



The forester rides again



Jack and "Saskatoon" exploring mallet forest near Dryandra.

Jack Bradshaw explores in style

IN THE recently published book of foresters' stories "Leaves from the Forest", Jack Bradshaw tells a hilarious story of his early days as a forester in the south-west, when he and Terry Court used horses in a surveying project on the south coast.

The story was called "The Forester's Last Ride."

Now Jack is the Department's top forester as manager of Silviculture Branch.

He is still interested in horses, but now he rides in style.

Jack has completely restored a 19th century buggy and loves to explore the forests of the south-west from "buggy height" on weekends.

"About all I had to start with

was a set of springs and an axle, which I got from a farm rubbish dump," Jack said.

"I worked from blueprint from an old library book."

Seven different timbers are used in the reconstruction.

The project took Jack and his son Iain (who made all the harness) over a year to complete.

Training officers appointed

By Colleen Henry-Hall

TWO training officers have been appointed to train Aboriginal rangers for CALM's national parks.

Peter Hutchison and Peter McGlew visited Como recently before heading to their respective bases at Kalgoorlie and Turkey Creek.

Hutchison will work with communities in the central reserve and possibly the western desert, and McGlew will work with Turkey Creek communities and later in Bungle Bungle National Park.

The Aboriginal ranger training programme is funded by the Federal Government, and the two training officers will work closely with Aboriginal communities to develop specific training programmes.

Both Hutchison and McGlew said they feel it is important to consult with their communities before

they develop any ideas about how the training programme should be run.

McGlew said: "We're very much open at this stage."

"When we speak to them we'll know what they expect and develop the programme from there."

The two have been working closely with Steve Szabo, who developed CALM's first Aboriginal Training Programme last year.

Steve said: "It's important to note that we're responding to requests from the communities for this sort of training."

"And because we are working for the communities, it's necessary to identify what they think is important for them to learn."

Generally, Hutchison will do consultative work with the community, taking a broad look at training Aboriginal people to not only become rangers in national parks, but to carry out community based duties.

McGlew said he will negotiate with the community to see how they wish to participate in park management, and work with them on the selection of ranger trainees.

Steve said: "The important thing in both jobs is to sit down and listen."

"The training programme is also an opportunity to learn from these people, a chance to gather and record their knowledge on land management and the environment."

"These training officers are a contact point and a sphere of influence that CALM otherwise wouldn't have, and we'll have additional help in the parks."

"We're anticipating 16 people will come out of the training programmes next year."

Hutchison, formerly with the WA Fisheries and Wildlife Department, was doing community development work in Arnhem Land before he joined CALM.

He has a degree from and Murdoch University, and a teaching diploma.

McGlew has been associated with Aboriginal communities for the last 10 years, most recently as a schoolteacher in the central reserve and then in the Pilbara.

He has a teaching diploma, with a major in Aboriginal education, and a bachelor of science degree in horticulture.

New National Park Opened

THE world's only Tuart forest was declared a national park by CALM's Minister Barry Hodge recently.

To be known as the Tuart Forest National Park, it covers an area of about 2880 ha near Busselton.

The establishment of the national park gives security to a unique example of the State's landscape.

Tuart trees grow only in WA in a narrow belt of coastal limestone based soils that extend from the Moore River mouth of Perth of the Sabina River near Busselton.

It is a very slow growing, hard and durable timber which grows to a height of

WILDLIFE NUMBERS RISE WITH FOX CONTROL

A RECENT survey of Tutanning Nature Reserve for woylies, tammars and possums has produced evidence that all three species have increased in number since the implementation of fox control measures.

Bob Bromilow and Mike Onus from the Wildlife Research Centre at Woodvale carried out the survey over four days.

Research Scientist Jack Kinnear, who is supervising the fox control programme, said the baiting started three years after they had some idea of the relative abundance of the three species.

He said: "Things looked pretty grim; on average we were lucky to sight a tamar or possum during a spotlight survey."

"As for woylies, we never did see one, but we trapped a few after a lot of effort."

A five-year-study by the CSIRO had yielded similar results.

Graham Arnold's team, during the course of 54 spotlight surveys of Tutanning, recorded on average less than two tammars per survey, and no woylies were sighted at all.

The recent survey by Bob and Mike recorded 56 sightings for all species — an average of 14 per night.

In sharp contrast, the 1984 prebaiting surveys produced less than one sighting per night.

Jack said: "It's an encouraging sign, but we expect an even greater improvement in the near future because population growth rates are a function of population size; the more animals, the faster their numbers breed up."

The rise in numbers was achieved by Bob's baiting the reserve one day each month.

He has also noticed the phascogale population (a dasyurid species somewhat smaller than the spotted native cat or chuditch) and has shown that baiting has not harmed this species.

Research on fox control, which has recently been extended to the large national parks, is continuing with the aim of reducing the baiting frequency.

With this point in mind, Jack has been reviewing the literature with the object of modelling fox control.

He said: "There has been a lot of activity in this area, particularly in Europe and the US, due to the fact that the fox is largely responsible for the spread of rabies."

"In many respects, the

mathematics of fox control for rabies seems to be very relevant to our predation problem, and it seems likely that the mathematics can be directly applied to our situation as soon as we acquire sufficient data.

"Even at this early stage, the review has led to some insights about fox control that should make the task more efficient and hence, more cost effective."

"The hardest part will be linking the rabies models to predator-prey models and the collection of relevant information in the field," Jack said.

RESEARCH OF WANDOO DECLINE

CALM researchers are investigating the causes of wandoo decline in the western wheatbelt by looking at the role of biotic agents, correlating these with environmental conditions and developing a practical guide to the diagnosis of symptoms.

Paul Brown, who heads the Tree Research Centre in Narrogin, addressing a recent Research Seminar at Como, said: "In the early '80s, we noticed that there was branch decline in the wandoos, and there was every reason for it occur — drought, salinity, and insect attack."

But the precise reason for the decline was unknown, so Paul applied for a grant from the Rural Credit Development Fund and, with the money, hired Paul Albone on a two-year contract with CALM.

Brown and Albone have been looking at two types of biotic agents: those affecting the bark and wood and those defoliating the trees.

Brown said: "We're trying to get a handle on the life stages of the different insects that have been found associated with branch decline, and also photos of the stages of decline for the diagnostic guide."

Toward this aim, Albone has set up 27 plots across the wheatbelt to look at how widespread insect attack is, and to correlate stand and site characteristics.

The data is now being put on computer for analysis. Brown said the project has been hampered by the fact that there has been little branch decline in the past 18 months.

The study will run for another six months.



PETER HUTCHISON, (left) and PETER MCGLEW

Underwater clean-up

A LITTER clean up with a difference occurred in the Marmion Marine Park recently, with volunteer help from Down Under Divers and diving instructor Tom Whiteoak.

This joint effort involving C.A.L.M. and the divers successfully cleaned up Boyinaboat Reef; a show piece inshore reef just South of Hillary's Marina.

Rubbish cleared from the sea bed rang-

For Marine Park Manager Greg Pobar this help was much appreciated.

Not only did it involve the local community, but it paved the way for one of the first underwater dive trails in the Park.

The trail will include submerged plaques explaining the layout of the reef and the surrounding marine life.

It is envisaged that other clean ups involving C.A.L.M. and local divers will be

FROM MY DESK

During mid-October regional and branch managers met at Como for their annual reporting and problem-solving session.

I enjoy these sessions, particularly the views put forward by managers from the bush. They provide a different angle on things from the political, policy and administrative people with whom I mainly work.

To a large extent senior staff are required to deal with conservation and land management at different levels — resources are columns of figures, or lists of staff; forests, parks and reserves are areas on maps. On the other hand field managers are in the bush trying to make policies work with dollars and people (or without them!).

At our most recent meeting, the managers highlighted a number of issues which they considered need urgent attention in the months ahead.

These included better intersection of the tourist dollar by CALM, more sophisticated user-pay system, better contact with park and forest visitors (especially at weekends in the south-west), more efficient management of the wildflower industry, and the development of more consistent and efficient ways of dealing with "necessary operations".

The managers also spent some time looking at ways to improve CALM's public support.

All of these issues will be followed up.

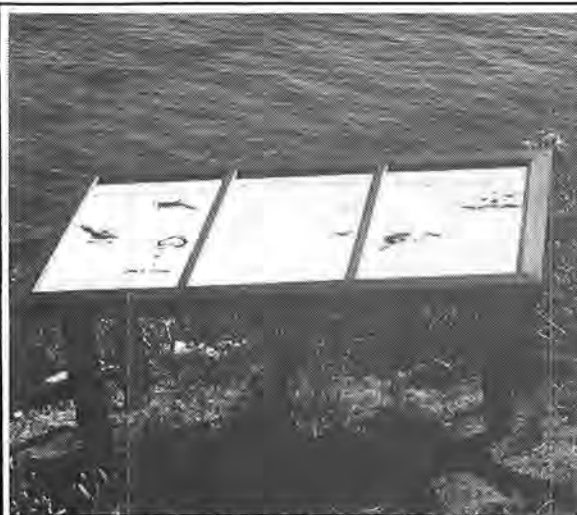
It encourages me to hear the ideas and schemes which flow from our field and specialist staff.

This constant drive to do our job more efficiently and more intelligently can only result in a steady improvement in wildlife conservation and the management of forests, parks and reserves in WA.

Incidentally, at the recent National Fire Workshop at Busselton, I was very proud to hear a visitor from the east remark that "CALM is widely regarded as setting the standards for conservation management in Australia."

Full credit to all staff who have helped create this situation.

ROGER UNDERWOOD
Acting Executive Director



CALM First Year Cadets helped construct the whale watching platform in Leeuwin-Naturaliste National Park.

Cadets in Central Region

CALM First Year Cadets spent time in Central Region recently working on recreation sites in Leeuwin-Naturalists National Park. Under the direction of Parks and Reserves Officer Neil Taylor, the cadets built two lookouts, which give spectacular views of the coast.

One lookout included a three-panel display on whales, their migration and identification.

Neil said: "The cadets did a good job and the work was really appreciated."

"The project was part of their official training and they all enjoyed the work."

The cadets also did a complete revamp of an existing walk trail on Cape Naturaliste.

Neil said much of the trail had to be re-cut through heavy coastal heath where it had been overgrown.

Seats and trail markers have been placed throughout and all wooden signs have been replaced.

Also, the accompanying brochure will be rewritten and reprinted as part of the project.

Busselton District provided funds for materials and tradesmen to assist with the carpentry.

Leeuwin-Naturaliste Ranger Mike Batchelor was involved with the work whenever possible.

"It's hoped that the success of this programme will ensure the cadets annually tackle a recreation project close to Bunbury, where they do their first year of training," Neil said.

LES WARNER RETIRES

FOR Les Warner, forestry was a most fascinating career.

Les, a forest worker at Ludlow who retired from the Department recently, said: "I was always intrigued by the work, so much so that the years flashed by and before I knew where I was, it was time to retire."

"There's always something interesting going on when you're working with trees — there's planting, pruning, felling, burning — looking after them from the time you've planted them until they're ready for the mill."

Les had chalked up almost 50 years with the Department, thanks to starting when he was just a boy by carrying mail from the Ludlow Post Office to the Ludlow settlement.

He was then promoted to rabbit trapper and paid "six pence a pair of ears".

He joined the Department officially in 1941, and worked in the pine nursery

doing planting, weeding and cultivating.

"We walked to where we were going to work in those days, carrying our lunch and axe," Les said.

Les walked a lot throughout his forestry career, sometimes 7 or 8 km a day, particularly while doing fire control and edging.

"I walked right up to the day before I retired and I'm sure that's kept me pretty fit," Les said.

"The only job I didn't really like was high pruning, which wrecked my neck."

"But I was getting paid to do a job and I did it."

A BICENTENNIAL-funded project will construct an 8km walk track in Millstream-Chichester National Park, along part of an original camel track last used in 1892.

The Python Pool Camel Trail, which will run from Mt Herbert to Python Pool via McKenzie Springs, has been constructed by clearing spinifex and ground debris up to a metre wide.

Work on the signs and accompanying brochure is being done now for next year's opening.

"I liked to work, to do a job and do it properly."

Les won't be giving up his career entirely: his retirement plans include cutting firewood for the area's pensioners.

Les was inducted into CALM's Alligator Club just before he retired for avoiding a serious chainsaw injury by wearing safety pants.

He received a gift pair of safety pants from CALM Minister, Mr Hodge, which will no doubt come in handy.

Les' other plans include completing renovations on his Busselton house, and doing some gardening.



LES WARNER receives a pair of safety pants from Barry Hodge.

Safe year for CALM workers

IT'S been a good, safe year for CALM, and the annual report for the Occupational Health Safety and Welfare programme proves it.

The All Accident Rate has been drastically reduced during the past year, there has been a marked decrease in the number of Lost Time Accidents, from 41 to 28, and a reduction in the number of Medical Treatment Accidents, from 204 to 127.

Safety Officer Tom Wood reports that the frequency rate for all injuries is the lowest annual rate ever recorded since the introduction of the Occupational Health, Safety and Welfare programme into the Department.

The number of working days lost due to lost time accidents was 1382, a reduction of 95 days from last year.

There was one fatality. Environmental factors (insects, dense undergrowth, uneven terrain and bad weather) encountered every day by a large number of field staff, contributed to 34 per cent of all accidents.

The number of back injuries has stayed at 20 per cent of all injuries.

The next most prevalent type of injury was to the legs (26 per cent), followed

by injuries to the eyes (12 per cent).

Three keyboard operators incurred Occupational Overuse Syndrome (formerly known as RSI) injuries during the year.

With the correction of working conditions, no days were lost from work and all three people were reassigned with modified duties.

The 1987-88 programme will focus on: awareness of the environmental hazard that cannot be changed; reducing the duration rate of each lost time accident; continuing manual handling training; an eye safety programme; ongoing education and correct management of keyboard operators.

The following units achieved one or more years without incurring a lost time injury accident in the past year: Dwellingup Cadet School, Busselton, Harvey, Pemberton, Colliie, Walpole, Manjimup, Greenough/Gascoyne and Bunbury Region.

A total of 524 people qualified for these awards. Other OHSW activities during the year included safety training schools, St John's First Aid schools, a chemical users school, the audiometric testing of 599 staff; training in manual handling.

Also, eight people were awarded membership of the Alligator Club for saving their legs from serious chainsaw injuries by wear-



Assistant Forester Francis Tay concentrates as he catches an egg during the Tabloid Olympics, at Como recently.

Admin Officers attend seminar

Those people who do much toward keeping this Department running — Administration and Clerical officers — met again recently for an annual conference on administration and finance.

Frank Townsend, the primary organiser of the seminar in Forests Department days, organised last year's seminar, and then made an appearance at the seminar to meet all his old friends.

Field administration officers from all over the state, clerical officers from the smaller district offices and some SOHQ and Murdoch House people attended the three-day seminar.

Finance Manager Alan Hill chaired the seminar, and Kerry Olsson coordinated it.

For the first time, sessions in communications skills were held.

These were very well received, with many of the officers commenting on the content of the seminar was one of the best they had attended.

At the end of the seminar, a course evaluation was distributed to the participants.

Everyone felt that the seminar was worth attending for a number of reasons.

These included gaining valuable information, getting updates on new developments, having an increased understanding of the administration role, departmental responsibilities and structure, and the chance to discuss mutual problems with their peers.

Northcliffe reach a milestone

THE gang at Northcliffe, an outstation of the Pemberton District, reached a milestone in September when they achieved 20 years without a lost-time accident.

Over the years, the gang has varied between five and seven employees.

Man-hours worked during this period would exceed a quarter million and kilometres travelled would be in the vicinity of three-quarter million.

Some 40 permanent employees, as well as six Serpas and 10 students on work experience, have made up the Northcliffe gang in this 20 year period.

Many aspects of forest work, including controlled burns, wildfires, planting, bridge building, tourist facilities and road works have been done in this time.

Credit must go to all those involved over the years for working safely and avoiding injury and lost-time accidents.

Presently employed at Northcliffe are Park Ranger Rick France, Overseer John McDonald, and Forest Workmen Mick Liebrechts, Colin Daubney

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THE A.V. JENNINGS CHURCHILL FELLOWSHIP for the study overseas in the field of domestic architecture, home building and residential planning;

THE KERN CORPORATION CHURCHILL FELLOWSHIP for the study of property development — the impact of advanced technologies;

THE DONALD MACKAY CHURCHILL FELLOWSHIP for the study of organised crime and its suppression;

THE MEDICHECK CHURCHILL FELLOWSHIP in Preventative Medicine;

THE SWIRE GROUP CHURCHILL FELLOWSHIP for the study of an aspect of the Australian Cotton Industry. Applications, including references, must be forwarded not later than Monday, February 29, 1987.



AUS students Matthew Swepstone, (left) and Jon Collinan build their campfire at Icy Creek.

Icy Creek camp . . . STUDENTS DEVELOP EDUCATION CENTRE

By COLLEEN HENRY-HALL

A GROUP of Morley High School students, enrolled in the Alternative Upper School (AUS) programme, are transforming an empty house into an education centre at the Department of Conservation and Land Management's Icy Creek camp near Dwellingup.

The students, supervised by teachers Doug Melville and Kerry Cribb, have been working at Icy Creek periodically over the past year on a number of projects to improve the centre and camping area.

Icy Creek has been established by CALM as a place for community and school groups to camp, under canvas, away from public camping areas in the Lane Poole Reserve.

The camp is comprised of an education centre, bush amphitheatre, campsites with fire rings and tables, and toilets in a superb natural setting: a creek surrounded by tall jarrah forest.

It is available for bookings by school groups who are interested in investigating the environment first-hand.

The Morley AUS group have taken over the administration of Icy Creek, handling the bookings, the finances and arranging pre-visit inspections.

In addition, a work party, six students out of a total of about 20 in the

programme, are rostered to work on various projects at the camp.

The party travels down from Perth, sets up camp and works for two or three days at Icy Creek.

Past work has seen the kitchen floor tiled, a wood stove installed and carpet laid.

According to Doug, the AUS programme "gives these students skills and helps socialise them."

"It also gives them skills to use when they've got time on their hands, helping to keep them out of trouble."

The students prepare everything for the time they will spend at Icy Creek; they plan meals buy food, pack the camping gear and the tools they will use to do the jobs.

Kerry said: "They know it's up to them to bring

what they need, because if they don't bring it, they go without."

The students, through the AUS programme, raise the money needed to buy food and travel to Icy Creek.

Doug said that by working together and doing the jobs that affect everyone first and then dealing with their own needs second, the students learn responsibility.

"A project like this is good for the students because they are able to see the change and the improvement through their own efforts," he said.

Doug said the kids have developed good working relationships with the CALM officers, fostered by cooperation and respect on both sides.

The beginning of the

year saw 42 students in the AUS programme.

The number is now down to 16 as students that have found work leave the programme.

In addition to projects like Icy Creek, the students do work experience, which is arranged for them through the AUS programme, Doug said.

There is scope for other AUS groups to become involved in specific projects at Icy Creek.

Some possibilities, according to CALM's Education Officer Susan Worley, are constructing a confidence course and orienteering course, development of walk trails, making trail signs or brochures for the walk trails, or field activity guides for different user groups.

FAO fire study

of W.A.

A GROUP of seven men from Indonesia, the Philippines and Tanzania have returned home with valuable information on the use of fire in forest management following a two-month tour of Australia.

The group recently completed their United Nations Food and Agriculture Fire Study Tour with a week in WA.

Chris Muller, Senior Fire Officer Bunbury, coordinated the visit to this State.

Chris said: "Fire management must be integrated with forest management, so we looked not only at the fire operations in WA, but also some of the forest operations."

Of particular interest to the group were seed tree removal in the Karri forest, and salinity control with tree plantings near Collie.

The week was packed with things to see and do, and Chris said the group often had a pre-8am start and post 7pm finish each day.

"We spent a lot of time and detail on the planning involved in fire management," he said.

"A high point was a session on the way we prescribe fire, led by Manjimup Forester Greg Mair."

Their week included a trip to Manjimup, where they were shown fire equipment, and they were especially interested in the light units and the use of foam to fight fires.

Other districts and regions visited were Bunbury, Collie, Dwellingup and Waverley.

All the participants were foresters involved with fire in their respective countries.

"We gave them a broad overview of our approach, how we got where we are, and some things that were directly relevant to them, such as training and equipment," Chris said.

"Australia's expertise in fire management has world recognition, a fact proven by the United Nations' decision to send these people here."

"Their job now is to translate what they've learned to their own culture, both scientifically and socially."

Chris said he thoroughly enjoyed the week he spent with the visitors, although at times he said he wished he were fluent in their languages and had more understanding of their cultures.

• WHEN Matthias Makupa from Tanzania was asked by Fire Branch Manager Jock Smart where he worked, he was told Mufindi which is a small village on the slopes of Mount Kilimanjaro.

Jock knew that fellow Scot, Jock Gilchrist (now retired) had worked in Mufindi and promptly rang him, introduced Matthias and soon they were chattering away in Swahili.

It rapidly became evident that Jock G was held in God like status by Tanzanian foresters, since he had meticulously planned and recorded the initial plantings in what is now a high yielding 43,000 hectare plantation complex supporting a pulp mill and a saw mill.

Unfortunately Matthias's command of the English Language was insufficient to get his tongue around all the syllables of "Gilchrist", so Jock became "Mr Christ" for the day.

Does this mean that Jock G's God like status has been reduced by 50% or has his halo merely slipped?



PARTICIPANTS on the FAO Fire Study Tour attended sessions held at Fire Protection Branch, SOHQ.

Getting the message through

ON a recent Sunday, Rosalie Hollands, wife of Geikie Gorge Ranger Ron, took a phone call from a Bunbury chap trying to locate his family travelling in the Kimberleys, with news of a death in the family.

Rangers at Geikie and Windjana Gorge were contacted by radio and asked if the people were in either park, but no luck.

Mobile Ranger Kevin Hughes heard the message on his way into

town to catch a flight over the Bungles, and he jotted down the description and number plate of the car being sought.

Now comes the strange twist of fate.

Kevin's plane, just within sight of the Bungles, developed throttle trouble and turned back to find a safe place to land, which turned out to be the Great Northern Highway.

Kevin hitched a ride back to Halls Creek with the local policeman, and on the way met a

car with a familiar number plate. He asked the policeman to stop the travellers as he had a message to deliver.

The startled travellers were amazed and I might say grateful that the ranger service literally dropped out of the sky to deliver the message.

Needless to say, Kevin, being a hardy warrior, took to the skies again the following week and managed to get his aerial view of the Bungles.



RANGER Ross McGill, (left) heads the volunteer collecting group in Watheroo National Park.

WEEKEND SURVEY AIDS HERBARIUM

By PENNY HUSSEY

NATIONAL Park Ranger Ross McGill recently added more than 80 named specimens to Watheroo National Park's field herbarium, all the result of one weekend's work.

Ross had asked for help with the project from members of the WA National Parks and Reserves Association (WANPARA) who organised a weekend collecting excursion recently.

Members of the WA Naturalists' Club and the WA Wildflower Society also attended.

The result was about 30 enthusiastic amateur botanists eager to study the

magnificent wildflower wealth of this park.

After setting up camp behind the ranger's house, everyone followed Ross for a botanical ramble through the rich heath around the house block — surely one of the most beautiful front gardens of any house in the State.

During the evening, the enthusiasts got down to serious taxonomy, while the rest gathered for a wongi around the barbecue provided by Ross and Elaine.

The next day, Kelly Gillen, Moora District Manager, joined the

group, which went to look at a very different area of the park, Jingemia Hill, a chart outcrop near Watheroo.

No heath here, but woodland, including gimlet, and a very large cave.

This area also produced the botanical "find" of the weekend, a wattle known only from one other location.

Everyone thoroughly enjoyed the weekend.

Not only was it interesting and great fun, but it was also helpful to park management.

THE old cook house near the Millstream Homestead has been restored with a grant from the Heritage Committee.

The original oven had to be removed for the renovations, which included replacing timber posts standing inside the cook house.

The oven has since been put back. The work was done by regional staff supervised by the Building Management Authority.

★ ★ ★

The recently completed Munjina Gorge section of the Northern Highway puts a bitumen road within just 17km of Hamersley Range National Park Headquarters.



Trevor Smith and Peter Henderson inspect historic timber baulks on a Lake Clifton property near Yalgorup National Park.

RANGER Trevor Smith has made a historic find on a farm adjoining the Yalgorup National Park.

Stopping in for lunch on a recent patrol Trevor noticed two large baulks of unusual timber lying in a paddock.

He later showed the timber to his district manager, Peter Hender-

RANGER MAKES HISTORIC FIND

son, who took a small sample for identification, and contacted the farm's owner, Mr Peter McLarty, for details. The timber has turned

out to be Indian Teak. Mr McLarty has recalled that his grandfather found a teak log washed up on the beach over 100 years ago, and snipped it

to the farm for pitsawing on site.

Some of the fittings and furniture in the house were constructed of teak from the log.

CALM has offered to help pick up the historic timber baulks and arrange for them to be properly conserved and displayed in a museum, and Mr McLarty has wished us well in the project.

National Fire Conference MANAGEMENT MAJOR THEME

By LACHLAN McCAW

FIRE management on nature conservation lands was the focus of a five-day workshop hosted by CALM and organised by Manjimup Fire Research, in October.

The session attracted participants from all States and territories, representing conservation land management agencies, rural fire authorities, the voluntary conservation movement, CSIRO and tertiary institutions.

In the first two days of the workshop, speakers addressed a number of important fire management themes including: setting fire management objectives; deciding critical data requirements; selecting ap-

propriate management strategies, cooperational considerations and constraints; requirements for monitoring; social factors and public involvement.

Speakers provided examples from a wide range of environments throughout Australia.

Executive Director Syd Shea gave the opening address and also spoke on the role of public participation in fire management.

A field trip in the Leeuwin-Naturaliste Na-

tional Park provided a focus for discussion of a number of issues including protection requirements for coastal settlements, rabbit grazing in coastal vegetation following fire, and the specific problems posed by the large number of caves in the area.

For the final two days of the workshop, the participants were put into syndicates of six to eight people to examine the procedures involved in preparing fire management plans for nature conservation lands.

As part of this exercise each syndicate was given a case study based on a conservation reserve in WA.

The reserves chosen were Walpole-Nornalup National Park, Dryandra Forest, Fitzgerald River National Park and Hamersley Range National Park.

CALM staff with experience in each of these were on hand to provide detailed local knowledge, and a wide range of other resource information was also available.

Workshop convenors Neil Burrows and Lachlan McCaw were generally pleased with the outcome of the workshop.

Neil said: "The syndicate exercise highlighted a number of important steps in the fire management planning process, and these should form a useful checklist for planners in the future."

The workshop proceedings will be published by CALM following editing of the papers and collation of results from the syndicate exercise.

In addition to the formal programme, the workshop also provided a chance for CALM staff to discuss issues with counterparts from elsewhere in Australia.

A slide show by Pilbara Regional Manager Tony Start, a limerick competition, and a poem by after-dinner speaker Tony Mount contributed to a successful conference dinner on the Thursday night.

Lyric for our five fighters

By TONY MOUNT, Tasmanian Forestry Commission

BECAUSE the winter weather kept them office-bound together

The Manjimup Researchers had nothing much to do So they all jumped to attention when they heard somebody mention

That "Sydney wants a workshop to bring the experts to"

So they sent to each a letter saying "If you've got nothing better

To do in '87 why not come to our fair land

Together we will fashion with skill and art and passion

An everlasting method of how fires should be planned."

The leaders of the party, under watchful eye of Smarty

Were Neil, Lachie, Michelle Prie and all their motley band

They gathered us together with promises of weather

With sun forever shining — far too hot for us to stand

So when the sun shone brightly — they schooled us day and nightly

In a stuffy room near Busselton beside the tempting beach

But when it started hailing outside they took us sailing

To every fire problem that the old school bus could reach

Thus when the rain stopped falling, 'twas then we heard them calling

"It's time to start the syndicates so fire can be planned"

So seven experts wrangled over fire problems tangled

Up with people, parks and politics all up and down the land

Side by side we worked together juggling fauna, fuel and weather

Into one united document to deal with every fire

Each group, its task completed, eight times to all repeated

The measurable objectives to which we should aspire

But now our task's completed and your problems we've defeated

Home we now must wander back to bother and to fuss

Adieu, CALM, you've collected, four park plans all corrected

Now you must come back our way and do four for each of us!

Nematode counters Pine wasp

By COLLEEN HENRY-HALL

PARASITIC nematodes are proving to be the best weapon in the fight against a wasp that is killing pines.

More than a million *Pinus Radiata* trees have died in southeastern South Australia and western Victoria after attacks by the wasp *Sirex noctilio*.

The wasp has not yet been recorded in WA, but it has invaded all other States and could be introduced here in the future.

Research into the control of the wasp is being carried out by Dr Ross Field, of the Keith Turnbull Research Institute, Land Protection Division of the Department of Conservation, Forests and Lands, Victoria.

Dr Field addressed the most recent seminar in CALM's research seminar series.

The most recent attack has prompted a step-up in an inoculation programme using the nematode *Deladenus siricidicola*.

The nematode works in two ways to control the spread of the *Sirex* wasp: it invades the wasp's eggs, and feeds on the fungus intended for the wasp; or it parasitises *Sirex* larvae, rendering them sterile in their adult phase.

"If we can inoculate about 20 per cent of the dead trees that are playing host to *Sirex*, we might have some chance of noticeably decreasing the wasp population next year," Dr Field said.

But he added that he thought the one-million tree death estimate was conservative, and that only about 150,000 trees could be inoculated, a far lower number than was necessary to control the wasps.

"The problem could be just as bad next year," he said.

Trees are actually killed by the fungus that the egg-laying female injects with her eggs into the tree.

The female will only lay eggs in stressed trees, ones that have undergone recent thinning, are not getting enough water or have recently had a fire through them.

Early symptoms of wasp infestation are drops of sap from the egg holes.

Other signs are red or brown tops of stricken trees, resin flows, and fungal stains in the bark.

Dr Field said "*Sirex* is here to stay, and there will always be some environmental factor over which we will have no control, such as drought and fire, that will provide *Sirex* with suitable trees."

He did suggest a number of ways to decrease the

possible occurrence of *Sirex*:

- timely selective thinning or reduced tree competition and the removal of suppressed, deformed, multi-stemmed trees and those that are dying or diseased;

- early salvage of trees damaged by wind, hail and lightning;

- minimise injury to trees from fire and silviculture practices;

- avoid planting on steep slopes where thinning can not be done;

- restricting high pruning and noncommercial thinning to periods outside the insect's flight season, between May and November;

- and routine surveillance by foresters to check for infestation.

NATIONAL Park Rangers Noel Nannup, Bruce Woodley and Robert Cheedy came in for high praise lately from the police at Port Hedland for their help in a search for a missing man at Millstream.

And Pilbara Regional Manager Tony Start also some good words for the three: "I would like to add my own thanks to you for your immediate and thorough response to the call for assistance."

"I know that the police place great reliability on the effectiveness of national park rangers in emergency situations."

"It is your response to calls such as this one that has earned the reputation you have."

POLICE PRAISE RANGERS

CALM News is the Department of Conservation and Land Management's monthly staff newspaper.

We hope you will become involved in its publication by sending articles (up to 400 words), letters, photographs (with captions), minutes from meetings and items of interest to: Colleen Henry-Hall.

Department Conservation and Land Management Como WA 6152 — phone 367 0333 ext 322.

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LAYMAN FACELIFT

THE Layman picnic area, the site of the recent launch of the Ludlow Tuart National Park, will be renovated under the direction of Busselton District Forest Ranger Nick Read.

A loop road will be put through the picnic area, with barbecue sites and tables located adjacent.

The car park will be upgraded to cater for buses and caravans and a greater number of cars.

More picnic tables will be placed throughout the site.

Nick said the walk trail, which passes a former saw pit and some older tuarts, will be upgraded and signposted with interpretive information and directions.

He said the work is slated to be finished under next year's budget.

Staff news

Two Visit Thailand

Allan Briggs, Regional Leader Planning, and Warren Tacey, Planning Liaison Officer both from the Northern Forest Region, left late in October on a six-week Rotary Group Study Exchange visit to Thailand. While there, they will study forestry in northern Thailand and make business and similar work

Appointments

Hugh Clift has been appointed Librarian-in-Charge at Woodvale.

Promotions

Aubrey Fretz has been appointed sub-accountant at Como. Ms Rae Burrows has been promoted to Education Officer, Manjimup.

Transfers

David McMillan, Forester, from Karratha

Mead, Forester, Dwellington to Karratha.

Rob McGeachin has been seconded to State Treasury. He has been replaced by Lorraine Doherty from the same Department.

Retirement

Deryck Woodford, Timber Production, Como, has retired after 10 years' service beginning in Registration with

