



MELISSA SANDELL (left) applies a life-saving bandage to Jenny Smith's leg.

FIRST AID COURSE APPRECIATED

JUST before Christmas may not seem like an ideal time to attend a three-day course.

However, thanks to Harold Pears' wonderful knowledge and bountiful patience, those who attended the recent first aid course were rewarded with a very beneficial skill.

The girls were expert at bandaging, while the guys concentrated on resuscitating Annie.

Hopefully, we won't need the skills gained from the course, but I for one now feel more confident to help a fellow human, and statistics prove it is more likely a loved one's life you could save. Thanks, Harold! — MARGARET WILKE.



BOB SYMONS has Glyn Courtice all wrapped up.

Conference looks at . . . GREENHOUSE EFFECT AND ITS IMPACT

By JOHN BLYTH

ABOUT 300 scientists, engineers and planners attended "Greenhouse 87", a conference held in Melbourne in the first week of December, to consider the possible social, economic and environmental impacts of the Greenhouse Effect.

Among those attending were at least 14 from WA, including myself as a representative of CALM.

The evidence is now quite clear that carbon dioxide from the burning of fossil fuels, and many other trace gases being generated by human activities, are becoming increasingly concentrated in the atmosphere.

They will have doubled from pre-industrial levels by about the year 2030.

The most significant of the other greenhouse gases are methane, nitrous oxide and various chloro-fluoro-carbons (the latter better known for their involvement in the depletion of the ozone layer).

All of these "other" gases together make up about the same concentration as that of carbon dioxide, thus approximately doubling the potential effect.

The Greenhouse Effect refers to the capacity of these trace gases to absorb the heat that is radiated back to space by the earth, while remaining transparent to the incoming rays of the sun.

The trapping and re-emission earthwards of this waste heat within the atmosphere will, apparently inevitably, cause an increase in the earth's global average temperature, predicted to be between 1.5 degrees C and 4.5 degrees C in the next 50 years.

The world's temperature will continue to increase, as long as the concentration of trace gases in the atmosphere grows larger.

The increasing temperature will result in other physical and climatic effects during approximately the same period.

These other effects are much less clear and will be influenced by many variables at both the global and regional scale.

However, it seems very likely that sea levels will rise by an average of 20-140cm and that there will be considerable changes in patterns of rainfall (and perhaps of tropical

cyclones) around the world.

Globally, tropical and subtropical areas are expected to become wetter, and middle latitudes to become dryer.

The most likely result for WA is that summer rainfall may increase, and move further south, while the zone of reliable winter rainfall may also move further south; that is out into the Southern Ocean!

Overall, it is suggested that northern and central parts of WA may receive up to 50 per cent more rainfall, but that the South-West Region, including most of the wheatbelt, will become dryer due to a 20 per cent or greater decrease in winter rainfall.

Thus, during the next 50 years the South-West may become significantly hotter and dryer, with obvious implications for plant growth and the distribution of animals, and therefore for CALM.

For instance, it has been calculated that a 20 per cent reduction in winter rainfall would result in a 45 per cent

reduction in runoff and a 20 metre drop in the groundwater tables of the Gngangara mound.

The results for water supply, and for the conservation of wetlands from such a drop in water tables are all too obvious.

Although many of the results of the Greenhouse Effect still cannot be predicted accurately, especially at the regional level, changes will occur, and the general direction of those changes are now widely accepted.

There will be good and bad results, and they will become more obvious over the next few decades.

It is also clear that more precise predictions, coupled with good planning, will be essential if the adverse effects are to be minimised and new opportunities made the most of.

A meeting of all WA delegates who attended Greenhouse '87 was held, shortly after our return to Perth to begin the planning process.

Tree award

CALM's Southern Forest Region has received a John Tonkin Tree Award from Greening Australia.

CALM won the government instrumentality section for its work on the Shannon.

CALM was recognised for actively protecting or revegetating areas under its control.

The emphasis was on planning and integration with the purpose for that particular land, and consideration was given to a degree of community awareness and involvement in the scheme.

CALM's submission detailed the site's poor condition when the project began, and outlined the plans

which made the Shannon one of the premier facilities of its type in Australia.

The Shannon has day-use and camping areas, walk trails, a quokka observation shelter, tables, barbecues and toilets.

The submission for the award also detailed public involvement in the project and visitor response to the site.

The prize was a project sign which will be erected at the Shannon site and a framed certificate, which will hang at the Pemberton District Office.

Rainforest project continues

By COLLEEN HENRY-HALL

CALM scientists are planning their second foray into the rainforests of WA, in May and June, to gather more information on the plants and animals of these areas.

The project team, led by CALM's Norm McKenzie and including Kevin Kenneally of the WA Herbarium, are continuing the work they started in 1987 in the first broad scale ecological study of WA's rainforests.

The project is funded with a grant from the Federal Government's national rainforest conservation programme.

The work ahead for the team in the next year will be of two parts.

In May, the project team of four will sample rainforest patches in the Kimberley and near Broome, to extend the sampling done last year.

Norm said: "And in June, we'll go back to 16 of the sites we did last year and put in formal vegetation monitoring quadrats and sample additional animal groups such as insects, spiders, reptiles and mammals."

From the data they gathered in 1987, the team will select a representative subset of rain-

forest patches, then return to these during the wet season in early 1989, to record any seasonal changes in the plants and animals.

Remnants of rainforest are scattered along the coast between Broome and Wyndham, varying in size from a few trees to 100ha.

The first step in the research project was to locate these remnants.

LANDSAT satellite information was the only way to accurately and economically identify rainforests within the 90,000 square kilometre study area.

LANDSAT TM satellite imagery can detect stands of rainforest greater than 30m square.

Using maps drawn from satellite images, the location and the approximate size and shape of each Kimberley rainforest was determined.

From the 400-500 small pockets of rainforests found by satellite, the project team selected representative areas

for more intensive ground research.

A helicopter was used to land a team of five scientists within walking distance of the 83 chosen areas.

The location, size, shape and geomorphology of each patch was recorded, and a list was made of the plant, bird and land snail species present.

A second team of four biologists carried out more detailed ecological surveys at five of the 83 patches.

Their work provided a comparison that could be used to cross check results from the rapid inventory team.

Other findings by the teams included new generic records for WA: the trees *Ailanthus* (Simarubaceae), *Eugenia* (Myrtaceae) and *Dimorphanocalyx* (Euphorbiaceae).

Birds that are primarily rainforest dwellers in the Kimberley include the Torres Strait Pigeon and Rainbow Pitta, the Yellow-footed Scrub-fowl, Rufous Owl, Green-winged Pigeon, Yellow Oriole,

Figbird, Varied Triller, Little Shrike-thrush, Great Bower Bird and Green-backed Flyeater.

A number of these were considered rare in WA; they are now better classified as 'of restricted habitat'.

Recorded

The project also recorded, for only the second time ever, *Melotis caronata*, the rarest of Australia's pythons.

About 70 species of land snails were collected; about 80 per cent are rainforest specialists.

The survey yielded several land snail species never collected alive before, and a few new to science.

From this base information long-term plans for the study of WA's rainforests will be formulated, and management plans for their preservation devised.

In addition, results from the survey may provide insight into the origin and history of these rainforests.

FOX BAITING PROGRAMME

EXMOUTH District Manager Stephan Fritz flew low over Cape Range National Park recently with the APB to drop poison baits along the dunes and in five gorges.

The fox control programme in the park has been stepped up since last year, with funding increased from \$1000 to \$2500.

Last year, baiting was done only along the coast to kill foxes that were taking turtle eggs and turtle hatchlings.

Stephan said the extra money this year paid for baits to be dropped in the gorges, to kill foxes that attack the rock wallabies that live in the steep limestone cliffs. About 2000 poison baits were dropped

from the light aircraft, in the joint operation between CALM and the APB.

The 1080 baits were cut from fresh meat, about 200g in weight, which was big enough for a fox, but too large for most native animals to eat at one meal.

At this time of year hundreds of green turtles arrive on the beaches at the North-West Cape, making their way up the sand to lay eggs in holes they dig above the high water mark.

They cover the nests and leave the eggs and hatchlings to fend for themselves.

Foxes frequently dig up the eggs and catch the hatchlings that make their way to sea.

FROM MY DESK

IT was good to spend a day in the bush in our Nannup district recently, and to see the progress being made by local staff in several important areas, and to discuss the main issues of concern.

I was particularly pleased to hear about the positive relationships being developed between CALM staff and the various elements of the local community, all of whom place different demands on the Department and have widely different expectations of what we should do in the bush and how it should be done.

In this respect, Nannup is a microcosm of the Department as a whole. And the same approach must be taken.

We must listen carefully to what people are saying and acknowledge the range and legitimacy of values in the community.

We must produce written plans to which people have access and an opportunity to contribute, and we must try to provide equitably for different legitimate requirements. At the same time we must ensure that the basic principles of conservation are observed.

It's a challenge, but that's what we are paid for!

Well done Roger Armstrong and staff at Nannup for taking it on, while at the same time carrying out the normal district work of protection, silviculture, recreation etc.

As a sidelight I was intrigued to note that the Milwards pine forest (which I can remember being planted on repurchased farmland) is scheduled for final felling and replanting.

Am I really that old, or are pine forests growing faster these days?

R. J. UNDERWOOD
ACTING EXECUTIVE DIRECTOR

Workshop in Pilbara

THE MILLSTREAM Homestead was an ideal venue for a recreation site planning workshop.

It was run by Wayne Schmidt, Jim Sharp, Gil Field and Richard Hammond and attended by most rangers and some other staff from Pilbara Region.

Besides the idyllic setting, Millstream provided some real life problems in site planning.

The group used the techniques learned in formal sessions to consider the problems associated with changes in the river bed adjacent to the Crossing Pool campsite.

It also critically examined the camping area at Deep Reach, where CALM has inherited a site that was badly degraded by uncontrolled use (abuse) before the area was included in the Millstream-Chichester National Park.

The broad cross section of disciplines and expertise of the organisers was a notable factor contributing to the success of the programme and there is no doubt that the standard of site planning and park management in the region will be better for it. — TONY START.



Pilbara Region staff discuss the design options at Millstream Homestead with Wayne Schmidt, Gil Field, Jim Sharp and Richard Hammond.

STAFF PERFORMANCE APPRAISALS

By COLLEEN HENRY-HALL

NO matter what your role or level of responsibility, you like to know that you're doing the best you can in that job.

A performance management system, incorporating performance appraisal and career development, is being developed by CALM Training and Development Officer Tony Brandis for use by CALM.

Tony said: "A Department like this achieves its aims through the many people that it employs, so it's necessary to have a formalised approach aimed at discussing and providing feedback about how we are going in our jobs.

"We may not need to im-

prove our performance, we may just want to be able to change the direction of our career, or to attend a training course, seminar or workshop.

"All these aspects of our work can be catered for through an effective performance management system."

General Manager Roger Underwood agreed: "To be a good department, we need high productivity, high standards and high job satisfaction.

"To obtain these we need to set standards, provide feed-

back and set up training programmes, and the work Tony is doing will achieve these aims."

Tony said the major purpose of the performance appraisal was to determine the level of knowledge and skill a person has in the job, and increase his or her motivation by giving them feedback on and recognition of their performance.

He said the performance appraisal is a look, by the employee and the supervisor together, of what is being done and how it is being done.

But the work isn't over once that appraisal has been done.

"Both people then need to identify future performance targets, individual aspirations and potential for promotions, and in this way, the appraisal becomes a basis for a development programme for the

Department's employees," Tony said.

He has been working with Integra, human resource management consultants, to develop and improve the performance appraisal system used by this Department.

CALM's present performance appraisal system has been used since 1982, and served its purpose well, Tony said.

However, the system had a number of shortcomings, and some personnel have shown dissatisfaction with it, partly because they were unsure how CALM was using the system, he said.

A training course was held recently to try to improve how people perceived the performance appraisal system, and to re-emphasise the Department's commitment to it.

A number of people were

chosen from various functional and geographic locations to attend the course.

The comprehensive training course covered topics such as job analysis, setting performance standards, conducting interviews, and objectively rating performance.

Tony said: "These people will now be able to train others in the workforce to correctly use the performance appraisal system.

"They also may be able to collect information that can be used in improving the system in their interactions with other staff."

Tony said the ultimate success of the system would come when all personnel were happy to discuss their performance and career aspirations openly with their supervisors, and had achieved the goals they had identified at the interview.

'Fields signs

EXCELLENT progress has been made by the Goldfields Region over the last 12 months in signposting their remote reserves.

Regional Manager Ian Kealley stands near one of the new signs at Queen Victoria Springs Nature Reserve.

Ian said: "The signs are very important because they remind people like mineral prospectors and adventurous tourists where the reserve boundaries are.

"They also show that CALM takes pride in these beautiful areas."

The green and yellow signs also fit very attractively into the spinifex and mulga country.



IRON OUT YOUR COMPUTER BUGS

HAVE you got a problem with your programming?

Craig Bowers has recently joined the Department's Computing Branch as a troubleshooter.

He's available to answer questions about software packages and computer systems, train you in the use of your computer, or show you an easier way to do a job.

In short, he can give help on all microcomputer problems.

Craig, who has most recently worked as an astronomer at the W.A. Observatory at Bickley, said he also will conduct in-house training on standard software packages like Multimate, Lotus 123, and DBase III, initially, on a basic level, and courses in introductory micro computer use, all at no cost.

"I can also organise all levels of training for the same software packages through local companies for both metro and country CALM staff," he said.

Craig also will investigate new computer products.

He said: "I'd be interested in hearing comments and recommendations on any other packages I haven't mentioned, so I can let others know of possible alternatives."

Craig also is responsible for administering NEM, the Department's electronic mail system.

He said: "NEM can be used to send messages to individuals, groups or places, and it's cheaper than using the telephone or the mail system because it uses the existing computer link-up.

"I've designed a monitor that will beep the console when a message has been received, so that computer operators will know to check the NEM system."

He soon will begin introducing and organising the use of NEM in all regions and districts.

Another facet of his job will be to serve as a liaison between all computer users.

Craig said: "For example, before trying to develop your own software, check with me to see if anyone else in the Department has already developed it."

Craig can be contacted at SOHQ on Ext. 337.



CRAIG BOWERS gives some advice to Crawley's Pam Sapsworth on how to run a new programme while Shani Owens looks on.

Staff News . . .

HIGHER STUDIES

Three staff are to commence PhD studies this year. They are Gary Inions, Manjimup Research; Paul Biggs, Inventory Branch; and Martin Rayner, Inventory Branch. They have been accepted at the University of WA, University of Melbourne and the Australian National University respectively.

APPOINTMENTS

Shirley Dennett, Officer, Forest Resources Division, Como and Kathryn Orr, Technical Officer, Murdoch House have joined the permanent

staff. Mathew Williams, Research Scientist from the State Health Department, has joined the Research Branch, Como.

TRANSFERS

Frank McCafferty, Reserves Management Assistant, Katanning to Woodvale; Rod Simmonds, District Forester, Nannup to Manjimup; and Peter Trembath, District Wildlife Officer from Bunbury, temporarily in Perth en-route to Broome.

RETIREMENTS

Bill Buchanan, District Forester, Manjimup retired after more than 23 years of service with the Forests Department and CALM. Three other retirees, all with long periods of

service, were Geoff Wheeler, Officer, Mapping Branch, Como; Neil Phelps, Senior Forester, Bunbury and Lindsay Marshall, Senior Mechanical Supervisor, Bunbury. Harry Winfield, Forester, Walpole leaves the Department in February after more than 41 years of service.

PROMOTIONS

Andrew Griffiths from Foresters (Tech) to Projects Officer, Murdoch House; Mike Fitzgerald from Officer, Como to Forester (Admin), Geraldton.

Adrian Mitchell gained promotion to Internal Audit, Department of Employment and Training; Kate Kirwan to a clerical position with the State Health Department.

CAVE ASSOC.

THE Australasian Cave Management Association was formed at the seventh Australasian Cave Tourism and Management Conference, held in NSW recently.

It aims to provide a forum for the exchange of ideas between, and joint action by, those interested in the management of caves and karst anywhere in the Australasian region.

It will provide for the continuation of the biennial conference on Cave Tourism and Management; will publish a newsletter and other literature; will provide advice as requested to management agencies or individual managers, whether simple technical advice on a specific problem, or the preparation of a total management plan; and will facilitate any other

interaction between, service to or joint action by cave managers.

Membership is open to all interested persons or organisations.

Membership fee is \$15 a year, and it is suggested that these be paid on a two-year basis.

Application forms for membership and further background information on the Association and the biennial conference (Eighth conference to be held at Punakaiki, New Zealand, 1989) are available from John Watson, Regional Manager, South Coast Region, Albany.



Park visitors Alison Rowe and Mike Cortenback from Perth explore Yardie Creek in the Canadian canoe.

Refreshing act of trust at Cape Range

By GEORGE DUXBURY

IN this day and age when it's necessary to lock everything up or tie it down, it is quite a phenomenon to find any item left for the public use and trust.

RESEARCH TESTS BURNING THEORY

MANJIMUP Fire Research staff are investigating fire behaviour in spinifex hummock grasslands in conjunction with research staff at Kalgoorlie.

The project is part of the study to test the hypothesis that the disappearance of small and medium-sized mammals from the arid zone has occurred because of the decline in burning by Aboriginals.

Manjimup staff will develop prescriptions for aircraft burning trials which are to be conducted in May.

Following an introductory trip to the Queen Victoria Springs Nature Reserve (300km east of Kalgoorlie), the team spent three weeks in the Gibson Desert Nature Reserve (500km east of Wiluna) assessing fuels and conducting experimental burns.

Annual checking of nest boxes has been completed at Manjimup.

For the first time, pygmy possums have been recorded using the boxes in some areas.

Other species encountered were mardos, phascogales, long-eared bats, owl nightjars and tree martins. — From the Woylie Rag.

During January last year, a family from Exmouth spent a weekend camped at Yardie Creek in Cape Range National Park.

I noted them using a kayak canoe on the creek.

On the following weekend there were other people camped there and I saw they were using a kayak canoe similar to the one seen the previous week.

It wasn't till the middle of the next week when I visited Yardie Creek that it became obvious that I had seen the same kayak each time.

On investigation I found a note written on the front of the kayak, covered with a clear epoxy resin that enabled the note to be read easily.

In essence, it said: "This canoe was left here by (name withheld) of Exmouth. Please use and enjoy it, don't steal it, leave it for others to enjoy".

In the ensuing months the kayak must have travelled hundreds of kilometres up and down Yardie Creek.

People not only didn't

steal it but carried out running repairs on it as they became necessary.

The fact that the kayak was so successful caught the attention of the manager of the Morale, Welfare and Recreation Department of the Harold E. Holt Communications Station.

The people of MWR decided that it was worth risking another canoe at Yardie Creek, so in June they placed a five-metre Canadian canoe at the creek.

Stencilled on the side is a message saying who it belongs to and requesting that the people who use it leave it clean and ready for the next user.

Already the new canoe has done many kilometres.

It was so busy during the school holiday period and for some time afterwards that people were actually booking the next use of it with one another.

At present, both canoes are being repaired at the Communications Station and will be returned to Yardie Creek soon, perhaps

joined by another canoe donated by the MWR, thanks to the obvious success of the exercise.

There's a mystery about the appearance of the original canoe, however.

After some months during which the kayak had been at Yardie Creek, I met the man whose name was on the kayak in Exmouth, and thanked him for leaving his kayak there for the enjoyment of so many people.

He happily informed me that I was about the twelfth person to thank him and while he appreciated it, it wasn't his canoe and he hadn't left it there.

Thanks then to some mysterious benefactor who left the kayak there, which in turn prompted MWR to leave the other canoes for everyone to use.

Thanks too to the public who have respected the trust and haven't either smashed or stolen the canoes.

It is nice to know that good things such as this can still happen in our modern world.

Nursery leaves a lasting legacy in N.W.

By COLLEEN HENRY-HALL

THE Karratha Nursery, recently closed in a rationalisation of CALM's nursery programme, has left a legacy of trees and an acceptance of low-water gardening in the arid environment of the Pilbara and Gascoyne.

Water is a precious commodity in the arid north-west, and the modern settlement of the Pilbara by mining companies brought with it Europeans who were used to gardens more appropriate to high rainfall areas.

The former Forests Department, with its nursery in Karratha, set out to help reduce the amount of water used domestically, which accounts for over half of the water consumed in the Pilbara.

The approach was based on stopping overwatering; redesigning gardens using appropriate arid area plants and eliminating water demanding species; and promoting water conservation technology such as the use of mulch, tap timers and trickle reticulation.

The nursery was established in 1975 and was first controlled by the Public Works Department, then passed to the Roebourne Shire, the Department of the North-West, and finally the Forests Department in 1982.

There were four staff at the Karratha Nursery: two tradespersons and two forest workers.

Both tradespersons were trained at the nursery, and one, Michael Hughes, is the first Aboriginal graduate from the Pilbara.

The nursery provided many other services besides growing and despatching plants in their low-water garden programme.

They gave advice on landscaping, reticulation, pests and diseases, and species selection as well as carrying out research into cultivation of many hardy native shrubs.

The closure of the nursery will see the staff spending much more time in the valuable area of extension work, making contact with the public and answering questions about the growing of plants in the Pilbara.

Wally Edgecombe, who has been involved with the nursery for many years, said: "Many people are more aware of the need for water conservation by using appropriate arid area species."

The nursery's free tree programme will continue, with the plants grown at the Broome Nursery and taken to commercial nurseries in Karratha.

CADET AWARD

VERNON RUTHERFORD, overseer at Collie District, is this year's recipient of the Executive Director's Scholarship.

The scholarship, worth \$5000, will enable Vernon to complete the second year programme of the two-year field officer cadetship at Dwellingup.

Wayne Burton, last year's recipient of the inaugural Executive Director's Scholarship, completed his cadetship with flying colours, and received a letter from Dr Syd Shea congratulating him on his effort.

Wayne has been posted to Albany.

PUBLIC INTEREST IN PARK PLANS

THE draft management plan for Leeuwin-Naturaliste National Park was released recently by the local member for Parliament, Doug Wenn.

More than 100 people attended the release, set in a grove of trees at Conto's Field, in the Park.

CALM Director for National Parks Chris Haynes and Central Forest Region Manager Don Spriggins also spoke at the release.

The plan, coordinated by Planning Officer Paul Frewer, recommends the development of a Cape-to-Cape walk trail, the redevelopment of major recreation sites in the park, including Conto's Field and Injidup, and the establishment of a cave management committee.

The plan also sets guidelines on the management of dieback, which is present mainly along the Park's boundaries, and develops a

prescribed burning strategy that will protect major townsites and recreation sites.

Paul said a number of public participation projects contributed to the development of the plan, including a visitor survey, a public workshop, meetings and discussions, and written submissions.

The plan is available for public comment until February 26.

Fighting fires — We're on the job

THE story of a recent bushfire in the remote Bungle Bungle National Park had some interesting elements.

First there was the detection. The fire was spotted by a party of tourists at Echidna Chasm.

They managed to contact a mining company in Darwin by HF radio who telephoned CALM Regional Manager Chris Done in Kununurra.

Chris was surprised to receive a perfect "PAFTAC" report.

(PAFTAC is the Department's fire report code, used routinely in forest areas of the south-west.)

Then there was the fire-fighting operation. Chris Done radioed Ranger Trevor Anderson who was on patrol in the Bungles.

Trevor recognised the map reference as being that of a popular camping spot, and headed off, expecting the worst.

On arrival he found a well-organised gang of tourists controlling the blaze.

They were under the direction of CALM forester Dennis Hilder, an experienced fire-fighter who just happened to be in the area on holiday with his family when the fire started.

Needless to say, Dennis had put the PAFTAC report together.

By the time Trevor arrived, Dennis and his crew had the fire well in hand.

Finally there was the cause of the fire. An unfortunate tourist had lit the gas fridge in his 4WD station wagon and then gone for a walk.

In his absence, the fridge exploded, not only igniting the vehicle but starting the diesel engine.

Still in gear, the flaming machine chugged off through the tall, dry Kimberley grass, setting it alight as it went.



JACKIE BROWN, Planning Branch Technical Officer, hands out copies of the plan.

**Cut above
the rest**

D'ENTRECASTEAUX LAND PURCHASE FINALISED

By ALEX ERRINGTON

ONE of the largest purchases of freehold land for conservation purposes in the State was finalised recently, when CALM acquired 1983ha of virgin bush on the south coast.

The six blocks involved are located east of Windy Harbour, within the extended boundaries of the D'Entrecasteaux National Park.

Discussions with the owner of the blocks had been held as far back as January 1986, but funding had been a problem.

Recently, the five largest of the blocks were put on the market as part of a scheme to promote the formation of a wilderness trust on the south coast.

However, interest in the scheme did not come up to the promoter's expectations and this enabled CALM to re-open negotiations.

The complicated deal was concluded when the promoter of the wilderness scheme and the owner of the blocks signed contracts which guaranteed the blocks would become part of the Park.

One of the most pleasing aspects of the purchase was the inclusion in the package of a sixth block.

Ecologically, this was the most valuable of the blocks.

A nearby lake is a large, freshwater lake and concern had been expressed at plans to establish a time-sharing

holiday resort on this block.

A key to the success of the package deal was the personal interest that the Minister, Barry Hodge, took in the matter and his desire that the blocks should become part of the Park.

He twice took the matter to Cabinet and obtained approval for special funding to meet the cost of the blocks.

The purchase is timely, coinciding with the release of the management plan for

the Park.

One of the strategies in the plan is the proposed acquisition of all privately owned freehold blocks within the Park's extended boundaries.

This purchase represents about 40 percent of the total area of that private land.

CALM will be looking closely at the possibility of acquiring more of the remaining privately-owned blocks as and when they become available and as finances permit.



RON JANSEN (right) and Steve Dick from Inventory in the cross-cut sawing competition.

Manjimup triumph

By ALAN SANDS

BIG BROOK Dam near Pemberton was the site for the inaugural Big Brook Relay hosted by the Southern Forest Region in October.

Teams contesting the event were Manjimup District, Information Branch, Manjimup Regional, Manjimup Inventory and Pemberton District.

The relay began with a 7.5km run, followed by a 3km Canadian canoe event, a 4km horse ride, cross-cut sawing, 12km cycle and a 900m swim (brrrr!)

Manjimup District won the event from Pemberton with a time of 1 hour 58 minutes and were awarded the revived Karri Country All Sports Trophy.

Information Branch fought off some desperate challenges to secure the Derriere Trophy with a time of 2 hours 27 minutes.

Following a BBQ lunch, team managers, tacticians, physiotherapists and spectators participated in a range of events, including tug-of-war, frisbee golf and canoeing.

One of the highlights of the event was the nomination by Pemberton of a navigator/safety officer for their runner. Mick Sermon ran well to ensure Jason Creasey made it safely around the dam!

Planning is well underway for the Bicentennial Big Brook Relay scheduled for October 15-16.

All districts and branches are invited to enter teams this year.

Entry forms will be sent out in June. For further details, contact Alan Sands at Manjimup.



TIM FOLEY in action.

SEARCH IS ON FOR EUCALYPTS

THE hunt is on for some 180 species of rare or poorly-known eucalypts in WA.

CALM is conducting a survey of these eucalypts in order to determine their range, rarity and preferred habitat.

The survey programme is being coordinated by Anne Taylor and Anna Napier, of CALM's Research Centre at Woodvale.

The Eucalypt survey will be run on the same lines as the recent Banksia Atlas survey, which involved some 500 volunteer recorders throughout Australia.

It will involve identification and recording of species with the aid of specially produced field guides and recording sheets.

The survey coordinators are particularly interested in hearing from people in the Wheatbelt and Goldfields regions, but welcome any enquiries.

Computer check on pine growth

A newly-developed pine growth model will enable CALM officers to more closely predict pine timber volumes on different soil types on the south coast.

The computer-based growth model, for *Pinus radiata*, was recently developed by Gavin Ellis, For-est Officer at CALM's Manjimup Office.

Gavin said: "The growth model is essential for the Softwood Sharefarming Scheme, in which annuities based on predicted log yields are paid out to the property owner over a number of years.

"In addition to predicting sawlog volume with the growth model, we can relate pine growth directly to annual rainfall, which gives us a better idea of where it is economically viable to plant pines."

The model was developed following extensive fieldwork over the past two years, during which Gavin

and a team of forest workers from Walpole measured pine plots from Northcliffe through to Albany.

The fieldwork also included thinning, high pruning and fertilising 38 private stands earmarked for future measurement.

Gavin said: "The primary reason for tending the plots was to show landowners how to manage their pine stands to produce high-quality sawlogs.

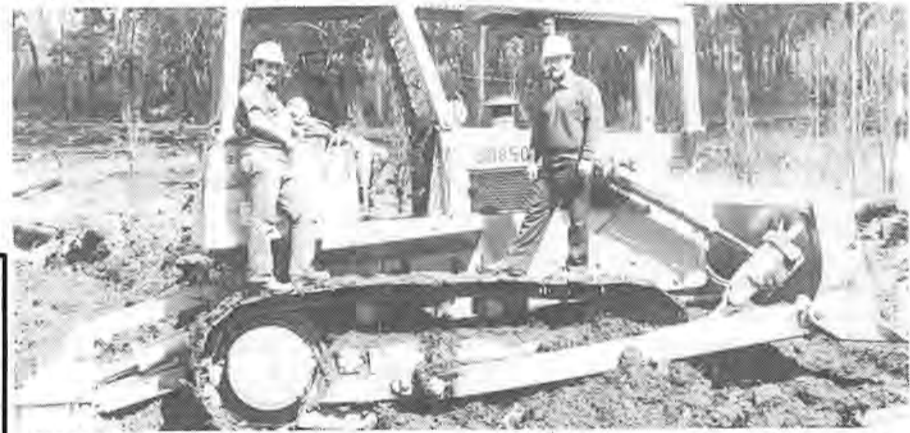
"Also, CALM will now be able to monitor the future growth of the trees in response to the tending."

Gavin said he was most impressed with the cooperation of the landowners who allowed CALM to measure and tend their pine trees.

"Without their help we couldn't have collected the data that we needed. They were all very interested in the project and eager to learn more about growing pines."



GAVIN ELLIS measures a pine. Photo by Warren-Blackwood Times.



BUNNINGS Machine Operator Ruben Chapman (in bulldozer) is visited on log landing rehabilitation site at Deep Two, by Bunnings planning foreman Ron Larkin (left) and CALM Walpole District rehabilitation officer Phil Durell. Photograph courtesy Warren-Blackwood Times.

REHAB. SUCCESS

EACH summer, several hundred landings and many kilometres of snig tracks used in logging operations in State forest around Pemberton, Manjimup and Walpole are rehabilitated. This includes site preparation and planting.

So successful is this operation that several years after planting, it is almost impossible to see the difference between rehabilitated landing and snig tracks and regenerated undisturbed areas.

Rehabilitation work began in Walpole District recently, using a Bunnings Forest Products bulldozer, under the supervision of a CALM officer and Bunnings personnel.

Rehabilitation is funded by the timber companies that have carried out logging operations in an area.

After the logging operations, timber industry personnel clear each landing of debris, level it for drainage, return the stockpiled topsoil and deep rip it to allow roots and water to penetrate.

The work is done according to a detailed prescription drawn up by a CALM officer, which includes a plan showing all landings, snig tracks and disused roads that need rehabilitation.

All landings are numbered to ensure that none are overlooked, and the plan is also used for planting trees the following winter. — JOHN EVANS

