and prepares them for management roles within the industry.

B. Matthews FIWSc.

BUCKINGHAMSHIRE COLLEGE: A CENTRE FOR TIMBER EDUCATION

At Buckinghamshire College, High Wycombe, between London and Oxford, there is a National focus for education in the use of forest products. The Department of Timber and Construction there offers a developing range of courses which operate under the slogan The Future of Forests lies in the Wise Use of Wood. This is reflected in the main current courses, the BSc (Hons) Forest Products Technology which has been introduced this year as an environmentally-aware academic development of the well-established BSc Timber Technology and an MSc/PG Dip Forest Products Technology course on offer from October this year. The future of these courses has been fostered by the recent achievement of the College in obtaining fully-accredited status with Brunel University. Starting next year, all graduates will receive Brunel University degrees. In addition to the full-time courses, the College also offers a range of short courses in specialist areas such as remedial treatment for house timbers and saw-doctoring and, naturally, courses for the Institute of Wood Science.

The introduction of the Honours- and Masters-level work has been made possible by the growing involvement of the teaching team in research and consultancy. For example, testing of the strength properties of timber components and wood composites are conducted within the College laboratories. The technical problems of the sawmilling industries are also being addressed. Research is being conducted on wood preservation and the organisms which destroy wood. Despite the fact that it is about as far from the sea that it is possible to get in the UK, the College specialises in marine borer research, collaborating with overseas institutions.

The Department of Timber and Construction is actively involved in forging links with similar European institutions. Within the past year, students and staff have travelled to partner institutions in Germany, Sweden, Russia and Hungary. Such links are eventually intended to permit students to undertake part of their course of study at a partner institution. Training links have spread still further: field work has been conducted and advice prepared on the training needs for the secondary processing industries of the Philippines.

The College is keen to build on its links with industry and sees its role as being a supplier of trained personnel who not only have the technical knowledge, but also an awareness of the developments which are likely to affect the future of the wood-using industries - hence the Departmental motto above.

G.D. Livingstone FIWSc.
SCOTTISH BRANCH

In the spring of this year, our branch members and guests heard talks on the fibre building board and timber frame construction industries.

Mr. A. Kerr, Technical Consultant (Pidade) spoke at length and depth on the manufacturing processes and properties of the range of fibre building boards currently used for construction materials.

Messrs I. Barton and H. Morrison of Wallegrove Timber Systems Ltd. gave a superbly presented on modern timber frame building methods, marketing and technical aspects, supplemented by visual evidence including a video and range of samples. Significant penetration has been achieved into four and five-storey residential and commercial properties, beside the estate development market. Sound and thermal insulation properties have been improved in separating floors and developments in wall panel, and roof construction have contributed to this success. This subdivision of the building industry is a considerable consumer of softwood timber and board materials.

Our AGM was held in Glasgow this year and we are pleased to report a successful use of the Building College facilities for this meeting. The management committee are therefore looking forward to two meetings to be held in Glasgow in the spring of next year and arrangements are in progress.

The AGM was followed by a talk by Miss E. Allen of the University of Glasgow - 'Amazonia, a vanishing world'. Her thought-provoking presentation covered not only the relentless destruction of the rainforest timber base but included other facets of the overall picture such as development of agricultural industries and mineral extraction. The speed at which clear-felling is progressing is very disturbing and new communications, residential and commercial centres are growing very quickly following population movements. Qualities of these developments leave much to be desired in some respects, with adverse effects on the indigenous peoples and their environment, bringing more problems to solve.

Our autumn programme will open with a talk about methods of repair of structural timber using epoxy resins, followed later in the year by a speaker from our British orientated strand board manufacturers conversion with the production and properties of the new materials formed by technically advanced processes using wood chippings and veneers. A visit to Dundee harbour is planned in the spring to see preservation work on the vessel "Unicorn".

Scottish members will be interested to note that plans are being made to hold the Conference at a venue within easier travelling distance and modifications may be made to the format. It is hoped therefore that more members will be encouraged to attend the deliberations vital to the well-being of the wood science and timber industries. Please look out for more news of arrangements in due course!

Eric Wylle ATWSc - Scottish Branch Secretary

LIVERPOOL BRANCH

The Branch seems to have been very busy in the last few months or so. A very successful 34th. Annual Dinner at Haydock Park on the 19th of February was followed in March by a superb talk from President-elect Keith Purcell at the North East Wales Institute on Deeside. This was a joint meeting with Bangor University and Keith’s theme was a personal view of the Scandinavian Timber Industry entitled "From Seed to Ship". The after-dinner presentation attracted an audience of almost fifty, including students and lecturers from Bangor and a strong contingent from the Institute of Builders’ Merchants.

In April, Branch Chairman Roger Drake hosted the AGM at Roger Haydock & Co.’s Widnes office. As usual much useful work was done, and we took all the empties away with us!

Saturday, May 9th saw me and mine precariously driving along the North Wales Expressway in a monsoon conditions on our way to Anglesey. The reason for the trip was to be a conducted tour of the famous Newborough Warren. I never saw such a collection of wildlife, anoraks and dossers alike as bedecked the moody crew of twenty or more members, Those, children and friends who gathered in the Visitor Centre car park, under the watchful eye of doughy organiser Don Jones. But the sun sometimes does shine on the rightous, and we had a most marvellous afternoon, strollin’ around three coastal woodlands under the expert guidance of Dr. Graham Mayhead of Bangor University, (who, incidentally, we have had as our guest speaker at next year’s Dinner - 19th February 1995 -make a note). Rumour has it that several of our shining company fell into my favourite local restaurant in Mold on the way back, and were not seen again for three days, although this, so far, remains unconfirmed.

The Anglesey trip was our third ferry into North Wales this season, and the Welsh connection continues to strengthen. I think I am alone amongst the active members of the Liverpool Branch to actually living in Wales, but others of our number regularly stamp the area in the course of business or frequent social ventures, being resident only just the wrong side of the border. I believe that several potential Institute members in North Wales are considering making application for membership under the new “grading rules”, having attended some of the meetings we’ve held in the area. They will certainly be warmly welcomed by our Branch.

Most of next year’s programme has now been fixed, and the Committee found itself once again with ideas to spare, so that several possibilities had to be put back into 1993/94. Subjects to be covered will include Kiln Drying, Architectural Specifications and problems in the Far East. Outside visits will take in, hopefully, Shotton Paper Mill, the Glwyfryd Estate on the Llyn Peninsula, and Beddgelert Forest in Snowdonia, again with Dr. Mayhead. Full details will be available shortly from Secretary Don Jones.

Paul G. Davies ATWSc

WHICH WAY FORWARD??

The Council meeting held in December last year, was in many ways a normal one, but in addition to the routine business of the day, something emerged that seemed to represent a ground swell of opinion within the Institute.

That “something” was an expression by many members of the Council that there was within the Institute a significant body of opinion that we should be looking at the way we present ourselves to the membership, and what we provide for them.

As a result of the debate that ensued, it was felt that a major area of interest to the wider membership had been opened up, and rather than let the issue drop, Maurice Holloway your Director, suggested that a working party be established in order to investigate the issues raised further, and report to Council on its on-going basis.

Obviously there are many complicated issues within the question in my title. “WHICH WAY FORWARD?” - but it is crucial that at a time like this, as a group of organisations, companies and individuals, working with timber see under greater pressure than ever before, that we look to the future.

The Institute of Wood Science has a long and successful history with an unrivalled breadth of expertise and ability within its membership. Certain initiatives to develop in a positive way have already been successfully implemented, with Maurice Holloway working very hard to ensure the success of both the Corporate Membership scheme, and the new “Member” category of membership.

What is required now is the next stage of development that will ensure that the Institute of Wood Science continues to prosper and develop in the coming years, building on the excellence already established. In ever changing times with new threats to our industry and to timber as a material, we need to be ahead of the challenge!

The working party has already been hard at work drafting outline areas for further development, drawing upon the opinions of both Council members and the branch membership. Now it is over to you - the working party are anxious to canvas the views of everyone in the Institute, and rather than send a questionnaire that will limit your input, please drop a line to the working party setting what you think is good, bad, or indifferent about the Institute, what you would like to expand, alter, drop or introduce, and your overall feelings.

Address your correspondence to: David Causer, ATWSc, c/o the IWSc

AUSTRALIAN BRANCH CHAIRMAN

On separate occasions both the Director, Maurice Holloway, and the President-elect, Keith Purcell, were delighted to have had the opportunity of meeting Dr. Harry Gravess, FJWSc., Chairman of the Australian Branch, whilst visiting this country in May. Dr. Gravess, who is Associate Chief of CSIRO, Forest Research Division, Victoria, presented a paper at the WPDA Convention at Stratford-upon-Avon.

Dr. Gravess was disappointed whilst in the UK not to be able to arrange a visit to see his favourite cricket team, Yorkshire (even with Tendulkar) but was pleased to be going back to Harrogate again where this year’s IRI Conference was held.

DAVID CAUSER, AUSTRALIAN BRANCH CHAIRMAN
ASPECTS OF FOREST PRODUCTS IN CHINA

This is a shortened version of the illustrated talk given by Dr. Hills at the Annual General Meeting of the IWSC, Australian Branch on 24 June 1992.

INTRODUCTION

There are 18 countries in our north-south region and in 1990 China had the largest population with 62 per cent of the total whereas Australia had less than 0.9 per cent. Our neighbours have long established diverse cultures, different languages, centuries-old antagonisms and distances, of which we are largely ignorant, and a different approach to the market place.

Chinese culture began about three and a half to four thousand years ago. They had a special knowledge of wood technology 2000 years ago with the use of durable cedars for coffins and other novel construction methods. They transported highly durable, large diameter manu logs about 3500 km from S.W. China across mountains to build, about 600 years ago, the great hall still standing near Beijing.

With increasing population and the need for agriculture, very large areas of forests have been removed. Some soils have become severely impoverished. About one-third of the Chinese now live on the 830 ha of rich soils serviced by high rainfall and river systems. China has double the crop land of Australia but with higher quality soils; we have about 16.20 per cent less land surface.

The recent considerable collective improvement in living standards has been achieved with little recognition of an individual's worth or rights and in marked contrast to the current situation in Australia. Hunger seems to have been eliminated. Large employers provide housing in apartments adjacent to the workplace. China is now a collection of diverse people and cultures.

ASPECTS OF FOREST PRODUCTS

Climate varies from tropical monsoons in the south to temperate zones containing mixed hardwoods and softwoods to frigid zones rich in larch in the north. More than 1100 tree species occur, some of which are unique to China such as the endemically rhinoceros, Cheilostom and ash and others as well as the highly prized bamboo, camphorwood and walnut. Seventy-six per cent of the standing volume of mature forests is in areas of difficult access or transport. Bamboo is plentiful as well as elbling and fruit trees in some provinces.

Forest removal was increasingly severe from 1900 to 75. In 1948 the forests covered only 6.6 per cent of the land area equivalent to a little more than N.S.W. The main wood producing area of the Heilongiang (in the north-east), Sichuan and southern provinces. An extra 28 million hectares bad been cleared by 1983. There is a widespread shortage of wood for fuel and other purposes.

China now has the second largest area of eucalypts in the world but poor choices of eucalypt species and plantations have been made with very little attention to wood quality. It has developed the successful Leuhto hybrid No. 1. Queensland foresters have introduced superior eucalypts and management practices in southern China.

A bureaucracy of about 60 million people directs most activities from Beijing. It demands each enterprise to earn foreign exchange and be an instant exporter, frustrates business contracts, etc. Personal friendships need to operate within the bureaucracy and a restrictive culture.

The Ministry of Forestry controls its activities throughout the country. Some provinces appear to have their own forestry operations and data obtained in the field can be significantly higher than that given in Beijing. The Ministry of Railways has its own forests; it operates the wood preservation work, mainly for sleepers. The Ministry of Light Industry controls the pulp and paper industry and currently over 60 per cent is produced from bamboo, reeds, etc., and the abundant supply of straw. Only recently has the Ministry of Forestry undertaken research work on pulp production from wood as part of an Australian aid project.

Two distinctive features of Chinese operations are the huge workforce and the limited integration between and within departments and timber complexes. Each Ministry acts like a separate nation with its own foreign affairs department, hospitals, etc. There is little cooperation between and within Ministries, provincial research institutes and between neighbouring universities except on an occasional personal basis.

The Ministry of Forestry has a staff of 2.2 million to cover all aspects including those of bamboo and forest chemicals. In addition, there are 3.8 million on 4000 forest farms. The Chinese Academy of Forestry has nine research institutes and experimental bureaux with 5000 staff with one-third professionals. There are over twelve forestry colleges or university departments, where wood science is rarely taught, graduating 3000 a year. The 37 forestry schools have graduated 96,000.

Sichuan Province has a population of about 110 million and is the second largest provider of timber of 76.3 million m3 in China. Chengdu, the capital, has a strong forestry products industry with about 4000 staff. The Research Academy has 278 technical staff and 200 research projects, a strong wood science and technology section of 17 and a forest chemicals section of 57. Yet wood technology is not taught in the otherwise good Forestry College outside Chengdu. The best major building of the Naching Institute was completed in 1987 with a staff of about 200 scientists and 40 projects on all aspects of wood.

But staff numbers are not the most important items. Some Chinese forestry research workers are most brilliant and dedicated. Many work in labs with limited facilities, old equipment, poor infrastructure, scarce research funds for field work and very expensive maintenance services for existing institutes.

It is not easy to estimate future wood production. In 1983 there were three billion trees in shelter belts and in addition a 3000 km (i.e. from Melbourne to Perth) belt of casuarina along the south China coast. Some plantations have failed and some have grown slowly on nutrient deficient soils. Furthermore, wood quality can be low due to the bad removal of branches for fuel or essential oil production.

China has three times Australia's area of forests and seven times the area of hardwood plantations. It is the fifth largest producer of industrial wood in the world and produces eight times the amount of Australia's pulp and board exports double our amount. This will increase with increasing availability of the wood from acacias, eucalypts and other species. China will export scarce material if cheaper substitutes are available locally.

China has over 477 forest chemicals factories producing over 40 per cent of the world's resin, one-third of turpentine, one-third asphalt, 90 per cent of the world's tire oil, large amounts of "eucalyptus" oil, etc. etc. It also has 3000 medicinal species with over 160 being commercialised. There is a considerable effort to find more but the cost/benefit ratio must be high.

WHAT OF THE FUTURE?

Chinese authorities plan to increase forest cover to over 20 per cent by the year 2000 which would increase timber output by 50 to 100 million m3. This will require the annual planting of 2.5 million ha with 35 billion seedlings of local species and significant numbers of casuarina, eucalyptus and acacia. A eucalypt research centre is being established in Zhejiang with Australia's help.

China will need to import 20 to 50 million m3 of forest products by year 2000 and softwood logs are now the annual largest export of 130,000 m3 to China. Yet there will be increasing exports to reduce shortage of foreign exchange.

From the last section the situation for everyone in our north-south region is serious. A fast-growing pine log can be used for lumber after 35 years growth. In that same period, China's population will have increased to 1.5 billion whereas 1.2 billion is the maximum they can support. Australia will have reached a rising 23 million but now only 12 million is considered by some to be ecologically sustainable in the long term. Indonesia, at already densely populated country with currently ten times our population, will have increased by an extra 83 million.

China is the fourth largest producer of wool in the world but is the second biggest buyer of wool. Yet we have donated our best rams and taken to improve their flocks, trained their staff in husbandry, etc. The Australian Wool Commission donated $5 million for a wool store in the port of Shanghai to house a small store and a small display of its history and improved use. Without consultation, the wool store was built inland in Nainjing where it now houses Arizona wool. They have demanded that the Commission provide more money for changes. Now they are putting the pure wool trade mark on milled fibre fabrics.

Through ACIAR, I initiated the Black Wattle project to provide taanin to help convert 10 million pigs to more and better lambs for the population as well as providing a good basis for wool adhesives; I worked voluntarily for several months to that end. On my last visit, an official of the Ministry of Trade demanded I arrange visits for him to Australian tanneries so that he could tell willam to Tanzania. So much for the needs of the Chinese people.

Specifically, how much still should the Australian taxpayer provide China which has the second largest trade surplus in the U.S. of more than 587 billion and rapidly rising, gold reserves of $40 billion, numerous expensive missiles, a Moscow atomic bomb, the supply of nuclear capability to unstable countries and a very large military force? That expense should be used to pay for their research services rather than being freely provided by Australia. In contrast, our own spending on research and development is almost at the bottom of the OECD list. If we do not wish to be further marginalized we must protect, develop and use our own resources for our national benefit and survival.

Dr. W.E. Hills FTWSc.
FRIDA'S HUSBAND (another Maurice) has produced this Crossword Puzzle to prove he's better at this than washing up or cutting grits.

ACROSS
1. Wood finishing, or starting? (13)
7. Stay Lorelfe embracing institutional lady (6)
9. A hundred trends confuse this chasuble (6)
10. Seem to allot nothing arrive (5)
11. Fish like lady semaphore express (6)
13. Exercise a bribe used in Madrid (6)
15. Tax the French right to the knitting machine? (6)
18. An Italian printer's musical manner (6)
21. Former mayor always around the point (5)
22. Was the view of a drugged counter? (6)
23. Rip up the artichoke by mistake (6)
24. Scene foreclf blooming skin rash (13)

DOWN
1. In favour of tendrils in the wind? (13)
2. Made a noise in the inlet (5)
3. Spaces for mixed up Alhambra (5)
4. Rent a Kentish field (5)
5. Untangle in order to be together (5)
6. Estimate with nothing more than china interspersed (13)
8. Tread again to sleep? (7)
9. More evidence of casting (7)
12. Once the state of Zealand (6)
14. Autline topcr (5)
16. Firebrand off sho joggling (5)
17. Red and amber (5, 7)
19. About the waxen man (5)
20. Falls drop right away another time (5)

BLUE CIRCLE INDUSTRIES PLC
is seeking an experienced plywood production specialist for an operations management position in the forestry and wood products division of its Chilean subsidiary Cemento Melon.

It is envisaged that the term of the appointment will be 12-18 months with the possibility of an extension.

In the first instance interested parties should contact Brian Bowen on 071 245 8268 for preliminary discussions.

IWSC CONFERENCE AT CHELTENHAM
The combination of six excellent papers (all faithfully reproduced in either the current or next issue of the Journal) combined with the splendid venue at the Cheltenham Park Hotel made the 1992 Conference one of the most successful in recent years.

Next year the Conference will be held from Friday evening 2 April to Sunday morning 4 April at the Royal York Hotel, York.

1993 DIARIES
We have ordered a small quantity of 1993 Diaries (black with gold metal corners) with Institute of Wood Science, the address and telephone number inscribed in gold on the front cover.

Price including VAT P&P, at 14 is rather good value. Orders to the Office will receive Freda's prompt attention.

CORPORATE MEMBERS
IWSC wishes to record its thanks to the following Cooperative Members for their continued generous support.


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DATES FOR YOUR DIARY

1993
21-22 Future Practice of Contamination Control — Queen Elizabeth II Conference Centre, London.
24-27 Woodworkers Show — Sandown Park Exhibition Centre.
Oct. 5-7 CTIS Examination — Stirling.
10-12 Flor 6th International Conference Maurice.
28-29 Systems Builders — Sandown Park Exhibition Centre.
Nov. 4 CTIS Examination — BRE Garston
7-11 Pacific Rim Bio-Based Composites Symposium — Rotarua, New Zealand.

1992
Feb. 15 Liverpool Brunch Annual Dinner — Haydock Park.
April 2-4 IWSC National Conference — York.

“TRADA, in association with “Forests Forever” and the RIBA Regional CPD Managers, will be holding a series of seminars entitled "Why not use Wood in September/October 1992 at the following venues:

RIBA Region, RIAS or RSUA

Sept. 16. Leeds (Yorkshire) 12.30-2.00
17. Newcastle (North) 12.30-2.00
23. Alton, Hants (Southern) 12.30-2.00
25. Exeter (South West) 12.30-2.00
29. Glasgow (Scotland) 5.00-7.00

A light buffet and drinks will be provided at both luncheons and evening events.”