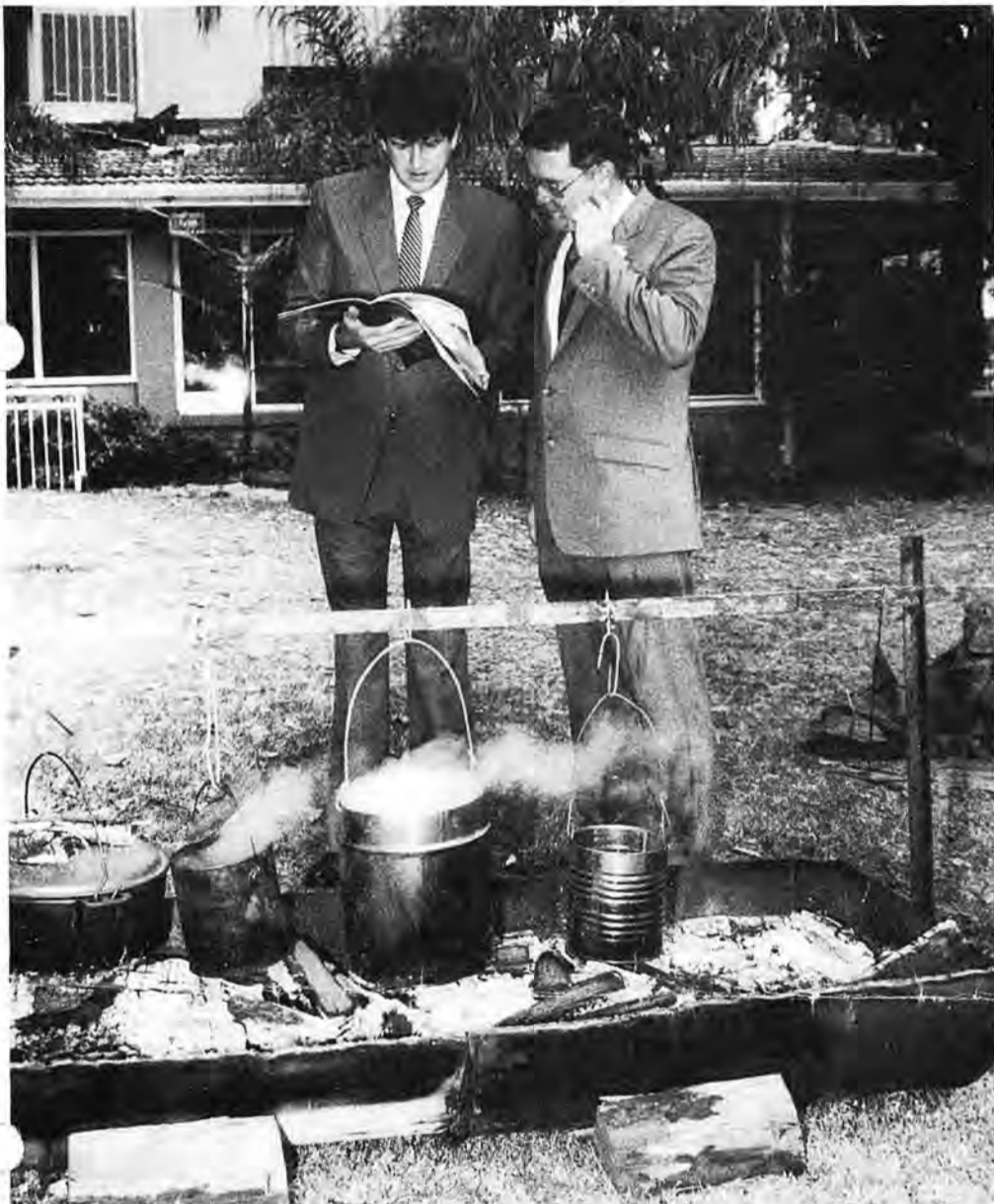




# CALM News

COWI RESOURCE CENTRE  
DEPARTMENT OF CONSERVATION  
& LAND MANAGEMENT  
WESTERN AUSTRALIA

Official newspaper of the Department of Conservation and Land Management Volume 2 Number 22 December 1986



WHILE the billy boils and the damper cooks, Barry Hodge and Syd Shea discuss Landscape.

## Magazines launched CALM'S NEW COMMERCIAL ENTERPRISE

CALM has launched two publications on the commercial market.

They are Landscape — WA's own wildlife, forests and national parks magazine — and Beating About the Bush, a guide to more than 80 recreational sites in National Parks and Forests within a half day's drive from Perth.

Conservation and Land Management Minister, Barry Hodge, launched the publications.

Executive Director, Dr Syd Shea, said that to continue to improve the management of the State's public land and wildlife while faced with expenditure constraints, the Department decided to develop an entrepreneurial approach to raising funds.

Dr Shea said the Department believed it was reasonable to expect that part of the cost of management could be recouped by applying the user-pay principle.

This applied to Landscape, whose mailing list had grown from 4,000 to 10,000 copies an issue since it was launched 18 months ago.

Landscape was initially produced to keep interested people informed in the Department's activities, and was provided free of charge.

The sale of Landscape will consolidate its long-term viability, relatively independent of Government funding, while reaching a larger audience.

The magazine will be available at newsagents, book stores

and CALM offices at a retail price of \$2.50 an issue.

The Department is also offering two subscription packages.

The first is a year's entrance to all national parks in WA, a year's subscription to Landscape and 20 brochures and recreational guides to State parks and forests. The cost is \$30.

The second is a year's subscription to Landscape and 20 brochures and recreation guides. The cost of this package is \$15.

Beating About the Bush is being retailed at \$7.95.

Beating About the Bush was developed by CALM staff who had a great deal of knowledge about the recreational and picnic sites in the areas of land they manage.

Apart from being an important public service to Western Australians, the development of the publication has proved a great management tool.

CALM officers found many of the well-known recreation sites were being over-used and now the public will be encouraged to use the lesser known but equally attractive sites.

Dr Shea said all money raised by the sales of these publications and the subscription packages would be used to further develop recreation facilities and programmes to conserve wildlife.

## Bungle team set up

A PROJECT team has begun work on the draft management plan for the proposed Bungle Bungle National Park.

The team comprises Project Officer Mary Colreavy, seconded to Planning Branch to work on the plan, Planning Officer Paul Frewer and Kimberley Regional Manager Chris Done.

They are working with a larger planning group of representatives from Aboriginal groups, the Tourist Commission and the local shire to review management strategies for Bungle Bungle.

Mary is doing preliminary work on the plan from Kununurra.

"This is a very unique situation because it's the first time in WA that a management plan will be drawn up before the land is in CALM's control, or has even been declared a national park," Mary said.

There are benefits to getting in on the ground floor, with visitor impact comparatively low in the Bungles.

In most national parks, where the management plan follows years of heavy use by the public, roads and picnic sites become established, and they are not necessarily in the best places from a management point of view.

"With careful management here, we can do the appropriate thing, influencing the public use at an early stage before too much damage is done," Mary said.

The project team hopes to have the draft management plan completed by February.

## MLA opens new airstrip

The official opening of CALM's Mundaring airstrip recently will enable the Department to increase its surveillance of summer wildfires in the district.

This will provide greater protection for people living in the hills as well as the 200,000ha of national parks, State forests and nature reserves in the area.

The airstrip, built in March 1986 at a cost of \$16,000 and located near the Mundaring Weir, serves the Mundaring District as well as the Jarrahdale and Wanneroo Districts.

In particular, the airstrip will enhance the implementation of the two arms of CALM's fire protection programme. They are the use of "bomber" aircraft in prescribed burning operations, and the early detection of wildfires by spotter aircraft.

CALM plays an important role in detecting and controlling fires, and has a well-trained and equipped fire suppression force capable of fighting several wildfires simultaneously in severe weather conditions.

To control fires, CALM plans to carry out low intensity fuel reduction burning on

more than 250,000ha of forested land this year.

Without this, the potential for summer wildfires would be much greater.

Wildfires can have serious consequences for Districts like Mundaring and Wanneroo, because of the populations of people living close to forests, as well as the destruction of private property and valuable forest areas.

The airstrip will also allow the Department to provide a better surveillance service to shires neighbouring CALM lands, with early take-offs in emergency situations.

Spotter aircraft are often in the air from between 8am and 5pm during the high-risk summer months.

Further development at the airstrip includes the planned construction of a helicopter landing pad, an extension of the airstrip from 500m to 700m to accommodate bomber aircraft in all conditions, and the sealing of the access road.

The airstrip hangar, built in July 1986 at a cost of \$20,000, can house two Piper Super Cub aircraft.



MUNDARING MLA Gavan Troy unveils a plaque to commemorate the opening of the new airstrip.

## FOREST SPECIES SITE SURVEY

MANJIMUP Research Station has recently completed a classification of site-vegetation types for the southern jarrah forest similar to that which has been available for some time in the northern jarrah forests.

Although the information has not been published yet, there is already interest in the system to assist with certain management aspects.

The main interest is in the correlation of dieback and site vegetation types to enable impact prediction.

The classification descriptions include some information on dieback occurrence

and impact, but to increase its reliability, a more intensive survey and mapping project is being undertaken by the dieback interpretation section.

The aim will be to develop a system of mapping impact categories from vegetation types where there is currently no dieback occurrence.

Seventeen site-vegetations were identified from survey data of forest areas around Manjimup, Pemberton and south toward Walpole.

At each site, various stand, soil, vegetation and site parameters were recorded. Each site is described by these charac-

teristics plus some comments on dieback, regeneration and productivity.

Vegetation is an important tool in the identification of the site types and the survey helped to identify the site characteristics which each species prefers.

So by identifying the species occurring on a site, some of its characteristics, such as drainage and fertility, which may be useful for management, can be inferred.

Two publications have been prepared and are currently with the publications section.

— GREG STREILEIN



## From my Desk

ONE of the major objectives of the Department since its formation has been to improve its interaction with the public.

I believe that the high priority we have placed on this objective is justified because we are managing public land for the public and, frankly, if the public doesn't believe we are doing a good job, the Department has no future.

I have no doubts about our performance.

But I have been concerned that the public was not being informed on what we were achieving or were being given an unfair assessment of the Department.

Over the past 12 months, we have conducted a vigorous campaign in the media to improve our public image.

It has been outstandingly successful and I congratulate all those who were part of it.

An indication of the success of the campaign can be gauged by the fact that over the past eleven months more than 455 separate articles on CALM have been printed in publications around the State.

Last week our Minister, Barry Hodge, launched the first commercial edition of *Landscape*, a *Landscape* plus entrance to National Parks package and 'Beating About the Bush'.

These publications, which I am confident everybody will be proud of, provide another way by which all members of the Department can further improve its public image.

By assisting to sell these 'packages' you will not only be broadening our contact with the public but you will also help our budget.

If each member of the Department sold 50 *Landscape* Gold packages our revenue would be increased by more than \$2 million.

That extra revenue would be retained by this Department to continue to improve its services to the public.

I would like to take this opportunity to wish everyone a very Merry Christmas and a Happy New Year.

SYD SHEA  
Executive Director

By  
JOHN BLYTH

A SHORT seminar/workshop on the management of seabirds, especially penguins, in the metropolitan area, was held on Monday, October 27, at the Wildlife Research Centre at Woodvale.

Representatives from CALM, CSIRO, the Tourism Commission of WA and other groups were present.

The seminar was organised by staff of CALM's Metropolitan Region to coincide with the visit to Perth of Professor Mike Cullen from Monash University.

Professor Cullen has been

# Seabird management workshop at Woodvale

conducting studies for some years on the large colony of Little Penguins (*Eudyptula minor*) at Phillip Island in Victoria, particularly in relation to their response to various impacts resulting from human activities.

The first speaker was Nick Dunlop of Murdoch University, who spoke on the management of metropolitan seabird populations.

The subsequent discussion revolved mainly around silver gull (*Larus novaehollandiae*) populations near Perth.

However, despite considerable concern over the explosion in numbers of silver gulls around Perth in recent years, it was generally agreed that the numbers of most other seabirds around Perth have not been adversely affected.

Nick Klomp of Murdoch University presented preliminary results of his research on the breeding, biology and diet of the Little Penguin on Phillip Island.

The birds have adapted well to artificial nesting burrows provided by Nick, who suggest-

ed that modifications of this idea may permit public viewing of penguins under controlled conditions.

Professor Cullen, the third speaker, discussed the history of research and management of the Little Penguin on Phillip Island, Victoria.

Viewing of the "Penguin Parade" at Phillip Island is an important part of the tourist industry in Victoria and the Government is funding further studies to clarify the major threats to the penguin population.

Foxes and loss of breeding areas have been identified as factors reducing the number of birds, and the effects of seasonal variation in the quality and availability of food is now being closely studied.

The afternoon was completed with some lively discussion on the management of Penguin Island, with particular reference to the conservation of the Little Penguin.

It was noted particularly that there are far fewer birds in the Penguin Island population and the area is much more restricted than that on Phillip Island.

Thus the development of public access to the birds will need to be handled very differently on Penguin Island to that operating in Victoria, where thousands of people at a time watch the Penguins emerging from the sea at dusk.

# FIRE SEMINAR

FIRE suppression organisation seminars were held at Como, Bunbury and Manjimup in November, as part of the Fire Branches on-going training scheme to prepare staff for the coming fire season.

Fire Branch Inspector Rick Sneeuwjagt said the seminars' aims were to demonstrate, discuss and practise CALM's fire suppression practices.

The seminars, held at regional centres for the first time, brought together Forest and National Park rangers and the specialist officers they will work with during a fire.

The first day of the two-day seminars centred on lectures, information sessions and discussions.

On the second day participants took part in a mock fire exercise.

Rick said the mock exercise in each region was set in an area that presented particular problems or difficulties.

The Northern Forest Region exercise was in the Murray Valley, which has high fuel levels, many visitors and access is difficult.

Central Region fought a fire

in the Blackwood Valley pine plantations, which have high value and high fire characteristics.

The Southern Region's mock fire was in the Warren National Park, where Karri regrowth, nearby logging and large numbers of people present unique problems.

"By undertaking mock LFO's in the regions, we hoped to alert the districts and regions to the problems that can occur," Rick said.

"We learnt during last year's Yanchep fire that we were not fully prepared for that particular fire.

"We believe that the seminar will bring the preparedness to an appropriate level.

"It was time consuming to develop the course, but we feel that it was an important and worthwhile exercise that will bring many tangible benefits to our fire fighting organisation."

IMAGINE this scenario: It's the Saturday of the Australia Day weekend, and more than 6000 people are camped along the banks of the Murray River in the Lane Poole Reserve. By midday, the temperature has reached 39 degrees and the 40kph winds have swung from the north east to the south west. Six miles to the south of Dwellingup, a farmer is slashing hay in a paddock.

These were the mock exercise conditions presented to the Northern Forest Region seminar when the fire started at 3pm.

Dwellingup staff were on standby because of the conditions, and neighbouring district staff were involved in mopping up operations elsewhere.

The fire spreads quickly and is burning on a 3km

front from the north west at about 1.5km an hour within a short time.

A LFO is quickly established and positions filled. Because of the situation, it is decided to evacuate the Murray River Valley; the SES, police and Bush Fires Brigade are mobilised.

The more than 100 children staying at the Nanga Bush Camp are taken to the Dwellingup Oval before the camp and Nanga Bridge are "destroyed".

Fortunately, the "evacuation" is a success and because of the moderating conditions and the speed in mobilising equipment and people, the fire is brought under control by early evening.

Although only a paper exercise, the mock LFO indicated to the participants of the Como seminar, the potential disaster of a summer wildfire if we are not prepared.



PARTICIPANTS at the Northern Forest Region fire seminar.



RICK ALLISAN (left) and Charlie Salamon compete in a target race.

## NAVY WINS COMP

FIVE units competed in the inaugural fire competition held at Yanchep National Park on November 13.

The competition was won by a Navy team from Garden Island's HMAS Stirling with 99 points, from Metropolitan One and Wanneroo with 93 points, and Metropolitan Two and Yanchep with 86 points.

The three-man teams competed in a four-event programme — relay, target and obstacle race and a drum roll.

The judges carried out a vehicle inspection before the competition started.

The event was initiated by Supervising Ranger Metropolitan Region, Jim Maher, and coordinated by Jim and Brian Cornell from Fire Protection Branch.

The event will become an annual one and the teams

will compete for a perpetual trophy.

While the Navy team won the trophies donated and presented by Metropolitan Regional Manager

Barney White, Wanneroo won the first aid kits for the safety award.

Competition stewards were Ray Hill, Gordon Graham and Jim Maher.



YANCHEP'S Lance Jackson in action.

## Meritorious award to Jack Andrews

RANGER Jack Andrews, who retired at the end of October, was honoured at a function in Albany recently.

Staff from the Esperance District, Albany District and neighbouring Walpole District gathered together for afternoon tea.

Jack was presented with a photograph album, complete with a wide selection of photographs of the scenery and some of the jobs he undertook during his career at the Stirling Range, Torndirrup and William Bay National Parks.

Jack was also presented with a special South Coast Region Meritorious Award in recognition of his outstanding services to National Parks, spanning a period of 20 years.

A bouquet of flowers was presented to Jack's wife, Madge, on behalf of the regional staff.

Jack thanked everyone for their help and comradeship over the years and again re-iterated that his seven years in the Stirlings were the highlight of his career.



JACK ANDREWS

# Changes mooted from study tour

By COLLEEN HENRY-HALL

AN OVERSEAS study tour by CALM Forester Ray Fremlin to see how other countries plant eucalypts could mean changes in WA's eucalypt planting techniques.

Ray's five-week trip to Portugal, France and Brazil was sponsored by the WA Chip and Pulp Company and CALM.

Brazilian scientists have developed that country's propagation of eucalypts to such a degree, that 400,000ha of eucalypts are planted annually. Australia plants only 10,000ha a year.

Ray said that clonal plan-

tations, the only sources of new eucalypts in Brazil, produce 100,000 cuttings each day.

Cloning provides better genetic material. The new trees are insect and disease resistant and have high quality wood.

He said: "The seasonal changes and differences between day and night temperatures would limit the

same techniques being used here, but I believe that we could do quite well if we put in all the cuttings at once, at the right time and in the right conditions."

While in Brazil, Ray also attended a conference dealing with the propagation of a tree that grows well in arid and saline conditions and produces an edible pod for human and animal consumption.

The Prosopis is native to South and Central Amer-

ica, Mexico, the southern United States, Africa and India.

The tree, if planted in Australia, could rehabilitate saline land and provide shelter and animal fodder in arid parts of the country.

"If the import of selected Prosopis seed were approved, we could conduct controlled experiments over Australia's climatic zones to establish where the tree could be grown here," Ray said.





ROSS DE HOOG shows CALM staff how to install his gate.

# Mulga under threat FIRE REGIME BEST PLAN TO SAVE STANDS

By COLLEEN HENRY-HALL

**THE RESERVATION and active fire management of mulga stands in the Pilbara is necessary to conserve the ever-dwindling stands of Acacia aneura, according to a recent report from Pilbara Regional Manager Tony Start.**

Mulga, a short, scrubby tree constituting the only woodland in the Pilbara, is under threat from pastoral activities such as grazing by cattle.

But fire is perhaps the greatest threat to the continuing existence of mulga in the north.

Tony said the presence of much of the mulga is a consequence of burning practices, formerly carried out by Aborigines.

Aboriginal burning maintained a mosaic of burnt and unburnt spinifex country that protected mulga communities from extensive and hot fires.

With the cessation of these methods, the mulga woodlands are being whittled away by fire and replaced by spinifex, a

more fire tolerant species.

"Survival of the mulga depends on the reintroduction of a system of burning in spinifex that prevents the incursion of wildfire," Tony said.

Hammersley Range National Park is the only conservation reserve in the Pilbara in which there are significant stands of mulga, but they are by no means extensive.

The best-developed stands grow in the valley systems between the south-western end of the Park and the Ophthalmia Range near Newman.

But these stands are coming under increasing pressure. A large area of land with excellent stands was recently released as pastoral leases.

Many of the ridges between

the mulga-filled valleys contain significant deposits of iron ore and much of the area is included in mineral tenements.

A new section of the National Highway between Newman and Port Hedland follows the valley system that supports many mulga stands, and the opening of the highway will make this remote country accessible to anyone driving a 4WD or car.

Tony said the long-term effect of the disappearance of mulga in the Pilbara is a decline in diversity of the wildlife and flora that exist in the mulga habitat.

"Responsible land management in conservation reserves must look to introducing a fire programme that has the same effect as that which Aboriginal people used," he said.

## Student's gate on trial

AS any national park ranger knows, some people delight in shooting, bashing or going over the tops of gates meant to keep vehicles out.

Two WAIT students have designed prototypes of two gates that should withstand the efforts of most vandals.

Ross de Hoog, a final year student in WAIT's Bachelor of Education in manual arts, and another WAIT student, Richard Uren, developed the gates with input from CALM's Recreation and Landscape Branch Manager, Wayne Schmidt.

Another project, by students Dean Finlay and Murray Plug, produced an outdoor light fixture, which can be used in a number of places, is attractive and solidly constructed.

The light, along with the two gates, will be installed and field tested.

Ross's gate, a steel pole and post design, has been erected at the Schipp Road entrance to Kalamunda National Park.

The gate has many improvements over the standard wood gate used by CALM.

One is that the "lock" — a pin that screws into the steel crossbar, is hidden inside the steel post, so vandals are less likely to find it, and if they do find it, it offers little satisfaction to destructive types because it can not be shot off or bashed.

The "key", a small piece of metal tubing filed to fit the specific shape of the locking pin, unscrews the pin from the steel crossbar, allowing the crossbar to be slid out of the steel post.

The time needed to erect the fence — one hour at Kalamunda National Park — is an improvement over the day needed for a wooden one, said Mundaring District Manager Tony Raven.

"We're keen to make more of these fences, as funds allow and as our road upgrading continues," Tony said.

Depending on the performance of the gates in the field, the designs will be incorporated into CALM's Recreation Operations Manual, Wayne Schmidt said.

The joint programme with WAIT enables students to tackle practical problems with the help of professionals such as Wayne, and the student's project often helps out the Department.

The design of the gate is the property of the student, but CALM is allowed to produce the number of gates they need.

Tony said district and regional officers interested in looking at or discussing the new gate can ring Mundaring.

## MIDGE STUDY JOINT EFFORT

A METHOD of monitoring the numbers of midge larvae in lakes and ponds near residential areas is being developed by CALM and Murdoch University.

Chief Waterbird Research Officer, Jim Lane, said the technique could be used to determine the most effective time to spray, which was just before the largest number of midge larvae pupate.

By taking this action at the right time, the reproductive cycle is broken, and the nuisance swarms of adult midges prevented.

Jim said there was no current biological base to determine the most effective time to spray.

He said the shires tend to respond to the number of phone calls received, but by that time, the midge cycle was already over because adult midges only live for a very few days.

Jim said if we know when the larvae numbers peak, shires could be told when it was the best time to spray.

The monitoring method is being developed by Grant Pearson, Technical Officer at Woodvale, Dr Jenny Davis, a lecturer in Wetland Ecology at Murdoch, and Murdoch student Faye Christidos.

Grant and Faye count the number of larvae in samples from Forrestdale Lake.

The sampling will continue throughout the summer. Following the long winter rains this year, the midge problem could last until March next year.

"Hopefully by the end of the summer, we will have developed a technique that requires about two days a fortnight to sample and do a data sort, either by CALM or by the shire, to determine the larval level," Jim said.



GRANT PEARSON gathers midge larvae at Forrestdale Lake.

## Blackwood Marathon

CALM staff competed in the Blackwood Marathon relay from Boyup Brook and Bridgetown on Saturday October 25.

The teams were:  
CALM ONES — Peter Ritson (Collie), John McGrath (Como), Warren Christensen (son of Per), Clinton Rado (Manjimup) and Kevin Kenley (an outsider).

TOO CALM — Jim Maher (Metro), Grant Wardell-Johnson (Manjimup), Per Christensen (Research), Eddie Tamm (outsider) and Andrew Strelein (outsider).

STILL CALM — Hugh Chevis (Albany), Shannon Walsh (Mapping), Rhonda Ferris (outsider), Greg Rogers (Mapping) and Tim (outsider).

CALM ONES finished a credible 43rd out of 307 teams competing, an improvement on its 64th position last year.

STILL CALM finished in 128th position and TOO CALM 170th.

## BEATING ABOUT THE BUSH

Discover national parks and forests near Perth.

How often have you felt like taking your family for a picnic or weekend camp in the country without having to drive for hours to get there?

BEATING ABOUT THE BUSH offers 80 scenic spots, all within a day's drive (there and back) from Perth.

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BEATING ABOUT THE BUSH is a must for all car glove boxes, and is priced at only \$7.95.

Buy your copy from bookstores, newsagents or direct from CALM by filling in the coupon below.

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CALM STAFF: Inquire for special discount rate for your copy of BEATING ABOUT THE BUSH.

## Field Officers AGM

THE annual general meeting of the Forest Field Officers' Association was held recently in Bunbury.

The gathering of about 40 conducted business in a number of areas, including the election of officers.

Elected were: Tom Wood, president; Frank Vince, vice president; Gerard van Didden, secretary; Brian Brody, Civil Service Association representative; Ralph Smith, treasurer; Kevin White and Des Donnelly, social secretaries; and Mick Law and Max Rutherford, Housing Committee representatives.

At the one-day meeting, field officers heard a report on industrial matters from the CSA Secretary Mike Thorne, and the President's Report from Tom Wood.

The Association looks after the industrial welfare of its members — those people employed under the Forest Act Field Staff Award, Secretary Gerard van Didden said.

Issues that crop up regularly are: uniforms, broadband-

ing, housing rental, nine-day fortnight and flexitime and the award, which is up for renewal soon.

Also discussed at the meeting were the L4-7 examination and diploma status, and the CALM logo on vehicles.

General Manager Roger Underwood addressed the meeting, praising field officers for their past performance, but forewarning them that with fewer resources, job duties must change, with officers taking on new responsibilities to meet the demand.

## EARTHY SOLUTION

THE recently completed recreational site development at Bunkers Bay in the Busselton District utilised stabilised gravel to direct foot traffic to the beach.

The area has moderate to steep slopes, but with the stabilised paths and careful alignment, access for wheelchairs has been possible to the beach.

The stabilising technique is not new, in fact the district is enjoying a boom in housing development with rammed earth walls, stabilised with about 5 per cent concrete.

A private contractor, Stabilised Earth Structures of Margaret River, laid the paths.

The technique involved laying gravel path to a depth of 150mm; concrete is sprinkled onto the surface and then rotary hoed into a depth of 100mm.

Once mixed, the path is compacted.

Water may be required to damp the material.

The resultant surface is resilient to wear and water, the surface does not show the cement contact and generally, it is a technique I could recommend for outdoor recreational areas. — Neil Taylor, Parks and Reserves Officer, Central Forest Region

## "LANDSCOPE" TWO SUBSCRIPTION OFFERS

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ABORIGINAL rangers Maitland Parker (right) and John Parker (left) recently visited Perth. They are pictured with Hamersley Range National Park rangers, Keith Cunningham and Tony Smith.

## Studying effects of fire

By NEIL BURROWS

WHAT are the long term effects of different types of fires on plants and animals?

This was the most popular response by the then Forests Department staff to a fire research questionnaire circulated some three years ago.

It is also one of the most pressing areas requiring research according to the Australian Forestry Council's Research Working Group on Fire Management.

It is obviously critical that we, as land managers, have a firm understanding of fire effects in this fire prone environment in which we live.

There have been many studies of short-term responses of plants and animals to wildfires and prescribed fires, but there are very few long-term studies anywhere in Australia.

Probably the most serviceable long-term study in WA is the one set up in karri and marri forest near Manjimup.

This study was established by Dr Per Christensen in 1972 and was designed to examine the effects of different fire regimes on the forest understorey.

The study is revealing some very interesting and very important results and

a progress report should be available within a few months.

Long-term fire effects studies are scarce for a number of reasons.

Firstly, they require a commitment by the organisation funding the research and by staff to maintain the plots, the treatments, and an interest in the study.

Secondly, long-term studies often fail, due to operations and research staff changes.

A third reason why long-term studies are disbanded is due to the disturbance factor under study — wildfire.

In the past, intended long-term study sites have been unintentionally burnt.

While the study could continue in spite of wildfires, it is difficult to interpret the results in the absence of a control and difficult to determine seasonal and intensity effects.

Changes in research priorities with time is another reason for the lack of long-term fire effects studies.

While the odds are stacked against us, CALM researchers at Manjimup have established a major long-term fire effects study in the South West.

Plots have been set up at six sites ranging from the Sunlands, west of Nannup, through to the tall karri and jarrah forests near Manjimup, out to the eastern dry jarrah forest (Perup) and down to the treeless, myrtaceous flats near Walpole.

The working plan was written and proposed in 1983.

The first fusee matches will be dropped this coming summer at both the Sunland and Perup sites.

At each of the six locations, plots have been constructed to study five fire regimes.

The regimes, or fire treatments, will be no burn; burn as frequently as possible (summer every three years); burn in spring every 6-10 years; burn in autumn every 6-10 years; burn in spring every 12-15 years.

Each of these fire treatments will be replicated at each site and carried out indefinitely.

Vegetation structure and floristics have been and will be measured regularly.

Gordon Friend and

David Mitchell, from the Woodvale Research Centre, are assisting by studying the effects of these fire regimes on the lizards, frogs and insects at the Perup site.

Towards the year 2000, we hope to have a much deeper understanding of some of the ecological effects of fire.

Naturally, the study becomes more important, more productive and more valuable with time.

Hopefully, CALM Staff in generations to come will reap the benefits and extinguish the debate on that most controversial of land management practices.

# ABORIGINAL TRAINEES VISIT PERTH

WHEN the Aboriginal Ranger Trainees gave a slide show at Como during their recent tour of the South-West, they expected a handful of people to attend.

The 70 people who gathered at SOHQ to see the slides and meet John Parker, Maitland Parker, Bruce Woodley and Robert Cheedy, indicated the level of interest in CALM's first such training programme.

The four ranger trainees, accompanied by ANPWS Training Officer Steve Szabo, have recently returned north after a tour of operations in the South-West.

Steve said there were a number of objectives for the trip.

One was to see other WA national parks, which included Yanchep, John Forrest, Stirling Range and Kalbarri, all of them very different from Hamersley and Millstream-Chichester national parks where the trainees have worked for the past year.

Another goal was to meet the policy directorate and learn how CALM is organised.

The ranger trainees were able to meet future colleagues including rangers with whom they may one day work, and other CALM staff.

Steve said the trainees also looked at forestry operations, something far removed from their northern experience, but very instructive in seeing the total responsibilities of CALM.

The trainees visited the WA Museum, the Perth Zoo and

the Department of Aboriginal Affairs.

Steve said one future responsibility of the Aboriginal rangers will be to care for and maintain Aboriginal sites, and here they learned how to record important information about the sites.

The training programme began in January and will run until December.

In that time, the four men have learned the practical skills and the values of being a National Park Ranger.

Their work in the Hamersley and Millstream-Chichester National Parks has included rehabilitation projects and regular ranger duties such as collecting camping fees, talking to tourists and servicing facilities.

The rest of the training programme will be general park duties, and Steve said he would like to "address the Aboriginal side of things, drawing from community elders on such things as plants, animals and cultural history of the Aboriginals".

A graduation ceremony is planned for mid-December, to which Federal and State ministers and parliamentarians have been invited, along with CALM's policy directorate and other involved government departments.

## Nature reserves under scrutiny

WITH the use of statistical information and computers, the wetland nature reserves of the South-West are being analysed for their ability to be used for breeding by waterbirds.

Dave Ward and Jim Goodsell, using data gathered by the Royal Australasian Ornithologists' Union, are plotting the combinations of factors necessary for different species of birds to breed on certain sites.

The aim of the project is to develop a predictive tool that will enable the classification of wetlands and help determine their subsequent management.

The data come from four years of observations of 48 breeding species on 377 wetland nature reserves.

One of the major factors being examined by Dave and Jim is the level of salinity of these wetlands.

The first task was to establish any connection between salinity and the occurrence of breeding birds.

Having established that, the two are now using statistical methods to ordinate and cluster the data, looking for other patterns.

"We're using these records of wetlands to establish relationships between the wetland's character and the breeding character in terms of its vegetation, size, depth of water and water quality," Jim said.

"There are many indicators that can be used to produce a predictive tool, and we've chosen to look at the breeding of waterbirds as an indicator of habitat quality."

Results of their work so far indicate that the majority of the wetland nature reserves surveyed are of such poor water quality that they are unsuitable for breeding for most waterbirds, and that these wetlands are further degrading.

"The water values are biologically limiting, they're very salty," Jim said.

Once a predictive model of waterbird breeding is completed, it can be applied to the tens of thousands of hectares wetlands within national parks, state forests and other crown lands that have not yet been surveyed for waterbird use.

Jim and Dave will investigate which wetlands are biologically important enough to warrant attention, and will then suggest how these should be managed as nurseries in order to protect them against further salination.

The amalgamation of different skills and experiences into CALM has now made such a project possible and there is every reason to be optimistic about its outcome and the security of waterbirds on lands now managed by CALM.

## FIELD DAY HELD AT YALGORUP NP

CALM's Director of National Parks, Chris Haynes, recently hosted a field day at Yalgopus National Park, which was attended by representatives of the Shires of Harvey, Waroona and Mandurah.

Chris and Trevor Smith, the Ranger-in-Charge at Yalgopus, provided a guided tour around the Park to introduce people to its beauty and scientific significance, as well as some of the issues involved in its management.

Personnel from CALM attending the field day were, in addition to Chris and Trevor, John Blyth (Scientific Adviser), Peter Henderson (Manager, Harvey District), Jim Lane (Waterbird Research) and Neil Taylor (Parks and Reserves Officer, Central Forests Region).

Peter arranged much of the programme, including provision of an excellent picnic lunch.

The Neville Stanley Field Centre, a house turned into a field research station, was kindly loaned as base for the day by the Department of Microbiology, UWA.

Chris Burke, a PhD student in the Microbiology Department, who is working on the Yalgopus Lakes, provided assistance and fascinating insights into the ecology of some of these lakes.

The day started with introductory talks on various aspects of the park by Chris Haynes, Peter Henderson and Chris Burke.

Considerable emphasis was placed on the stromatolites in Lake Clifton, whose scientific importance has only become fully recognised quite recently.

The field inspection included a short boat trip on Lake Clifton to view the stromatolites, and lunch at the old McLarty Homestead, before a drive around the Park, with stops at several of the picturesque and very diverse lakes.

The day was designed as a forum for discussion on matters of mutual interest to CALM and the Shires in relation to the management of Yalgopus National Park, and to encourage appreciation of its

value to the local community.

All participants agreed that the day was a great success, and closer cooperation between CALM and the local authorities is likely to result from it.

## US learns from our procedures

AUSTRALIAN and American fire protection procedures evolved along two different paths, and although there is much each can learn from the other, there are few practices that can be transferred.

This is according to visiting American Associate History Professor, Dr Stephen Pyne.

Dr Pyne, author of "Fire in America: A Cultural History of Wildland and Rural Fire" is travelling Australia to research his next book, "A Cultural History of Fire in Australia".

He said that America had much to learn from Australia in the area of "urban fringe" fire protection, or protection of communities from fire.

But he said it would be difficult to redirect or reshape an organisation such as the US Forest Service, which is dedicated to the suppression of fire, to accommodate prescribed burning on a large scale.

Dr Pyne spoke to a group of about 20 CALM officers while in WA.

He outlined the use of fire in the US, particularly the policies of the US Forest Service, and explained how those policies have evolved from the first use of fire there by the American Indian.

"What is most different in Australia is the amount of fire," he said.

"People here grow up with fire and are confident with it."

Americans use fire suppression rather than prescribed burning, and this is both a result and a cause of the American distrust of fire.

Dr Pyne is an assistant professor at the University of Iowa.

He spent 15 seasons as a supervisory fire management specialist at Grand Canyon National Park and now works as a fire specialist at Rocky Mountain National Park



HALLOWEEN revellers (from left) Roxanne Horsley, Tracey Beveridge, Heidi Graski and Tony Moss.

## SOCIAL CAPERS

SOCIAL Club members celebrated the American tradition of Halloween with a fancy dress party at the Como Canteen on October 31.

There were plenty of pumpkins and tricks and treats on the eve of All Saints Day.



LESLY THORNE (left), Mark Dalton and Amanda Preece enjoyed Halloween.