



Walkers lose their way

SOME Bibbulmun Track bushwalkers have been getting hot under the collar lately — and it's got nothing to do with the soaring summer temperatures.

It seems some irresponsible walkers can't resist the temptation to souvenir the brightly-coloured waugals which mark the track.

Other vandals have been stealing signs, chopping down wooden stage posts, or reorienting signs to point in the opposite direction.

As a result, innocent bushwalkers

have been getting lost and unsuspecting CALM staff have been on the receiving end of several irate telephone calls.

Drew Griffiths from CALM's Recreation Branch said everything possible is being done to overcome the problem.

"But it's a costly exercise," he says.

"Apart from the time involved in rechecking and remarking the track, there is the cost of the markers and signs which have to be replaced.

"We may have to produce special souvenir waugals for sale in a bid to discourage people from stealing them."

Drew said Mundaring District, which has suffered the most, has taken the initiative and improved sign-posting in an effort to combat the vandalism.

"I conducted a field check recently and am confident that the new signs and markers will thwart the vandals and stop people from getting lost in the future," he said.

Regional Manager awarded fellowship

DON Spriggins, Regional Manager, Central Forest Region recently received notice that his application for a 1989 Gottstein Fellowship had been successful.

The Gottstein Memorial Trust was established in 1972 to perpetuate the memory of J.W. Gottstein, an outstanding research scientist who worked in CSIRO Division of Forest Products for many years and who was killed in a tragic logging accident in Papua/New Guinea.

The Trust was established to create opportunities for people to acquire knowledge which promotes the interests of Australian industries which use forest resources.

The Fellowship will allow a visit to be made in August 1989 to Canada and parts of the USA to examine how demonstration forests have been used to inform and educate people on forest management practices.

The first stop will be at the University of British Columbia Research Forest near Vancouver where a demonstration forest has been operating since 1949.

One of the aims of a demonstration forest is to develop, in one compact area, examples of the full range of growth stages in the life cycle of a forest.

People are encouraged to visit these forests where they can view for themselves on a mini scale, progression of a forest from seedlings through to mature trees.

Don is optimistic that well designed demonstration forests will be extremely valuable in improving the understanding of forest management practices.

In conjunction with other CALM people such as Jack Bradshaw, staff from Collie District and Bunbury Interpreters, an area of Jarrah forest near Collie has been selected as a potential demonstration forest.

Basic data has already been collected and knowledge gained from the Fellowship visit will be valuable in developing a first class demonstration forest on this site.



BARRY HODGE opening the Warren Bicentennial Tree.

Bicentennial Tree opened

A new fire lookout tower, nestling 60m above the ground in a karri tree top just south of Pemberton in the Warren National Park, was officially named and opened by the Minister for Conservation and Land Management, Barry Hodge, on December 2.

The tree, called Warren Bicentennial Tree, replaces the deteriorating Gloucester Tree in the function of fire detection.

The Gloucester Tree will continue to be open as a public climbing tree and will remain a major tourist attraction in the area.

After 40 years of service, the Gloucester lookout tree is deteriorating. An intensive care and maintenance programme may extend the life of the tree for another 20 years.

In the meantime, the Warren Bicentennial Tree will be part of the fire tower network that is a backup to CALM's aircraft surveillance and fire detection system,

watching over the forest in the summer season.

The new lookout site will cater for tourists following the closure of Gloucester Tree as a public climbing tree.

Invited guests were bussed to the site for the official opening followed by a barbecue lunch.

Representation from the Bicentennial Authority, timber industry, tourism, schools, Warren community and organisations involved in fire control attended.

The project was funded by the Australian Bicentennial Authority.

Environmental, economic benefits

TREE TRUST LAUNCHED BY PREMIER

THE biggest afforestation project ever undertaken in Australia has been given the go-ahead in the State's south-west.

More than 100 million trees will be planted in a programme which will have major long-lasting environmental and economic benefits throughout communities in the south-west.

Premier Peter Dowding announced the programme near Collie recently.

The programme, to be known as the Tree Trust, will play a major part in reducing the Greenhouse Effect and will help the

State tackle the long-standing problems of soil erosion, salinity and phosphate pollution.

"The Tree Trust also has the potential, within ten years, to generate more than \$350 million in export income annually and create more than 4000 new jobs," Mr Dowding said.

The proposal to plant 105,000 hectares of eucalyptus trees on cleared farmland in the south-west

is based on a successful pilot scheme carried out by CALM.

Mr Dowding said the pilot scheme demonstrated that planting trees could be highly profitable and that Western Australia was ideally placed to capitalise on the increasing world demand for high quality wood fibre.

He said that farmer participation in the scheme was entirely voluntary.

The response of the farming industry to the pilot scheme had been overwhelming and already 5000 hectares had been volunteered by farmers in anticipation of the 1989 programme.

Local timber companies Bunnings Pty Ltd and WESFI had actively participated in the development of the Tree Trust concept with CALM and strongly supported it.

Both companies had already agreed to be members of the timber industry consortium which would provide the seed capital for the project and who would be represented on the Tree Trust.

CALM would have responsibility for establishing and managing the plantations under contract, at no cost to taxpayers.

Mr Dowding said the long-term environmental benefits of such a major afforestation programme included:

- a significant regional contribution to the reduction of the Greenhouse Effect by consuming 13 per cent (3.4 million tonnes) of the carbon dioxide currently emitted industrially and domestically;

- reducing salinity, increasing the fresh water supply of the south-west by 340 million cubic metres per year (conservatively valued at more than \$250 million per year);

- reducing phosphate pollution of the inland waterways and estuaries of the south-west, particularly the Peel-Harvey Inlet;

- protecting the estuarine and waterways habitats of local fauna;

- providing an interim cash crop for farmers currently affected by pesticide residues.

The State Government has approved a 5000 ha planting programme to be undertaken by CALM next year.

Full details of the Tree Trust, including a prospectus, would be available early next year.

Response to park plan informative

THE public participation programme for the Walpole-Nornalup National Park management plan is well underway.

A leaflet has been sent to more than 800 individuals and organisations inviting input to the plan.

Plan coordinator Vanessa Smith said some very interesting and informative submissions have been received.

A user survey was conducted from October 6-9, to coincide with spring visitors and the end of the school holidays.

A total of 1018 survey forms were handed out, 557 of which were handed out at the Valley of the Giants picnic site.

This was a surprisingly high number of visitors, particularly when the first two days of the survey were fairly miserable.

716 forms have been returned, giving a response rate of about 70 per cent, which is excellent.

The results are still being processed, however, respondents most liked the natural environment (particularly the large trees and wildflowers) and the peace, tranquility and natural beauty of the park.

Users least liked the lack of facilities (toilets, parking for caravans, etc) and the lack of information.

Suggestions for improving the park included more information (pamphlets, information boards, etc) and some development (such as roads mended, more walk trails).

Also during the survey, actual visitation figures for the major recreation sites were obtained for the first time.

A public workshop at Walpole on October 23 attracted about 50 people, representing 32 different groups and many different park users.

There were 14 speakers covering such topics as flora and fauna values, recreation and professional fishing, yachting, tourism and adjacent landholders' perspectives.

In the workshop sessions, the six groups had a brainstorm of issues affecting management of the park and then narrowed those down to five major issues, prioritising each of them.

Each group was then assigned one major issue to explore in greater depth and arrived at possible solutions and strategies.

The five major issues discussed by groups were: fire; tourism and recreation; conservation; access and zoning; compatibility of land and water use; management problems (such as resources, staff, education).

Vanessa said the workshop was most informative and constructive, with many useful ideas and thoughts emerging.

"Also of great value was the spirit of cooperation that emerged from the day," she said.

A second workshop on December 3 aimed to develop a zoning plan for recreation and access in the park.

FROM MY DESK

IN last year's Christmas edition of From My Desk I expressed the hope that the following year would be less stressful.

That has not been the case.

CALM has had a very busy year and again I apologise as I did last year for the additional stress that has been placed on everybody.

Nonetheless, there are a huge number of positive achievements of which everybody should be proud.

In the review of the year's activities carried out by the policy group at its retreat, we collectively concluded that one of CALM's strengths is the diversity of people and the talent we have in the organisation.

One of the consequences, however, of having the diversity of people with different backgrounds and talents is that there is a corresponding variety in the style with which we interact with one another.

The fact that the staff of the Department work so well together despite this is a great credit to everybody.

I hope this Department retains its diversity and informality and the goodwill that we exhibit with one another.

I take this opportunity to thank everybody for their efforts during the year and wish you and your family the compliments of the season.

SYD SHEA
Executive Director

STAFF NEWS

APPOINTMENTS

New to the permanent staff are Margaret Langley, Technical Officer, Woodvale, John Goodlad, Senior Production Officer, Information Branch and Alan Clarke, Officer, Land Information Section, Como.

PROMOTIONS

Bill Frost to Forest Ranger, Manjimup and Bob Mitchell to Index Clerk, Records Branch, Como.

TRANSFERS

Sean Hazelden from Forest Ranger, Wanneroo to Trainee Wildlife Officer, Wildlife Protection Branch, Murdoch House.

Park Ranger Dave Lamont to Serpentine National Park.

RETIREMENTS

Bob McAlinden, Forest Ranger, Narrogin, has retired after 35 years of service.

Public Affairs Branch formed

CALM has a new Public Affairs Branch after a reshuffle of two existing branches.

Information Branch and Recreation and Landscape Branch have been reorganised into the Public Affairs Branch and Recreation, Landscape and Community Education Branch.

Public Affairs, responsible for publications and media relations, will be housed in Crawley's Cygnet Hall and will be responsible to the Executive Director, Syd Shea.

Its staff includes Sweton Stewart, Tim Langford-Smith, John Hunter, Liana Christensen, Richard Grant, Carolyn Thomson, Trish Ryder, Louise Burch, Marg Wilke, Alene Lim and Kylie Byfield as well as contract designers Robyn Mundy and Craig Garratt.

Technical editor Marianne Lewis will join Research Division, from Publications Section.

Former Information Branch staff Gil Field, Carmel Staniland, Cliff Winfield, John Goodlad, Margaret Buckland and Karen Shaddock will work for Recreation, Landscape and Community Education Branch.

The branch, to be located at Como, will fall within the Technical Services Division.

Front counter and switchboard staff — Robyn Weir, June Ellis, Diane Johns and Michelle Griffin — will become part of the General Manager's staff. They were previously attached to Information Branch.

Information Branch Manager, Kevin Goss has accepted a position with the Agriculture Department's Division of Resource Management.

What's New

We've moved. Publications Section is now housed in Cygnet Hall, Matilda Bay. The phone number is 389 8644.

* The brochure and drinks coaster "Take Care in Crocodile Areas" have been reprinted.

* The booklet "District Clerical Officers Guide".

* "Code of Logging", a report.

* A brochure on "Monkey Mia" dolphins.

* Landscape Volume 4 No. 2.

* "Implementing Timber Strategy", a report.

* The CALM Annual Report 1987/88.



Isabelle Procter

IT was a lucky coincidence that around the time CALM was initiating the idea of developing a strategy plan on Aboriginal employment, Isabelle Procter applied for the Executive Development Year (EDY) programme.

Ms Procter is of Aboriginal descent and has a strong background in the development of Aboriginal policy.

Before starting work at CALM in September she worked in the Ministry of Education where she was Acting Senior Consultant of the Aboriginal Education Liaison Unit.

One of her major respon-

Aboriginal strategy

sibilities will be to develop a draft policy statement and strategy plan on Aboriginal employment and training.

"I believe that CALM offers all sorts of opportunities for Aboriginal people because of their affinity with the land and conservation," she said.

However, she believes these opportunities lie "right across the board".

Aboriginals could potentially work as rangers and wildlife officers, professional, clerical and administrative officers or in the

maintenance and construction field.

Ms Procter is not sure exactly how many Aboriginals are currently employed by CALM, but according to data there are about 18.

"Many Aboriginal people are reluctant to identify themselves as such. It is a survival mechanism — because of discrimination received in the past," she said.

CALM is already leading the field in the area of Aboriginal employment and training in the more isolated areas of the State.

Its ranger training

programme for Aboriginals has been up and running for more than 12 months.

Ms Procter said she could see possibilities for training for Aboriginal community employment in CALM related areas.

Recently, she conducted a workshop which was attended by representatives from Federal and State Departments, Aboriginal organisations, unions, and CALM employees.

Ms Procter stressed the need for consultation: "I am looking for feedback from both Aboriginal and non-Aboriginal people."

Anyone from CALM with comments or suggestions should contact her on (09) 367 0212.

SAFETY CONFERENCE

By TOM WOOD

THE 7th bi-annual conference of the Occupational Health and Safety officers for the Forests Departments and Commissions of New South Wales, Tasmania, Queensland, Australian Capital Territory, South Australia, Division of Forest Products CSIRO, Conservation Forests and Land Management, Victoria and CALM Western Australia took place in Canberra in late October.

As well as enjoying the eastern hospitality, the renewing of friendships with the cross fertilising of ideas and strategies was of great value.

After all delegates arrived on Monday it was down to the serious business of the conference on Tuesday with ACT Forests as hosts, planning a packed programme including a field trip to inspect plantation establishment and silviculture practices.

A brief resume of the programme shows the similarity of Health and Safety programmes in each State, for example: pre-employment medical tests, leg protection for chainsaw operators, developments of corporate plans for Occupational Health and Safety, manual operations in plantation establishment, incentive and award schemes, rehabilitation of injured personnel, back injuries and health and fitness programmes.

Our programme is held in high regard by all States and in particular in Chemical Users Manual and Herbicide Technical Instruction books were examined in great detail and praised for

their accuracy and ease of use.

High praise indeed to be able to sit in a conference of your peers and have the virtues of our programme and results extolled in glowing terms.

I have brought back a better appreciation of other States' programmes.

However, our programme can still be improved and with the autonomy of management that exists within CALM, the incentive for good management coupled with work practices for continued excellence in occupational health and safety we can achieve even better results.



Trevor Carboon

New fire officer

WHEN Trevor Carboon volunteered to fight fires in Victoria many years ago, little did he know he would one day make a career of it.

But Trevor, CALM's first Senior Training Officer (Fire), now fights fires indoors, teaching other CALM personnel how to control or suppress fires.

He has a broad brief to coordinate and conduct fire training programmes, including the three levels of fire schools, and to advise and support fire protection officers in the field.

Such a range of duties calls for an equal wide range of skills — something Trevor has accumulated over the years.

Apart from a two-year National Service stint in the army, Trevor has worked

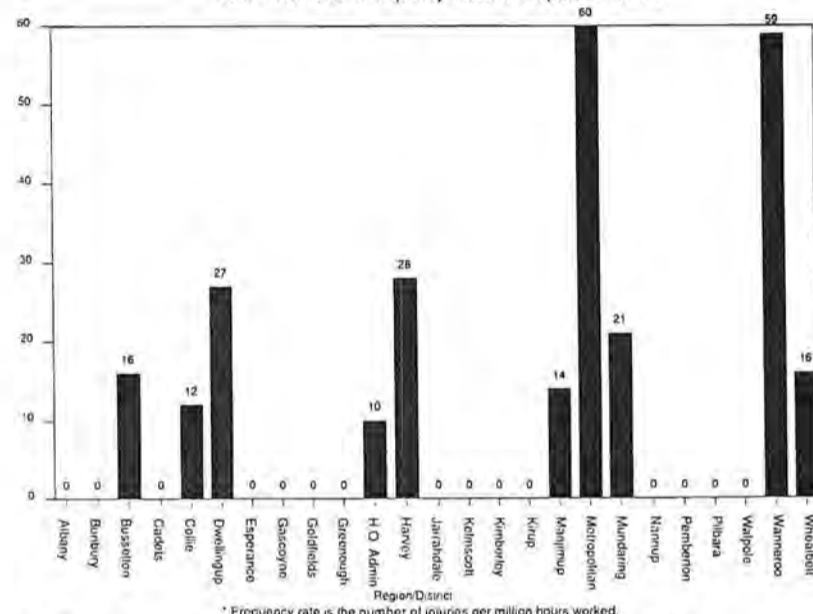
at different times for the Shell Oil Company, WA Petroleum and Cliffs Robe River Iron Associates.

Then it was on to UWA where he completed a Bachelor of Education degree, followed by an 11-year career as a secondary school science teacher specialising in biological science and chemistry.

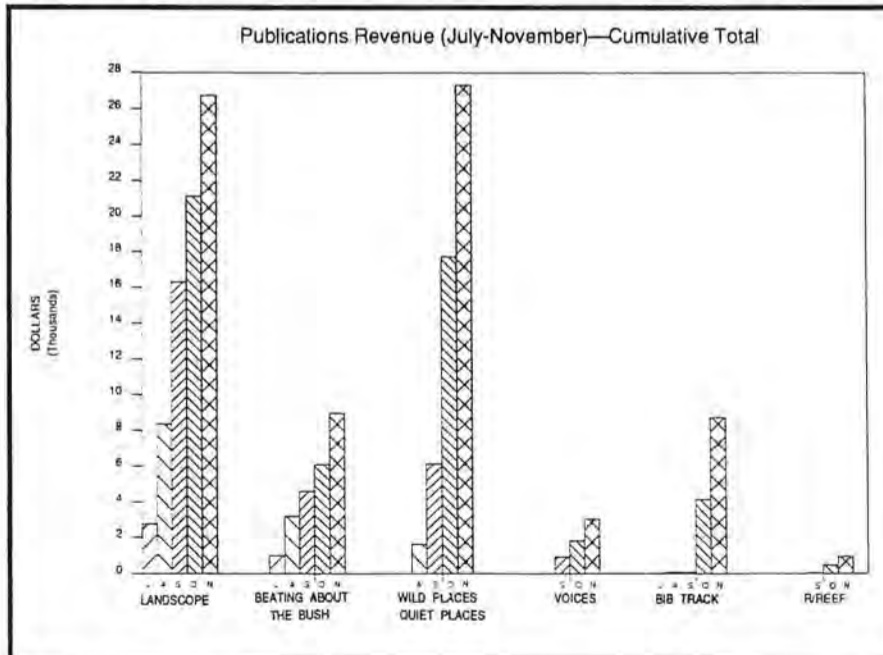
It was this background in education, combined with his experience as a volunteer fireman (his father and brother were both Regional Officers for Victoria's Country Fire Authority), which earned Trevor the new fire training officer's position.

Now, he has two primary goals: to complete his Masters' degree in science education and to formulate a more comprehensive formal fire training programme for CALM personnel.

Accident Report—November 1988
Lost Time Accident Frequency Rates for the past 12 months



* Frequency rate is the number of injuries per million hours worked.



Merredin gets a District Manager

ANOTHER milestone in the development of CALM's district network was reached recently with the appointment of Paul Brown as the first District Manager at Merredin.

He joins District Wildlife Officer Rob Coughran who recently transferred from Wongan Hills to Merredin, and will shortly be joined by a Reserve Management Officer (new appointment).

The vast north-east section of Wheatbelt Region was formerly looked after by Narrogin District Manager Ken Atkins and his staff.

"We are especially pleased to see Paul at Merredin," said Ken.

"We can now concentrate better on local issues. Apart from the extra workload, there was a lot of 'dead time' for Narrogin staff in travelling out to the reserves in this area."

Paul Brown has an ideal background for the job. His qualifications include a double major in forestry and zoology and he has had experience in CALM in operations, research and extensions.

FIND ON GOLF COURSE

NANNUP District's golf day on October 8 may have produced some wild and woolly golf, but it also resulted in an extension of botanical knowledge.

While Neville Holland was "in the rough" searching for an errant ball, his keen eyes sighted an interesting orchid.

Later, checking in the reference book "Orchids of South-West Australia" compiled by Noel Hoffman and Andrew Brown, he came to

the conclusion that the plant might be an unnamed species mainly occurring further west, and a further opinion was sought.

However, a voucher specimen collected during a survey of the population by Graham McCutcheon was identified by Andrew Brown and Dr Steven Hopper of the Woodvale Research Station as *Caladenia aff uliginosa*.

This is another as yet unnamed variety or species previously only known from the Harvey area.

The new location is consequently of considerable interest to botanists.

Contributions such as this from interested field officers are some of the results expected following the workshop on rare flora conducted at Como in August.

We also hope that a "score" such as this will make up to Neville for that over-par hole.

— GRAHAM McCUTCHEON



Staff at CALM Como headquarters tend to take the lovely surroundings they work in for granted. It is sometimes forgotten that the beauty of the grounds owes much to the hard work and dedication of our groundstaff. With the recent addition of the Herbarium to CALM, their numbers, and of course the grounds they look after, have increased. They are, from left: Mike Skipper, Brad Hasson (who came from the Herbarium), Neil Moore and Des Carter.

DIEBACK CONTROL AT MINES

By WARREN TACEY

NEW guidelines for the control of dieback disease during bauxite mining are currently being developed for agreement between CALM and Alcoa of Australia Ltd.

Dieback disease is common in parts of the south-west forests.

It is caused by a microscopic fungus which is readily transported in water or wet soil and can kill many plant species.

The new guidelines were drafted in recognition of the requirement to meet the provisions of both departmental policy on dieback control and the Alumina Refinery Agreement Acts, which confer the rights to mine bauxite in specified areas of State forest.

Joint objectives were developed to meet both these requirements. These were to:

- * effectively control dieback while maintaining an efficient mining operation,
- * prevent the development of dieback disease in dieback-free areas which are mined, and
- * protect vulnerable adjacent forest from dieback introduction and intensification.

The new guidelines recognise the varied stages of mining operations, ranging from extensive but low intensity exploration drilling to intensive mining and rehabilitation activity over a more limited area.

Different techniques for dieback control are specified for each stage.

For example, exploration drilling uses exactly the same control procedures as other wide-ranging surface operations in the forest, like logging.

During the sub-surface ore extraction phase (the stage most commonly thought of as "mining") the mine pit walls and drains along haul roads can be used to contain the operation and hence the spread of dieback.

Intensive activities which occur at the surface but over a more limited area, like clearing and topsoil removal, will be subject to a new "Priority System" of site classification.

These intensive operations will occur on the most important dieback-free sites under the driest or "peak" seasonal conditions.

Less important sites will be treated during "shoulder" periods, either side of the dry season, and the least important,

dieback-affected locations can be treated without any seasonal restrictions.

These new guidelines recognise that operations in contact with the organic surface soil require the greatest care because that is the most favourable location for the fungus.

Apart from the Priority System, equipment wash downs and access control will also be important at this stage.

Operations on the less hospitable clay floor of the mine or on hard haul roads, are likely to require different approaches.

These are based on drainage control and "sunbaking" of the clay surfaces, to kill off the fungus, before topsoil return and replanting occur.

The new Priority System is designed to be strictly applied to all areas of forest which are largely free of dieback.

Other new approaches, like drainage control, are especially applicable to mining but may not be feasible in more familiar operations, like logging.

Similarly, procedures developed for the logging industry, like stockpiling of logs for winter, are not likely to be effective or efficient in mining.

The new procedures are being detailed in prescriptions to be phased in during 1989.

This additional effort in dieback control is allowing new replanting strategies, based on jarrah, to be developed.

To be effective, the new systems will require a high degree of detailed planning.

To this end, Alcoa is testing a computerised geographic information system, based on CALM's existing systems.

This will allow data of common interest, like clearing boundaries and existing dieback localities, to be readily exchanged.

Various management scenarios can then be run to optimise the control procedures applicable to each site.

The new procedures were developed jointly by CALM's Warren Tacey and Alcoa's Peter Elliott, with a lot of input from districts, regions, inventory, research and protection branches and the minesite people.

A series of workshops has recently been run, at which the new systems were well received by the joint CALM and Alcoa participants.

After more than a year of work, everyone is now keen to "give it a go" in the field, prior to a thorough review of the procedures at the end of 1989.

At a recent workshop CALM General Manager, Roger Underwood, said: "By keeping it simple we can get 80 per cent of the benefit quickly, then improve further in the light of experience."

It is this cooperative approach which will make new initiatives such as this succeed.

'Wales' encounter of another kind

WHILE CALM staff and volunteers were battling to save the whales in WA recently, Southern Forest Region Manager Alan Walker was having a Wales encounter of a different kind.

Far from the stormy Augusta shores, he was in the UK — in the middle of Wales — as a member of a Rotary Group Study Exchange team.

Each year, Rotary District 946 selects five people to visit another Rotary District for six weeks.

There they study the culture, industry and heritage of the host country as well as furthering their own vocational interests.

Alan was the Rotarian team leader for the exchange to South Wales.

Back home again, Alan said the team had a hectic schedule, cramming in numerous visits to schools, hospitals, police stations, factories, castles and museums.

However, he did manage to see some UK forests and national parks — and made some interesting comparisons with land management in WA.

He said the Welsh Water Authority has developed an interesting policy in response to the problem of "acid rain" in Europe.

"The British Forestry Commission is being urged not to

plant more trees on cleared or pastured water catchments," he said.

"The extra tree foliage provides more opportunity for interception of 'acid rain', causing water quality problems!"

Alan said the Welsh Water Authority also has to provide for recreation on water catchments enshrined in their legislation.

"Consequently, water sports such as canoeing, sailboarding and even water-skiing (with gas-powered boats) are allowed in domestic water catchments," he said.

"No immersion sports are permitted except sub-aqua diving in wetsuits."

Alan said another difference between Welsh land management and that in WA is the acceptance of human impact on and involvement in national park management.

One of Britain's best-known parks — the Brecon Beacons Park — has Welsh mountain sheep and ponies grazing happily on a registered "common".

"Fences, hedges, stone walls and gates are an accepted and valued part of the park's heritage," says Alan.

In the Royal Forest of Dean, in Gloucestershire, Alan also discovered the term "forester" has a different connotation to our accepted meaning.

"There, a forester is a person who owns a cottage in the forest, grazes a few pigs and cattle, cuts wood for making char-

coal, or perhaps mines for coal in one of the thousands of small pits and shafts in the forest, which is operated by one or two men," he said.

One forest management issue encountered in both countries is the dislike some sectors of the community have for exotic softwood plantations.

"British foresters, struggling to meet future demand for saw-

logs, are planting fast-growing Japanese larch and European spruce to boost sawlog stocks," says Alan.

"Many Welsh people would rather the Commission plant indigenous (but slower growing) species such as oak and beech."

Alan took many slides during his visit and will organise an illustrated talk in the near future.

Corridor Conference

THE conference/workshop "Nature Conservation — The Role of Corridors" planned for Busselton on September 11-15, 1989 has generated an enthusiastic national and international response.

The organising committee (which consists of representatives from CALM, CSIRO, MRD and RCC) is delighted at the overwhelming support it has received for the idea of this conference, which is a follow-up to the successful "Nature Conservation — the Role of Remnants" held at Busselton in 1985.

"Already the conference is almost full," said committee spokesman John Blyth.

"Design of the programme will be very difficult, as there are almost twice as many papers on offer as time to deliver them.

"It is especially pleasing that leading international workers in this field are planning to attend."

Keynote speakers are likely to include Prof. Michael Soule of Michigan, whose work in the field of biological conservation is well known; Prof. Richard Forman of Harvard, a leading landscape ecologist; and Prof. Larry Harris of Florida who has studied the frag-

mentation of forest ecosystems by production forestry in the western USA.

Other speakers are likely to come from Canada, Belgium, West Germany, Sweden, the UK and South Africa, as well as NZ and all Australian States.

For further information, contact Penny Hussey at Como on 367 0423.

Valuable experience gained

KEVIN GOSS, Manager, Information Branch left CALM earlier this month to take up the appointment of Principal Adviser, Division of Resource Management, with the WA Department of Agriculture.

He will be assisting the Commissioner of Soil Conservation, Dr Graeme Robertson, to develop and implement policies for community involvement, education and public awareness for purposes of improving land management.

A major challenge will be setting new directions for the 90 "land management district" committees, and recently given wider powers for community action to solve land degradation problems.

Other community interest groups can expect greater participation in determining soil conservation policy, and there will be a publicity campaign leading up to the National Soil Conservation Conference in Perth in 1989, the 1990 Year of Soil Conservation and the 1990-1999 Decade of Soil Conservation.

OLD Track, New Track, CALM Maps

All CALM maps printed before 1987 are possibly marked with the old Bibbulmun Track alignment.

All these maps must now be stamped with the words: "The Bibbulmun Track marked on this map has been realigned. A master map is available for you to copy the new alignment."

Mapping Branch has a master copy of the Bibbulmun on 1:50,000 lithos which the public can use to trace onto their own maps.

Two education officers will be appointed over the next three years to help schools and the Ministry of Education incorporate soil conservation materials and field activities into existing curricula.

The expanded roles for CALM and Agriculture in conservation on private land — for example, implementing the Government initiative to subsidise protective fencing for native vegetation — will require greater attention given to interdepartmental coordination.

Kevin expects to have continued involvement with CALM to help with this liaison.

His appointment coincides with a boost in Federal Government funding and State Government priorities for programmes to overcome land degradation and work towards sustainable agricultural production.

Reflecting on developments in CALM since his appointment 3½ years ago, Kevin pointed to a number of major achievements in the areas of public information and community involvement:

* information shelters, signage and on-site interpretation at most national parks and State forest recreation areas; where there were few before.

* more than doubling of the publications output, and a tenfold increase in revenue.

* establishment of Landscape as a magazine of distinction and educational value.

* comprehensive campaigns of involvement in the preparation of management plans.

* support from a range of advisory committees and "friends groups".

* teacher, schools and educational consultants seek out and use CALM produced materials.

* CALM's expertise is now eagerly sought by a wide range of tourist and recreation organisations.

"It has been a demanding period but we have set very high standards for other Government agencies to follow," Kevin said.

"The experience has been invaluable, and I certainly will be applying that knowledge to the challenge of soil conservation and land management."

SURVIVAL COURSES

SURVIVAL is what CALM's outback safety and bushcraft courses are all about.

But hand-in-hand with teaching members of the public a few basic survival skills goes a lesson on nature conservation.

"We aim to teach the public something about nature conservation and the environment as well as showing them how to safely plan for and survive a trip to the bush," says recreation projects officer Drew Griffiths.

"That way, they will be safe and so will the bush."

CALM's third such course, conducted by Bob Cooper, has just been completed.

Four theory sessions at the Como headquarters were followed by a weekend at Icy Creek when the 24 participants put their new-found skills into practice.

The success of the bushcraft courses has been encouraging for Drew, who is currently planning other public education programmes.

"This was a pilot programme to see how popular public education courses would be," says Drew.

"Now we are considering putting together a whole package of courses, tailored to suit each different region."



Elizabeth George and Syd Shea inspect a Verticordia display.

Herbarium gains new collection

A reference collection comprising 27 bound volumes and about 700 specimens of *Verticordia* has been presented to the Western Australian herbarium.

The presentation was made by Elizabeth George, who coordinated the collection and preparation of the specimens over a nine-year period, to the Executive Director of the Department of Conservation and Land Management, Dr Syd Shea.

The albums, which include specimens, a description and a photograph of every known variant of *Verticordia*, will be held in the Community Research Herbarium and will be available to the public and special interest groups.

The specimens will be added to the general herbarium collection.

Verticordia, which is commonly known as Morrison or Feather Flower, is found mainly in Western Australia.

Dr Shea said the collection was a valuable contribution because of its wide taxonomic coverage and the care with which the specimens had been prepared.

He also paid tribute to Mrs George's work.

"Elizabeth's interests in *Verticordia* go back to 1970," Dr Shea said. "She realised then that there was no method available for an

amateur enthusiast to readily identify specimens.

"Through Elizabeth's enthusiasm and encouragement that has now changed.

"Since 1970, more than 250 people, both amateur and professional, have contributed to the collection.

"The project also received assistance from the WA herbarium and herbaria in all other States, along with numerous Government Departments."

Dr Shea said as a result of the collection the existing information on the distribu-

tion and habitats of the various species and the extent of rare and endangered species had been significantly expanded.

There were now 95 known species of *Verticordia* including 37 sub species and varieties.

CHINESE STUDY OUR OPERATIONS

By RICHARD MOORE

FOUR Chinese foresters spent two weeks in the south-west recently, studying forestry and agroforestry activities.

The study tour was part of an Australia-China Agroforestry Exchange Programme coordinated by the International Tree Crops Institute.

One of its main objectives was to identify areas where there could be mutual benefit from on-going exchange of ideas and information.

The study tour included inland forestry at Kalbarrie, windbreaks and fodder trees at Esperance, agroforestry for salinity control at Frankland and Mundaring and plantation and native forestry in the Manjimup region.

The leader of the delegation, Hu Yuxuan, is Govern-

nor of Nampi county; a county 300km south of Beijing, 20km by 40km in area, but with a population of 300,000.

Gao Yong is chief forester for several districts including Nampi county.

The third member of the party was Song Zhaomin, deputy director of the Agroforestry Research Division of the Chinese Academy of Forestry in Beijing.

For many years he has been studying the effects of windbreaks on microclimate and agricultural crops.

The interpreter for the party was Wang Mei Yan, who is involved with planning research with the Academy of Forestry in Beijing and with guiding visiting foresters.

The Chinese foresters said one of the tour highlights was seeing the broad-scale windbreak plantings on some farms near Esperance.

They described the farms of Geoff Grewar and the Overhues as model farms for controlling wind erosion and for sheltering stock and crops.

The tour also provided the Chinese with opportunities to experience something of the Australian way of life.

They visited seven farms, saw sheep being shorn, heard the Western Australian Symphony Orchestra at Esperance and inspected the Gloucester Tree.

The visit also gave

Western Australia farmers an opportunity to find out how the Chinese integrate trees and farming.

The Chinese foresters participated in a public forum in Esperance and showed slides and talked about their work at a lunch time break during a field day organised by the Land Management Society at Frankland.

Foresters in China have been closely involved in developing farming systems with trees.

During the past 30 years they have worked with local government to establish a system of multi-purpose windbreaks across millions of hectares of farming land.

The visit successfully opened up new channels of communication in a field where Australia can learn much from China.

IMPROVEMENT PROGRAMME TAKES SHAPE

By STUART SCOBIE

THE Parks Improvement Programme is a \$5 million Government grant over three years aimed at major improvements in CALM's Parks and Reserves.

This year — the first year of the programme — there has been a lot of upgrading and/or developing of recreation areas in the Northern Forest Region.

Mundaring District, especially, Walyunga and John Forrest national parks have benefitted from this windfall.

Both have been injected with long overdue funds for the upgrading and/or redevelopment of their major recreation areas.

Walyunga Pool has suffered badly over the years from the effects of countless visitors, an unpredictable river and insufficient facilities to adequately manage either pressure.

This financial year substantial regrading and appropriate drainage work will be carried out across the existing "Landing Ground" carpark.

This will ultimately reduce riverbank and carpark erosion caused by carpark runoff.

Major riverbank stabilisation will also be carried out.

Over the next two years, Walyunga Pool will undergo a massive facelift including formalised carpark inspired by the work of Ross McGill, ranger come honorary landscape architect; extensive rehabilitation and mass planting; re-siting of picnic and barbecue facilities and general site reorganisation to enable

visitors to fully enjoy this site to its maximum potential without allowing continued degradation.

In this financial year \$40,000 will be spent at Walyunga Pool.

John Forrest National Park is also in dire need of a recreational facelift.

Projects being planned include: the redevelopment of the major recreation area carparks and entry road; formalisation of carparks along the scenic drive as bushwalking trail heads; and a complete overhaul of park signs.

The redevelopment of the major recreation area is largely a follow-up to plans prepared by consultants in 1987.

This site will eventually be able to sustain more than 140 vehicles with the scenic drive being able to absorb a further 60 vehicles.

This plan will improve vehicle and pedestrian circulation at John Forrest while reducing congestion during peak periods.

These developments will greatly improve the visitor experience in John Forrest for years to come.

Thanks must go to all Mundaring District staff involved in these projects, especially George Duxbury and his staff for their valuable help in planning the redevelopment at John Forrest, and also to Ross McGill at Walyunga.

Rare bird "bugged"

WILDLIFE researchers are using radio transmitters to monitor the movements of the rare ground parrot in a bid to learn more about it.

CALM Researchers spent two weeks in low scrub country north of Fitzgerald National Park, on the State's south coast, trapping and monitoring bird movements.

The team, headed by research scientist Allan Burbidge, will spend up to five weeks in the area.

They will return for a month in February to continue their work which is being funded by the World Wildlife Fund.

"We want to know the parrots' exact habitat and territory," Allan said.

Allan said the parrots were trapped by mist nets and fitted with a light-weight transistor glued to their back.

Only two localities, Cape Arid, east of Esperance and the Fitzgerald National Park area, were known habitats of the parrot. They once existed along a big area of the south coast of WA.



Interpreter Wong Mei Yan asks David Jenkins about an agroforestry project on his farm near Bridgetown.

Safety Roll of Honour

We are all aware when regions and districts achieve periods free of lost time injury accidents.

Awards are given, hospitality is enjoyed and the results published in CALM News.

For example, Jarrahdale District has now completed two years without a lost time accident.

The presentation of award items was made recently to all Jarrahdale personnel by Executive Director Syd Shea.

To help in compiling an honour roll for continued excellence in health and safety from autonomous groups, Safety Section at Como would like to hear from all interested parties so that due recognition can be given.

Examples are Jarrahdale (2 yrs), Kimberley Region (5 yrs), Northcliffe Personnel (21 yrs), Wanneroo Research (15 yrs), Manjimup Inventory (7 yrs).

There are many others, so put pen to paper and let Safety Section Como record your result and we will publish all in a future edition of CALM News.

— TOM WOOD

