# CALM NUMBER

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

# Protection powers to be strengthened

WESTERN Australia's Wildlife Conservation Act is being rewritten to provide greater protection for threatened wildlife, marine mammals and wildflowers.

Premier Carmen Lawrence recently announced that the State Government would proceed with plans to repeal the Act of 1950 and replace it with improved legislation.

It is intended that the bill will be introduced to Parliament next year.

"The existing Act is outdated and inadequate," Dr Lawrence said, "and improvements are urgently needed and long overdue."

The new legislation will .ude measures to protect threatened flora, fauna and marine mammals, and better manage the wildflower industry.

A major feature will be a provision to protect the habitat of threatened or specially protected species.

Penalties for unlawfully taking threatened species will also be increased.

Fines will rise from \$10000 to \$60000 for individuals and up to \$100000 for corporate bodies.

Dr Lawrence said that Environment Minister Bob Pearce and CALM should be congratulated for their efforts in preserving and protecting the State's wildlife heritage. "Numerous programs and projects have already been put in place to save threatened species.

"Listed among these are recovery plans for critically endangered species and translocation programs for the threatened noisy scrub bird, numbat, boodie and golden bandicoot," she said.

"The relocation of the noisy scrub bird and the numbat have been very successful, and next year CALM scientists will move boodies and golden bandicoots, now extinct frommost of the Australian mainland, from a thriving colony on Barrow Island to the Gibson Desert Nature Reserve."

Dr Lawrence said CALM's baiting programs had also given many threatened native animals a chance to survive by removing predators such as foxes and feral cats.

### Behind the scenes

Kieran McNamara, Manager, Wildlife, and Simon Hancocks, legislation officer, have worked on drafting instructions for the proposed legislation over the past four years.

Changes proposed go back to the early 1980s, some of which were published in the WA

Wildflower Industry report 1980-81 by Mark Burgman and Steve Hopper. "We've been compiling

lists of what needed to be addressed in our experience of the Act and looking at anomalies in the legislation," Kieran said. "We've also looked at legislation in other states

and drawn on that." The pair have received input from across the Department, especially

from Chief Wildlife Officer Dave Mell. They have liaised with the Agriculture Protection Board, Department of Fisheries, Parliamentary Counsel (who actually drafts the legislation) and the

Crown Solicitor's office. "The proposed amendments are aimed at more effective management of wildlife and the protection of habitats," Kieran said.

"There's also a strengthening of controls over introduced animals and plants, and there's a lot of proposed housekeeping changes in the legislation to improve administration."

Kieran's and Simon's work has been before Corporate Executive and the National Parks and Nature Conservation Authority (NPNCA) several times.

They will now work with Parliamentary Counsel on the drafting of a bill for introduction to Parliament.



DEPARTMENT OF CONSERVATION

AND LAND MANAGEMENT

WESTERN AUSTRALIA

P.O. BOX 104,

COMO 6152

Foam is successfully dropped over a fire in the jarrah forest - turning the understorey into a wintry wonderland.

### Air attack tested



Dwellingup forester Graeme Gardner hand-lights areas of jarrah forest for the aerial bombing. Photo by Tanyia Maxted

KEY CALM fire staff saw how effective aerial bombing of small wildfires can be at a demonstration in Dwellingup last

month. South Australian company Aerial Fire Supportused an Air Tractor aircraft (AT 502) to smother small handlit fires under different types of forest canopies close to Dwellingup airstrip with 2000 litre drops of water and foam.

Fires were lit to give the pilot a target in low scrub, jarrah forest, and pine plantation - all of which were found, hit and smothered by the aerial attacks.

The aircraft was loaded by CALM heavy duty crews with water, and then with foam in varying consistencies.

CALM officers were impressed with the accuracy and effectiveness of the drops, as well as the

#### by Tanyia Maxted

DEPARTMENT OF CONSERVATION

& LAND MANAGEMENT

WESTER October 1991

short time needed to load the aircraft.

The Air Tractor is used throughout the world in the agricultural industry, and the most popular is agricultural aircraft in the United States. It has been successfully used in South Australia and Victoria to suppress small fires in difficult terrain and in remote sites. Foam drops have also been used to establish a protective zone around houses and high value sites.

Rick Sneeuwjagt said the trials proved that aerial foam drops could be very effective in supporting ground suppression forces on moderately intense forest fires. However, he said that the aerial support system could only be introduced into WA in the future if funds became available.

### CALM gears up for summer wildfires

CALM staff involved in preventing and suppressing wildfires on our lands have spent the winter preparing for the wildfire season, which officially starts this month.

CALM districts are in the process of updating their emergency response plans and ensuring all is ready for the fire season, with the help of a 10-page checklist from Fire Protection.

Acting Fire Protection Manager Rick Sneeuwjagt, along with Chris Muller and Gordon Styles, are presently visiting districts to inspect these plans. During winter, staff from Fire Protection Branch visited forest districts to inspect proposed aerial burn sites and approved burn prescriptions.

Training of district staff has been ongoing, and training will soon start for the new incident control system to be trialled this season.

Selected district and regional staff will also be involved in multi-agency exercises simulating a large emergency, along with representatives from the Bush Fires Board, WA Fire Brigade and local volunteer brigades. A residential training

course was recently run in Busselton for fire suppression officers, and operators such as pilots, navigators and incendiary machine operators have also been trained.

### New system tested

The need to improve management of large incidents was recognised after the large fires last season.

This year, a system is being adopted that is used throughout Australia by most fire authorities: the Australian Interservice Incident Management System (AIIMS). This system has also been adopted by

the Bush Fires Board. All key fire staff and others involved in emergencies such as oil spills and whale rescues will be trained in the system over the next year.

Another initiative for this season is the training of support fire fighting and administrative staff from CALM and timber industry workers that can be called upon in large emergencies as the Department's resources become fully committed. During last season's fires, resources were totally stretched during January and February and with the passage of Cyclone Fifi in April.

Volunteers and others not usually associated with fires were relied upon, and the safety of people unfamiliar with equipment and procedures became an issue.

Senior management decided that staff in other areas of the Department should be trained so they could be called into large emergencies.

Timber industry operators will also be used as firefighters as needed, in the area where they are located at the time.

CALM's new fire training officer Kevin White began training these operators in September. WESTERN Australia is the only state where trained pilots are used instead of forestry personnel to detect fires.

CALM's spotter planes are managed by Max Folks, who works on contract for the Department. Max has four full time pilots, who maintain the aircraft and work on communications and related tasks throughout the year. An additional 16 pilots are hired for the fire season to fly nine aircraft operated from seven bases throughout the South West.

CALM is to replace its present fleet of Piper Super Cub aircraft in the near future, and is looking to purchase Australian-built aircraft.

Accurate weather information is required for fire response staff 24 hours a day. For the past 10 years CALM has operated a private contract system, with forecasts given for 12 centres four times a day during the fire season. Staff are paid a set rate, and there is a bonus/ penalty system in place to provide incentive for providing accurate information. This year the contract has been readvertised. For the past three years Ocean Routes has supplied this service. The company serviced operations for the Sanko Harvest and Kirki oil spills.

#### FROM MY DESK



LISTENING to the radio in my car the other evening I was amused to hear that well-known Gilbert and Sullivan song about the "policeman's lot", which, as everyone knows, is "not a happy one". The song struck a special chord with me because I had only that day been reflecting on the lot of the CALM person who is often called upon to do essential, but unpleasant work.

In pre-CALM days I had frequent personal experience of having to do things I didn't particularly like - for instance, marking a nice tree to be felled on an area to be mined for bauxite or to make way for a road - and since then I have frequently noticed staff "grinning and bearing it" as they discharge some unpalatable aspect of their responsibilities.

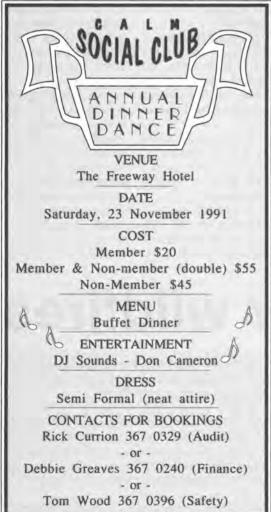
A graphic instance I witnessed was one day in the Karijini National Park (formerly Hamersley Range National Park) when I was accompanying ranger Tony Smith on a patrol. As we came up to a lovely pool in the ranges, a superb wild horse pranced out.

Taking out a rifle, Tony dropped it stone dead with one shot. He didn't like doing it, and I didn't like watching, but it had to be done. I especially appreciated this when I was later shown how the feral horses had been trampling and fouling the pool. We have had a similar situation recently of a wildlife officer having to shoot a feral bull which was causing severe environmental damage in a nature reserve near Perth.

From time to time CALM staff are required to poison foxes and cats, trap crocodiles, net birds, euthanase injured kangaroos or whales and shoot feral cattle, donkeys, pigs and goats. They also clean toilets, dig drains, clean oil off rocks, beaches and wildlife, work in dense, prickly, tick-infested scrub, and have to confront and deal with lawbreakers illegally taking wildlife, or drunken yobbos in camping areas. None of this is especially enjoyed, but it all has to be done, in the line of duty, and for the good causes of park and forest management, and nature conservation

It would be going too far to sing "CALM's lot is not a happy one" - most of us enjoy our work immensely - but it is worth all of us pausing now and again for a moment, in thanks for those people in CALM who do unpleasant but necessary jobs on behalf of the rest of us and the community.

> Roger Underwood, General Manager



### **Swan Region created** in CALM

CALM's Metropolitan regional manager, had been **Region and Northern** Forest Region are to be amalgamated into one: the Swan Region.

The amalgamation takes effect on October 14. Acting Executive Di-

rector Roger Underwood said Corporate Executive had reviewed the Department's organisational structure earlier this year to simplify it and make it more efficient.

"Out of a number of options examined, the one we decided to proceed with was the amalgamation of these two regions," Mr Underwood said.

"The reason was that they have exactly the same client base - the people of the suburbs and the outskirts of Perth.

"It's also timely to set up a new structure as we're undertaking four new major projects in the area: Hills Forest, regional parks, Wanneroo Urban Forest and the expansion of marine responsibilities.

"We have tried to accommodate all staff involved as best we can, and have consulted with them and the unions."

Mr Underwood said that Eric Jenkins, the former Northern Forest appointed acting regional manager of Swan Region.

This position was still to be advertised to see who would become the permanent manager, he said.

As part of the amalgamation, Metropolitan Region staff at Murdoch House would be relocated to Kelmscott, Mundaring, Wanneroo or Marmion depending on their expertise and the demands of the region.

Alan Sands was moving from Recreation and Landscape Branch to Kelmscott to take up a new position of regional recreation and landscape officer.

Mr Underwood said that two new districts had been created within the new region: Perth District and Coastal Waters District.

Greg Pobar is to be the new district manager for Coastal Waters, while Alan Briggs is to become the new district manager for Perth District, the latter incorporating the old Wanneroo district.

The existing Mundaring, Jarrahdale and Dwellingup districts will be largely unaffected by the changes.

### Gnangara pine thinnings increase

CALM is complying with an EPA recommendation and WA Water Authority request that the area of Wanneroo's Gnangara Plantation be reduced.

This new level will allow maximum recharge of the Gnangara Mound while, coincidentally, maximising tree growth.

Napier, Greg Wanneroo District's forest representative, said the plantation presently supplied about 1,800 cubic metres of wood a week to the timber industry.

CALM contractors Softwood Logging Services are thinning the

600 cubic metres a week of small sawlog material.

"The plantations have been in need of thinning for some years - this is the perfect opportunity. When up and running fully, two harvesters and a Bell logger will cut about 50 ha of the plantation a week."

Greg said that for the industrial wood, the contractor could cut of the operation.

Dear Sir

the Park is maintained.

as we do now.

**To CALM Exmouth:** 

appreciated by all who

pass through Neds Camp.



From Dwellingup are, left to right: Jim Pratt, Terry Gliddon and Lloyd Wren, three of the seven CALM employees who passed the adult literacy course with flying colours. Photo by Alan Scott

### New skills learnt

A PILOT course to improve literacy skills in CALM has been voted a success by the seven staff who took part.

Run by the Adult Literacy Skills Centre of

variable lengths (down to

75mm at the crown end),

utilisation of the trees. The

other new aspect of this

operation was that at Wesfi

Kewdale, where all the

timber was transported to,

the system of measurement

was now by weight. Greg

said this change had helped

streamline administration

maximum

ensuring

#### by Verna Costello

TAFE, the course was funded by the Australian Workers' Union. CALM provided training facilities at Como, time out during working hours and transport for participants.

The course was designed for staff who may need to complete a variety of forms such as first aid slips, vehicle running sheets or accident investigation forms, and who also need to be able to understand written instructions and safety regulations.

Senior training officer Alan Scott said that some written instructions could be quite complex, and it was even more vital that safety regulations be clearly understood.

"It's easy to see how a course such as this could mean the difference between life and death," Alan said, "and almost certainly could help prevent injuries." Alan said the course

By the end of the course, participants were able to complete a job description that included tools and

light machinery and jargon

used in CALM documents.

machines used, a first aid slip, an accident report covering a hypothe' accident, a description o. a dangerous workplace experience, a personal letter, a course assessment and a post-course evaluation.

Evaluation carried out by course participants showed that all improved their spelling, writing, and confidence with workrelated forms and reading materials.

All but one participant said that the course had helped improve their reading skills; and all expressed interest in further improving their reading and writing skills. They were keen to continue classes and would encourage other workers to do the same.

On completion of the course, each participant received a Workforce Basic Education Certificate,

LETTERS TO THE EDITOR

#### plantation, which produces industrial wood (medium density fibreboard) and small sawlog material.

Greg said that over the next two years, Wanneroo would be recognised as an important part of the overall timber industry as it grew to supply the required demand of about 2,700 cubic metres a week of industrial wood, and about

#### STEPHEN D. SMITH My wife and I have just

returned from our annual ...And

28 days vacation in the This is just a short note Cape Range National Park. of thanks to you people who are doing a great job I have two reasons for writing - firstly to congratuin helping to make our holi-

late you and your friendly days more enjoyable. and helpful rangers for the Part of my stay in Exmouth was at the very excellent manner in which beautiful Osprey Bay With this kind of care Whalebone Camp and our we can easily envisage our camphosts were Noel and grandchildren and their Dawn Gillingham. I canchildren enjoying the park not speak more highly of their dedication to their job. My second reason for

Each year over the last five years I have made the writing is to acknowledge the great improvement it long drive from Perth to is in staying at Neds Camp Cape Range National Park since the advent of and Exmouth and for what campground hosts Norm I see I give thanks to you all. Cole and his wife Gwen. Till next August with Here two nice people God's help. with their friendly care

**KEVIN GOFF** and concern are greatly

also encouraged participants to develop writing techniques to cover workrelated needs such as completing job descriptions. This meant learning to understand technical terminology relating to

prepared by Adult Liter Services. The certifica. were presented by Tom Lyons, Director of TAFE Curriculum Integration. Tony Brandis, senior training officer for CALM, also attended.

#### STAFF NEWS

#### Secondments

David Lamont, executive officer, Como Wildlife Branch.

#### Transfers

Murray Carter, ranger-in-charge, Warren National Park; Chris Hart, ranger-in-charge, Torndirrup National Park; Clyde Bevan, senior policy officer, to Minister's Office from Premier's Office; Belinda Rhodes, appointments secretary, to BMA from Minister's Office.

#### Retirements

Allan O'Farrell, ranger, John Forrest National Park.

#### CALM NEWS - OCTOBER 1991

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On tour: ANPWS Director Dr Peter Bridgewater sees the South West from a CALM perspective, courtesy of Busselton district manager Ian Rotheram.

### Projects on show

**DR PETER Bridgewater**, **Director of the Australian** National Parks and Service Wildlife (ANPWS), visited WA in August.

Dr Bridgewater was invited by CALM Executive Director Dr Syd Shea to inspect some of 'e projects funded by

NPWS and to look at major nature conservation issues in the South West. During his visit he was accompanied by CALM's Director of Research Andrew Burbidge.

The first stop was Dryandra to show Peter the results of several years of fox control. Although he wasn't lucky enough to see a numbat, more than 30 woylies were sighted during a spotlighting run of a little over one hour.

The next day Peter visited Lake Toolibin accompanied by regional manager Ken Wallace, and was able to see the work CALM has done to revegetate some of the lake's surrounds to reduce inflow of saline water.

He also discussed recommendations that a eries of bores be installed

by Andrew Burbidge

Then it was on to Busselton where Director of Nature Conservation Barry Wilson, regional manager Don Spriggins, district manager Ian principal Rotheram, research scientist Jim Lane and consultant biologist Doug Watkins took Peter on a brief tour of the Vasse-Wonnerup wetlands, which have been declared wetlands of international importance under the Ramsar convention.

On the last day of the visit Peter met with senior CALM staff to discuss issues of mutual concern.

The visit was timely because of the good news in the Federal budget that ANPWS' Endangered Species Program had received a considerable boost in funds.

### Saving native species a problem for all – Director

TURNING the tide for our endangered species is not just a concern for CALM and other relevant government departments.

CALM Director for Nature Conservation Barry Wilson said at a recent CALM seminar that instead, saving our native flora and fauna was a community problem, and one that all Western Australians should be dealing with.

The endangered species conservation seminar, which attracted a packed audience at CALM's Como Training Centre, featured brief talks from Wilson, CALM Dr Director of Research Andrew Burbidge, senior botanist Ken Atkins and plant breeder Bevan Buirchell.

The seminar was part of a series of information exchanges on topics relating to the pending Forestry Management Review and Nature Conservation Strategy.

"We're facing an extinction crisis - one that we are both the cause of and the witness to," Dr Wilson said.

So far in WA, 11 native animals and two native bird species have become extinct.

Seventy-two other fauna species are threatened with extinction. Dr Wilson said that undertakes CALM recovery plans on these species, and these are overseen by teams of scientists.

Two threatened species committees - one for flora, the other for fauna - were recently established by the Department, he said.

Species considered to be in danger could be nominated to these committees. "We have 260

threatened plants in WA. The task to recover all of these is beyond us, even with us drawing on our sister agencies.

"It's not an armchair exercise. People just can't leave it to CALM and others. We need to involve people hands-on and find ways to correct this crisis."

#### Setting priorities

Dr Andrew Burbidge told seminar participants that CALM had to prioritise species that needed scientific intervention so that resources could be focused on the worst cases first.

He expressed disappointment that invertebrates were not currently considered, since they made up 99.5 per cent of the total animal world.

"It's difficult to give priorities, as people have their favourite species and they tend to identify with some animals more than others

"At the moment we're trying a scoring system - a scientific and dispassionate one."

Dr Burbidge said that this scoring system had identified the 12 most critical fauna species in the State.

They were the mulgara, Gouldian finch, whitebellied frog, night parrot, dusky hopping mouse, dibbler, Partridge pigeon, ground parrot, red-tailed phascogale, western swamp tortoise, plains rat, and heath rat.

Of those threatened, there were 19 marsupial species, eight rodent, three marine mammal, 33 bird, seven reptile and two frog species.

Dr Burbidge said that while CALM studied each species individually to find the cause of population

decline and ways to restore the species, factors that were common to several species were also being focused on.

These included the role of the introduced red fox, the study of which was earning CALM scientists international recognition, he said.

The Department's fox control program was effectively restoring numbers of native animals such as the woylie in areas from which they had previously declined.

> "It's not an armchair exercise. People just can't leave it to CALM and others. We need to involve people hands-on and find ways to correct this crisis."

Dr Burbidge said the Federal Government was now putting half a million dollars a year into the CSIRO for the study of biological control of the

#### Floral diversity

CALM botanist Ken Atkins pointed out the large number of diverse flora species in Western Australia to seminar participants.

There were 8,000 named plant species, he said, 2,000 unnamed, and what he described as an 'x factor' of others, about which nothing was known.

"Out of 10,000 known plant species, 6,000 occur in the South West," he said, "and 75 per cent of those are endemic to the area."

Dr Atkins said the floral diversity of just one of our national parks - the Fitzgerald River National Park - was equal to that of

South Australia's. "In an Australian threatened flora publication in 1988, 43 per cent were WA species," he said.

Wheatbelt Region had the

highest number of declared

rare flora, as it contained

an incredible diversity of

plants and had been subject

to widespread clearing for

had the second highest

number, followed by the

Greenough Region.

the land had many.

Taxing

of native flora in WA.

These included no

further rezoning of

bushland to urban that

contained declared rare

flora, at least until it had

been established how these

plants could be saved,

dropping land rates and

taxes on bushland to

discourage people from

clearing, and imposing a

conservation tax on any

further bushland cleared -

at the price of the land

was a need for further

public education on rare

threatened species in

non-government

He said that sometimes

Mr Buirchell said there

and indeed

once developed.

flora,

general.

The South Coast Region

Dr Atkins used

agriculture.

As well as the 260 threatened species, 53 presumed extinct species were also on the threatened list.

provided This immediate protection for transparency overlays species, should they be from computer models to rediscovered. demonstrate that areas of state forest had little or no

"In the past year 10 species of presumed extinct declared rare flora, while flora have been areas where people had caused a large impact on rediscovered.

suggestions Perth plant breeder Bevan Buirchell criticised the Wildlife Conservation Act and suggested several ways to avoid further loss

"A large number of these have been found by the public."

Dr Atkins said that CALM had established a volunteer program to monitor threatened flora.

This saw private individuals collecting population information for the Department, allowing CALM's botanists more time for active management tasks.

"This data base is vital, and, as an example, can be tied in with the Department of Mines to see whether there is any rare flora on proposed mining tenements, rather than finding out afterwards."

Dr Atkins said that for a flora species to be declared, it had to have been surveyed over the last five years by competent botanists.

Priority for recovery programs was given to species that occurred in few locations and in low numbers.

He said that the

conservation organisations found themselves working hand in hand with CALM and other government agencies to achieve conservation aims, and sometimes they worked against them. "We all have the same

direction, we're just taking different paths."

### **Raising seedling quality**

Educational meetings are held each month at the

Kings Park Education Centre (opposite the restaurant)

would be up to six million

A NEW production site present level of production seedling lifting season season, more than 170,000 starts in June or July depending upon winter rainfall and planting facility. program requirements. Doug said that at the

pine tree seedlings per day

fox.

prevent the saline water table under the lake from reaching the surface.

The party then flew to Albany via the Stirling Range to look at dieback disease and canker problems there. Accompanied by South Coast Region manager John Watson, district manager Kelly Gillen and senior research scientists Jim Armstrong, Bryan Shearer and David Coates, Peter visited Two Peoples Bay Nature Reserve and the Cheynes Beach area.

Bryan showed Peter the results of some experiments where phosphorous acid had been applied to stands of Banksia coccinea, Banksia baxteri and Banksia brownii.

for volunteers in the field of wildlife care.

**BIRD FORUM** 

NEWS IN BRIEF

These meetings are open to anyone interested in the care of sick, injured or orphaned native birds.

The next forum is on Saturday, November 16 at 2pm. Guest speaker will be renowned wildlife veterinarian Dr Andy Keefe; his topic "Are Birds of Prey Any Different?" Admission is free, with a 20 cent charge for tea or coffee.

#### **OPEN DAY**

The Fauna Rehabilitation Foundation at Malaga is having an open day and fete on Sunday November 3 at Lot 10 Camboon Rd from 11 am. Phone 249 3434 for further information.

#### COMPETITION

CALM Dwellingup staff recently judged the Mandurah District's Rotary Club Environmental Essay competition. Winner Tiffany Townsend, a Year 7 student at Coodanup High School, was given a year's subscription to LANDSCOPE.

Tiffany's essay discussed the Peel-Harvey Estuary, looking at the geography of the area, the cause of excessive algae growth in the estuary and solutions for the problem.

She suggested that more trees be planted to lessen the run-off of nutrients from farms into the estuary.

s been selected for quality pine seedlings and cuttings at CALM's West Manjimup Plant

Propagation Centre.

The selection of the new followed the site amalgamation of the Department's forest nurseries, and it concentrates all tree seedling activities at the

one facility. Plant Propagation Centre nursery manager Doug Shook said the main objective behind establishing the pine nursery was to raise quality pine seedlings and cuttings from elite genetic seed lots.

Doug said such seedlings would be capable of survival and rapid growth when planted. He said the estimated

pine seedlings for the 1992 despatch season.

Sowing was to start in September, depending on spring rains, and the would be lifted at the new Reprinted courtesy of

the Warren-Blackwood Times.



peak of the despatch

CALM Plant Propagation Centre Nursery Manager Doug Shook and pine nursery overseer Jeff Cook at the new pine nursery hygiene delivery and despatch shed. Photo courtesy of the Warren Blackwood Times



Assistant librarian Julie Ellender, left, shows clerical officer Jenny Nicholson one of CALM library's 120 videos. Photo by Verna Costello

# More to libraries than just books

CALM's library resources and services are to become more accessible to more staff.

This follows a 'green light' from Corporate Executive for most recommendations proposed by senior librarian Hugh Clift in the Library Strategic Plan.

One of these is the purchase of a set of compact disks containing all the Commonwealth Agricultural Bureau's related indexes from 1939 (TREECD).

"Publications covered in this contain nearly 100 per cent of the forestryrelated research data needed by CALM," Hugh said.

Annual update disks will also be acquired as they become available. The hardware will be located at the Como library and will enable the branch librarian to conduct free searches on request and despatch the results quickly by diskette to any CALM officer.

Additional funding has

been approved to enable the inter-library loan service to operate free-ofcharge for the first 20 loans per person per year.

#### Library locations

Hugh said that because library resources should be held where they would be most effectively used by the greatest number of CALM staff, the forestry books and journals at Woodvale were to be relocated to the Como Library, provided the library could be extended into the research branch auditorium.

"However. the administrative arm of the library as well as wildlife and conservation resources will be retained at Woodvale," he said.

"The Herbarium library will retain its identity as a highly specialised botanical collection within the CALM library.

"Satellite libraries which are already established at many CALM offices will use CALM

#### by Verna Costello

ADMIN software as the departmental standard for control of their collections."

Hugh said the CALM ADMIN system, already in use, was a simplified information storage and retrieval package, capable of handling all local office and individual requirements.

"It's capable of transferring data by diskette from CALM offices to the main library database and is also userfriendly to the point of being readily operable by volunteers."

Woodvale, The Herbarium and satellite libraries would not be available to the public, he said, except in special circumstances, such as post-graduate research.

"The Como library will become a 'back-up' resource for Como reception staff, and the public will be permitted to

use it as a reference library. the only exception being video cassettes, which will continue to be available on loan."

Hugh said all the new equipment, software and relocations approved by Corporate Executive meant that staff could now expect a faster and more streamlined library service.

CALM ALERT CALM ALERT, a

monthly compilation of photocopies of the contents pages of journals received by the library and sent to all CALM offices, may be back in circulation, but in another format.

The publication ceased in February, 1990, due to costs of \$10 per copy.

"The technology is now available that can scan data on photocopies and download it onto a diskette for circulation to CALM offices," Hugh said.

"It's also hoped that the data will be downloaded onto the CALM network for a permanent index of library journals."

Plantation Forestry in

Go Bush in the Hills

WA - The achievements

and prospects by Dr S Shea.

Stores No 0908.

# Changing attitudes

**DEVISING** a recreation activities strategy for the new combined Metro and Northern Forest Region is the task for a seconded project officer from the Ministry of Sport and Recreation.

Peter Sharp is working with a steering committee of CALM officers to establish Perth Outdoors, a major campaign designed to involve the people of Perth more closely with the lands managed by the Department.

Over the next six months, Peter, who has been in charge of research, planning and community programs at Sport and Recreation, will work on a strategic plan for Perth Outdoors and then endeavour to marry some of the strategies with operations on the ground.

He will look at ways that CALM can service the recreational needs of Perth people while encouraging their responsible use of natural resources.

Peter says Perth is arguably the best city in the world to live.

"That's why we're here. There's the coast, the river and the forest ... I'd like to think that people in Perth realise that and revel in it, get outdoors and use it.

"The more they use it and revel in it, the less likely they'll want to see it damaged or lost - we're creating environmental through awareness interaction and positive experiences."

Peter said that programs such as the Go Bush program run by the former Northern Forest Region would become an integral part of any overall strategy. "And we will need to

place the programs within the broader context of recreation in Perth, the possibility of regional parks, the operational requirements of CALM, and bear in mind societal trends such as the changing structures of families."

Peter's background in outdoor recreation planning extends back to the days of the System Six study and the transformation of Woodman's Point from explosives storage purposes to a major recreation area offering a diversity of land and water-based recreation activities.

In 1987 he w? challenged to find a way . meet the needs of schools, parents and communities in sport development.

Through funding from the 'Family Package' he developed Sportsfun, an afterschool sports program run by teenagers for primary school children.

its initial Since operation at 26 schools in WA, the program has been adopted by the Australian Sports Commission and is now run at more than 500 schools Australia-wide.

Steering committee members for Perth Outdoors are Wayne Schmidt, Rae Burrows, Stev Slavin and Ray Bailey.

### Woylie orphan

1980s.

said.

ONE Western of Australia's rare nocturnal mammals - a young woylie - is attracting considerable scientific interest after its discovery at Lake Muir Nature Reserve, southeast of Manjimup.

The tiny brush-tailed bettong was orphaned when its mother was run over by a car.

On the advice of a CALM wildlife officer, it is being handraised on the south coast at the Albany Wildlife Shelter.

It's the first report of woylies occurring in the Lake Muir area since the 1930s, although a small population has been recorded east of Tone River, isolated from the major population in the Perup Nature Reserve.

significantly since the early

"Woylies are an endangered species restricted to a few small areas of the south-west but they were once found over a large part of the Australian mainland," he

"They are the subject of a recovery plan presently being written for CALM by consultant Graham Hall," he said.

"The plan aims to bring the species back from the brink of extinction over a five-year period.

"Recovery plans are also being written for the tammar wallaby, blackflanked rock wallaby, Shark Bay mouse, chuditch, two species of frog and four species of rare flora."

the plans. Dr Christensen said that in Collie, an extensive fauna trapping program being carried out by CALM was showing that woylies still occur in an area of State forest where some animals, transferred from the Perup Forest, were released several years ago.

As well as woylies, the trapping program had located chuditch and brushtail possums.

Albany Wildlife Shelter owner Eunice Daubert, who has raised the history-making orphaned woylie since it was a month old, named it Thumbelina.

Now between five and six months old, Thumbelina, who initially developed a liking for walnuts, cauliflower CALM received a grant mushrooms and apple

### New on the shelves

THE following publications were produced reavailable from Stores reintroduction

supplement from cently and should be LANDSCOPE on the of Branch Como, Enquiries endangered fauna to the Office Como, or if al- Gibson Desert 1992 Stores

Occasional Paper 1/90

- The Hill River Project

No 0901 & 0903.

brochure and a colour and Proposed Conservation Reserve at Lesueur. Stores No 0881.

> Occasional Paper 1/91 - Management of Spinifex Deserts for Natur servation. Stores No 0883. Occasional Paper 2/91 - Oral Histories Documenting Changes in Wheatbelt Wetlands. Stores No 0867. Occasional Paper 3/91 Management proposals for the Montebello Islands and surrounding waters. Stores No 0909. Land Managed by CALM - A brochure on the land areas and types managed by CALM. Stores No 0907.

ready out of print, the Resource Library, Como.

Desert Dreaming - a

### OOK

BIG Brook is less than a month away - is your team organised?

The annual Big Brook Relay will be held on Saturday, November 2 in, on and around the Big Brook Dam near Pemberton.

Participating CALM staff will cross cut saw, run, canoe, cycle and swim - all in the name of fun. The event starts at 10.45am.

This year individual events will not be timed. Instead, the entire event

will be timed on a master clock and final times for each team recorded on the score board.

Should team members wish to have their individual events timed, team managers can time and record times on the score board.

Other activities include a tug-of-war - the Pemberton Challenge Carton

Entries can be sent to Asher, CALM John Pemberton, Kennedy Street, Pemberton 6260.

Rural Trees of the South West - Reprint of a brochure on trees and soil types. Stores No 0628. Adding Value to Timber Products - A paper presented to the National Conference of the same name by Dr S Shea. Stores No 0910.

orest - A program of times and activities in the Mundaring area for the spring school holidays. Stores No 0883. Have you seen a Swamp

Tortoise? - A leaflet to landowners. Stores No 0912.

CALM Briefing Paper 5/91 - Dieback Disease in WA. Stores No 1911.

Working Together - A summary of Aboriginal programs by CALM. Stores No 0900.

Badgingarra Nature Trail Brochure - Reprint. Stores No 005.

Thomas and the Magic Glow - Reprint of an educational wetlands resource document. Stores No 0726.

Research Plan 1991/ 1996 - The Program. Stores No 0913.

CALM research

scientist Per Christensen from the Australian now prefers softened said that populations of National Parks and lentils, bananas, sweet corn woylies had increased Wildlife Service to write and porridge.





BUSLOADS of primary schoolchildren visited CALM's displays at the recent WOODWORKS festival at Curtin University. Ranger John Arkey brought along a joey and wombat and answered children's questions about native wildlife (pictured above) . Artist Laiene Maxted helped children interpret the environment through art using paint, pastels, crayons and collage (pictured below).



### **Visitors count**

WESTERN Australia's that burned through national parks, marine parks and State forests are attracting more than four and a half million visitors each year.

This is the equivalent of three visits by every man, woman and child in WA.

These statistics, taken last year, are the first collected in a full year by CALM and 48,500 ha in 1990.

The Pinnacles in Nambung National Park attracted 108,000 people, and Cape Range National Park 88,000. The figures are

facilities and to monitor gathered from a series usage, particularly in of traffic counters and sensitive areas.



# Ninth caving and karst conference

THE 9th Biennial Conference of the Australasian Cave and Karst Management Association (ACKMA) was held at Margaret River recently.

Some 50 people involved in cave management around Australia attended. This included nine delegates from New Zealand and two from Thailand.

There was a fairly equal attendance by speleologists, show-cave managers/guides, and park service cave managers or planners. After a brief inspection

of Yanchep National Park and a visit to Crystal Cave, the group headed south to Margaret River for the remainder of the week.

Attending from CALM were local Caves Ranger Rob Klok, Ranger Mike Newton from Cape Range, Neil Taylor of Central Forest Region and John Watson from South Coast Region.

The conference comprised a mixture of field inspections of adventure caves in the Leeuwin-Naturaliste National Park, visits to all four show caves in the area, workshops and formal presentation of papers.

Much discussion centred upon CALM's new permit system for the Leeuwin-Naturaliste following a presentation by Neil Taylor.

Recent CALM developments on the WA Nullarbor were outlined by John Watson, and Mike Newton presented a paper on cave fauna at Cape Range.

In all some 25 papers were presented covering topics as varied as karst management in China, recent developments in New Zealand show caves, new



THANKS to swift and effective action by CALM and volunteers, the long term impact on New Zealand fur seal colonies affected by the Sanko

#### by John Watson

ideas for cave interpretation for visitors, and the impacts of cavers upon caves.

The conference was voted a great success by CALM representatives, particularly with regard to the valuable exchange of ideas between delegates. The belief was expressed several times that if a more active role in ACKMA were to be taken, CALM would benefit more directly from an impressive range of expertise.

The next ACKMA conference will be in the Rockhampton area of Queensland in 1993.



ACKMA group at Giants Cave. Checking for 'a clean pair of heels' at rear is ranger Mike Newton from Cape Range, while caver Rauleigh Webb (far left) contemplates the interior of his helmet. Rauleigh has worked with CALM on several occasions on a voluntary basis. Photo by John Watson

### Focus on migrations

commercial operators.

This year the same number

of licences - 19 - were

issued in Perth, with three

licences issued in Albany,

three in Denham, one in

Jurien Bay, and two fixed

wing aircraft licences - one

in Denham and one in

breaching whales were

observed close to the

coast, and there were

unusual sightings of

southern right whales and

minke whales among the

that was used successfully

last season to glean

The log book system

migrating humpbacks.

September

Geraldton.

In

WHALE watching off Perth peaks this month, with CALM officers working with commercial whale watchers and managing public contact with the migratory humpbacks.

Commercial trips to see the whales between the beach and Rottnest Island began in September.

The season's responsibilities are being shared by the new Coastal Waters District's staff and Wildlife Protection Branch staff.

To start the season, a seminar was held by CALM staff for information about the

environment, their food Dr Gales said a significant factor in the source was still provided by their mothers and was recovery of the seal pups presumably was the relatively short not contaminated, and their delay between the oil spill

fledgling industry is being used again this year.

While the log book returns tell us little about whale migration, it is possible to speculate about the period of migration and where it may be possible to view whales.

Last year, a total of 11 665 passengers were carried on 276 charter trips. Of those 276 trips, 239, or 86 per cent of them, sighted whales.

One piece of interesting information to come from the logbooks has been that the mothers and newborn calves travel last in the migration southwards.

Meanwhile, on the south coast, southern right whales are becoming such a tourist attraction that CALM staff are posting information about them outside the Albany office.

District wildlife officer Peter Collins said that one English couple had extended their holiday in the hope of seeing whales - and weren't disappointed. "Interest in the southern right whales has reached the stage that in addition to CALM staff, I've got about nine volunteers between Hopetoun and Albany on the lookout for them, and they phone to tell me when and where they've spotted them. "I let the media know, and once a week I post a notice on a board outside the office, informing passers-by when and where the whales are most likely to be seen." Peter said that as many as seven or eight southern right whales had been seen recently in King George Sound where they come to mate and calf.

now the enormous popularity of these areas.

Reserves in and around the metropolitan area were most popular, with a total of nearly two million visitors.

The south-west forests had 1.38 million visitors and the South Coast and Greenough/ Gascoyne regions had 400,000 each.

Despite their isolation, national parks in the Kimberley including the spectacular Bungle Bungles. received 166,000 visitors.

In the Greenough/ Gascoyne, the most popular park was Kalbarri, with 117, 000 visitors, despite the fire

CALM is currently preparing part of the Leschenault Peninsula for the reintroduction of

a colony of ringtailed possums.

The species has declined in WA in recent years and is now common in only two areas - at Busselton and Albany.

CALM officers recently released at least eight possums, nursed back to health by animal rehabilitation groups, into suitable ringtail habitat on the Peninsula.

Of the eight released, four were females and most were carrying young.

The release followed intensive fox and cat baiting on the Peninsula. The possums have been fitted with radio collars and

will be monitored to find out if the release was successful.

other sampling methods

in representative areas

in parks and forests

recording visitor numbers

in order to plan for

CALM has begun

around the State.

Rehabilitated possums released at known ringtail sites in the past have not survived, possibly due to predation and competition from other possums, so it was decided to try a completely different area and bait for feral animals.

If possums the successfully establish, further releases of ringtail possums and a release of bandicoots (quendas), which are also threatened, will be assessed.

The Leschenault Peninsula is presently being redeveloped and rehabilitated, and a Leschenault Peninsula Park is to be created.

#### Harvest oil spill earlier this year has been minimal.

This was the overall finding in a report written for CALM by veterinarian Dr Nick Gales.

Dr Gales worked with CALM officers and volunteers to save seal pups coated in oil in February and has since returned to the islands to monitor the animals.

"NZ fur seal colonies along the south coast of Australia appear to be increasing in size and number," Dr Gales said. He believes the fur seal

pups were not as badly affected by the oil as sea otters during the Exxon Valdez oil spill as they had not been displaced from their normal

not lead them to ingest oil - as had been the case in

grooming behaviour did

the Exxon Valdez spill. "Research data gathered from the affected seal pups showed little indication of significant toxic effects in the animals affected," Dr Gales said.

He said that no harmful side-effects from the cleaning agents used had been observed in the pups. "It was fortunate that the animals involved were

those that were readily captured, contained and handled, and that followup during the pre-weaning period was possible, allowing maximum potential for assessment of the oil's impact on the pups."

an effective clean-up operation.

and the commencement of

operational "An commitment to rapidly supply personnel and equipment to the affected sites was central to this," he said.

"Furthermore, it appears that the approach to minimise disturbance to the colony by treating the animals quickly and keeping subsequent visits to a minimum frequency and

duration was effective. "It is my belief that mortality would have been higher if this approach was not taken."

Dr Gales said that a further thorough census of the two colonies on the Esperance islands will be conducted in February 1992.



Organiser Judi Fletcher and CALM's Reserves Management Assistant Gary Davidson during preparations for 'Back to Belvedere' weekend. Photo courtesy of Bunbury Mail

### **Bandicoots**

FUNDING is being sought for a three-year study of bandicoots in the outer urban areas of Perth.

A pilot study has already begun, with researchers trapping southern brown bandicoots (quenda) around Casuarina, south of the city, to assess the animal's distribution and the effect of nearby developments on populations.

CALM research scientist Dr Tony Friend initiated the project with technical officer Neil Thomas. following the bandicoot's admission to Schedule 1. Threatened Fauna, last year.

Dr Friend said that bandicoots seemed to be able to live in fairly disturbed areas, and were usually the last native mammal to disappear from suitable habitat.

"So far we've been trapping healthy individuals," he said.

"With this study we're trying to identify their limits. They have been declining as a lot of their best habitat is being developed or is threatened by development."

Dr Friend said there was evidence of bandicoots being harassed by domestic dogs. When a nearby development was built, he said, bandicoots left homeless moved into other bandicoots' territory, along the domestic with newcomers: dogs and cats.

A recent story on the bandicoot study on Channel Nine produced several calls to the CALM Wildlife Research Centre at Woodvale.

As well as trapping bandicoots, the story showed

photographs of bandicoots feeding side by side with a domestic cat at a private residence in Jandakot.

Dr Friend said he had been inundated by callers reporting sightings and similar experiences with bandicoots.

One such caller informed him that a family of bandicoots lived in the beer garden at a Rockingham pub. Golf courses and people's backyards seemed to be common places for bandicoots, he said, and south of the city seemed to offer better habitat than north of the city.

Bandicoots are mainly nocturnal, but they are often seen feeding in the afternoons. They fall within the vulnerable 'critical weight range' for mammals.

### **Back to Belvedere**

'BACK to Belvedere' was the theme of a recent weekend gathering on the Leschenault Peninsula run by CALM.

Hosted by Bunbury regional manager Don Spriggins, the weekend was organised by a primary school teacher on secondment to CALM, Judi Fletcher, as a factgathering exercise for her work to document the history of Leschenault Peninsula from the time of European settlement in 1838.

This history will accompany a development plan for the Peninsula being written by CALM.

Participants in the gathering represented a cross-section of the people who had been associated with the Peninsula in the past.

It was hoped that their memories would provide an invaluable guide to how things were 'way back when'.

Judi is now collating and editing contributions

for inclusion in the development plan, which is expected to be available

#### by Verna Costello

for public comment by the end of the year.

"In terms of the Peninsula's history, CALM is the new kid on the block," Don said, "but already plans have been drafted which will include its retention for conservation and passive recreation purposes."

#### Ongoing development

At the gathering, Don spoke about ongoing development on the Peninsula: the completion of facilities at Buffalo Beach, establishment of a camping and recreation site at The Cut, a proposed recreational site at Belvedere, future developments in the pipeline area and another camping area on the coast.

Charles Staples, historian and author of They Made Their Destiny, a history of the Shire of Harvey, spoke about the Prinsep Estate era and outlined the importance of the trade link set up

between India and Australia when Thomas Little settled at Belvedere and began breeding horses for the Indian Army.

Liam Barry, a representative of the South West Irish Club, told the story of John Boyle O'Reilly, a Fenian and a convict, first at Fremantle then at Bunbury, where he escaped from custody and hid in the sandhills at Buffalo Station (north of Belvedere) and escaped in 1869 on the American whaler

Gazelle. Wally Greenham, last owner of Belvedere before it was resumed by the State government, travelled from Denmark to tell how, in 1971, several young unemployed and disenchanted people, seeking refuge from city life, had approached him with the proposition that they set up an alternative lifestyle community on his

property. Sympathetic to their plight and to their dream of working towards a more meaningful life, Wally agreed.

dozens of others came some just to visit, others to build homes and create a different lifestyle," Wally said.

Wally told how the buildings, having been declared unfit for human habitation by the Harvey Shire in 1984, were demolished and the community disbanded.

Bill Carr, principal environmental officer from the Department of State Development, spoke about the industrial use of the Peninsula, the effluent discharge from Laporte Chemicals (now known SCM Chemicals), and u...

later rehabilitation and stabilisation process, begun in 1987. Harry Walta, owner-

manager of Environmental Field Services, described the rehabilitation work he was carrying out on Leschenault Peninsula.

Don Spriggins and reserves management officer Paul de Tores and reserves management assistant Gary Davidson agreed with Judi Fletcher that the weekend had been successful.

is to be tested here.

The Shire of Ashburton

had completed the

roadworks, and four

workers from the Karijini

Aboriginal Corporation,

funded by an Australian

National Parks and

Wildlife Service grant,

Next came a visit to

Joffre and Knox Gorges to

shelters and signs.

inspect lookouts.

putting in

toilets,

were

bollards,

"Over the next 14 years

# **Regional staff** meet at Karijini

regional meeting at Karijini National Park in the Hamersley Range.

An informal gathering in the park the night before the meeting brought staff together with rangers' wives, volunteers and Karijini Aboriginal Corporation workers from

Up at six the next morning, some staff joined biologists checking pit and Elliot traps.

They were rewarded by finding a gecko, a skink, a

PILBARA CALM staff a marsupial mouse recently held their formerly known as the little red antechinus.

> At the regional meeting, topics discussed included works programs, the Mt Windell Consultative Environmental Review, the region's volunteer program, aerial burning, the arrival of displays for the Millstream Visitor Centre, the Barrow Island rat eradication program and new visitor facilities being established in Karijini National Park.

Brent Johnson, the new administrative officer, tried to keep everyone out

new financial system, despite both light globes blowing in the overhead projector, due to power surges from the unreliable

park power plant. After brief subcommittee meetings and lunch, the group inspected the new lookouts, camping area and carpark development at Circular Pool, Dales Gorge and Fortescue Falls.

These are within what is now known as the Fortescue Recreation Area. featuring a campground based on a loop design with tent, caravan and group sites.

A self-administered camp fee collection system

Another meeting for the region is planned for Millstream to inspect developments at the Visitor Centre and to make an impact assessment on the eradication

weed program.

ringed brown snake, a stripe-faced dunnart and of the dark regarding **New donation box** Dasylcaluta rosamondae, Oracle, the Department's

A DONATION box has with each box explains to groups to determine what been

erected by the public what their the community views are

Onslow.

CALM at the Four Aces tourist site west of Manjimup.

It's the second donation box to be established in CALM's Southern Forest Region - the first was installed Pemberton's at Gloucester Tree last year. A third box is being installed at the Valley of the Giants. It is planned to install the boxes at various CALM tourist sites throughout the State.

Manjimup forest ranger Tim Foley said donations collected by each district at the various sites would be spent on maintaining and developing those sites. An information plaque

donation will be used for. Mr Foley said the donations system was a

step towards the concept of "user pays" - a concept more familiar in the USA and Europe. Fees had been collected at some WA national parks, he said, especially those near major population centres, where greater demands were placed on facilities and resources.

"The donations system is a good way to put something back directly to each site," Mr Foley said, "without actually charging fees."

The issue of fee collection, especially the collection of camping fees, is being considered in the region and discussions will be held with tourism

on this issue. Reprinted courtesy of the

Warren-Blackwood Times.



A RECENT request to view CALM's maps of reafforested State forest areas around Mundaring had an unusual twist - or was that twig?

The caller was the local producer of the twig pencil seen in craft shops and environmental centres around Perth. The reafforested areas around Mundaring had been replanted with eastern states eucalypts and karri trees, he said, and these provide excellent wood for twig pencils.



Testing the load capacity of a new lookout at Dales Gorge, Karijini National Park are, left to right: Bob Bromilow, Keith Cunningham, Stephen van Leeuwen, Stephan Fritz, Luke Coney, Brent Johnson, Maitland Parker, Geoff Kregor, Peta Shields, Peter Kendrick, Michael Hughes, Ruth Hobson and Wendy Cunningham. Photo by Judith Harvey

# On the right path

A HALF-day rehabilitation exercise at Woody Lake Nature Reserve was one of the more practical sessions of the ninth South **Coast Annual Regional** Seminar held at Esperance recently.

Participants also took the opportunity to inspect recent footpath construction work at Frenchman Peak.

But a major part of the seminar was devoted to identifying actions necessary to implement the CALM South Coast gional Management

Plan.

Much 'lateral thinking' was applied to devise ways of resourcing the plan's implementation.

Scientific adviser John Blyth and senior research scientist Allan Burbidge spoke on CALM's nature conservation strategy review, and South Coast regional manager John Watson and Goldfields regional manager Ian Kealley discussed the international significance of the region. This included a briefing on the possible

#### by John Watson

proposal.

Others attending the seminar included the manager of CALM's Corporate Executive, Dexter Johnston, and regional interpretation officer Lotte Lent.

Updates and briefings on numerous topics included footpath management, fire, dieback, tree establishment, wildlife issues. mining, administration and finance, time management,

# Planning to be practical

Nullarbor World Heritage

TWENTY CALM officers from as far afield as Kununurra and Esperance recently joined with Parks, **Recreation and Planning** Division staff and other regional specialists for CALM's advanced course on recreation planning and management issues.

As in previous years, the course was held at the Ministry of Sport and screation's Point Walter conference Centre. Judging from participant feedback, it appears to have been the most successful to date.

The course included a planning exercise in which syndicate groups were required to assess, formulate and present proposals for development and management of visitor facilities and programs in a CALM-managed park or reserve.

This year's exercise was based on Lake Goollelal, part of the Yellagonga Regional Park that encompasses Lake Joondalup in Perth's northwest corridor.

by Wayne Schmidt

The syndicate presentations, which were evaluated by an expert panel that included staff from CALM's former Metropolitan Region and Wanneroo City the Council, contained a number of ideas and proposals which will prove useful in the future development and

management of this area. Other highlights of the week-long course included a talk on planning for people with disabilities by Pippa Daly-Smith from the Authority for the Intellectually Handicapped.

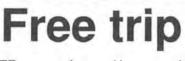
As part of her presentation, Pippa brought along several wheelchairs to enable course participants to experience one form of disability.

The session on visitor safety by Ian Herford also proved stimulating.

Ian also arranged a mock trial in which participants took part in a

court case in which a land management authority was sued for negligence.

Based on a recent WA lawsuit, this version of "you be the judge" proved extremely effective in highlighting legal responsibilities and liabilities as resource planners that managers face.



donated a four-day trip for two to Shark Bay towards a dolphin calf naming competition run by CALM and the Shire of Shark Bay in September.

The dolphin calf was born in the Shark Bay Marine Park during the first week in September, and has since been a regular visitor to Monkey Mia with its mother Holey Fin, one of the oldest dolphins in the Monkey Mia pod.

WA Coach Service, based in Wanneroo, donated the tour - a joint venture with Nanga Station, Shark Bay after hearing about the competition to name the dolphin calf on the radio. The winners of the competition were being selected as CALM News was going to print.

progress with the regional

communications plan and

The seminar is run each

year, and is the only occasion when many

regional staff are able to

meet each other, due to the

great distances across the

region. The intense three-

day seminar included a

quiz night, organised by

regional parks and recreation officer Terry

The annual regional

dinner wound up the

seminar and provided an

opportunity to thank spouses of the District staff

for their support during a year when bushfires and the Sanko Harvest oil spill placed everyone under considerable pressure.

Several awards were also handed out, and the

district

major award went to

operations officer John

Winton for claiming that a

'dead' cormorant he was

transporting in his vehicle

had not only attacked him,

but had managed to change

the frequency on his

vehicle's two-way radio!

response to the award,

finishing with the quote of

the evening, "Well, it could

have happened to anyone!"

John gave an hilarious

Esperance

Passmore.

interpretation strategy.

information/

the

CALM will award a special prize of two conservation publications, North-West Bound and Wildflower Country, to the person who submits the winning name. A special gift pack of LANDSCOPE magazines (WA's conservation, forests and wildlife magazine), complete with binder, will be awarded to the primary school child who submits the best drawing or painting of the calf and its mother.



Hands-on field exercise! Mobile ranger Kevin Hughes and Corporate Executive manager Dexter Johnston discuss the fine art of bollard installation. Photo by John Watson

#### From rogue crocs to rare flora by Carolyn Thomson

and Kalumburu, where

Dave remembers having

great times with the

Fires Board established a

200 kilometre buffer along

rewarding, as a massive

fire that occurred soon

afterwards stopped at the

buffer. The aerial burning

techniques are now refined

and properly operational."

pumping experience for

Dave was trapping rogue

crocodiles in the Ord River.

crocs. Once, we took a film

crew on a trapping

expedition and a 17 foot

crocodile broke loose when

we had it half in the trap. It

broke the ropes just like

they were bits of string.

They got some amazing

footage."

"We caught quite a few

Another adrenalin-

"That was very

topographic features.

Aboriginal people.

Another

experience

**CROCODILES**, Ross River virus and the tropical heat are a far cry from Dave Rose's present location in CALM.

Dave, a CALM stalwart after 20 years with the Department, is now district manager at Moora.

He was stationed at Dwellingup after graduating from Forestry School, and spent time in Pemberton, Collie and Manjimup - so moving to the Kimberley for seven years was quite a transition. "Those were truly

pioneering days," Dave said. "We did trial planting,

conducted botanical surveys and established the arboretum at Kununurra. Knowledge of the region's plants was only basic."

He and Kimberley regional manager Chris Done were the only two Forest Department officers based in the huge region, and there was a lot of ground to cover.

"Chris and I were the first people to drive in to he Bungle Bungle for seven years.

So how does Dave find his new post in Moora, after spending so much time in the Kimberley?

notable "Moora is totally different. It's not quite as was adventurous as handling participating in the first of the aerial burning trials to crocodiles, but the protect the Prince Regent adrenalin still pumps when being chased by a sea lion. River Nature Reserve. "CALM and the Bush

"But we had 15 major fires last season, there are 30 island nature reserves, several national parks and 90 nature reserves to manage, a huge amount of declared rare flora and mining companies to deal with.

"The Kirki oil spill was an experience I won't forget."

Dieback is also a major issue and Dave has been instrumental in forming the Northern Sandplains Dieback Working Party, a cooperative initiative by government departments and mining companies.

Dave, his wife Sue and their three children, appreciate the more temperate weather:

"I have lots of fond Dave and former memories of the Kimberley but I don't think I'll ever go back there to work. It's good to come down to a cooler climate."

**PRIVATE** companies



Jarrahdale forest ranger Peter Gibson (left) and Kalbarri national park ranger David Burton find out what it's like to be wheelchair-bound.

"There was no road access and it took us two days to travel 55 kilometres!" Dave said. "I ended up catching Ross River virus.

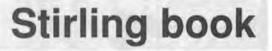
"About two months later, Tony Start, then of the National Parks Authority, asked us to take him in and we spent a week there, exploring many of

the hidden gorges by foot. We punctured 13 tyres in two days."

However, when CALM was established, the focus of the work totally changed.

The two worked in exotic locations like the Mitchell Plateau, Drysdale River National Park, Cape Leveque, north of Broome,

wildlife officer Mike Osborne both bear scars from the trapping expeditions.



THE natural history of the Stirling Range National Park is to be captured in a new CALM book.

The publication is the brainchild of CALM's consultant researcher Graham Hall and principal research scientist Gordon Friend.

Graham and Gordon approached a number of people to write various chapters in their areas of expertise. Contributors include

experts from CALM, the WA Museum, Bureau of Meteorology, University of WA and others.

It will be a similar size and format to Leaf and Branch, and will contain black and white illustrations of the park's flora and fauna.

The book is to be edited by Gordon and Graham, along with Carolyn Thomson from Corporate Relations, and should be available by August next year.

### Weeding out an immigrant

CALM officers at Geraldton are winning the battle against the introduced South African boxthorn on the Abrolhos Islands.

The introduced plant was probably carried to the Abrolhos by seabirds and has the ability to completely overtake large areas of the native flora in only a few years if left to spread. The islands are WA's most significant seabird breeding areas (many of them are nature reserves), and CALM has been working with interest and other groups government agencies to develop a system of marine and national parks on and around them.

"The boxthorns can

grow up to 12 feet high and anywhere from six to eight feet in diameter," wildlife officer Kevin Marshall said. Researchers Andrew Burbidge and Phil Fuller cut out about 70 plants from Pelsaert Island on their monitoring trip last year and Kevin and others removed the boxthorn from Gun and Newman Islands.

However, Kevin is planning another trip to remove about 400 bushes that were recently discovered on Six, Seven and Eight Islands.

"These need to be eradicated before the end of winter to avoid reseeding and further colonisation on adjacent islands.

"However, when this is complete, the plants should be all but eradicated from the Southern Group," he said. The plant is not on the noxious weed list but, according to Kevin, it has spread dramatically and is like "walking through roses". "It is multi-stemmed

and you only have to cut down 12 plants before your chainsaw's blunt," he said.

CALM, in conjunction with other organisations, has recently produced a new visitors' guide to the Abrolhos. This will enhance appreciation of the islands' natural and cultural features, give advice on visitor safety and provide information on caring for the Abrolhos and how visitors can minimise their impact on the fragile environment.



Geraldton district wildlife officer Kevin Marshall releases one of five native black ducks after renovations and extensions to a Greenough wildlife sanctuary. CALM officers gave advice and assistance to the owners of the sanctuary and inspected the enclosures prior to the birds and animals being released there. Photo courtesy of the Geraldton Guardian

### How to rescue a reptile

CALM's Kimberley staff are frequently called on to capture and tend to the wounds of fresh and occasionally saltwater crocodiles.

Depending on the amount of rainfall during the wet season, the spillway at Lake Argyle occasionally overflows. This water eventually runs into Lake Kununurra, after forcing its way through a narrow channel blasted in granite hills in the Carboyd Range.

This overflow causes problems to 'freshies' in Lake Argyle when they are caught in the fast-flowing waters and forced downstream.

Panic-stricken, they struggle desperately until exhaustion, or even death, overtakes them. Being cold-blooded reptiles, they lack the resilience and In July CALM News we had 'Tongue-in-Cheek Birdbanding'. Now read about 'Heart-in-Mouth Crocodile-Nursing' as told by Kimberley district wildlife officer, Russell Gueho.

recovery powers of mammals.

The speed of the water flow also causes problems for those of us who are intent on rescuing these large, bitey-type reptiles in rapids rated as Class 4 in white water rapids.

Crossing the spillway to rescue exhausted and injured crocodiles often results in exhausted and injured rescuers.

And capturing large freshwater crocodiles is not a job for the fainthearted (and triple the worry when dealing with 'salties').

But risks are for the taking, and respect is for the 60 to 70 razor-like teeth in their powerful jaws, not transport medium th promotes bacteriological growth, and sent off to the State Health Laboratories for analysis. That's when the action really gets under way, with

and identify the various species of salmonella carried by crocodiles. (Crocodiles are also sexed during this operation, but that's another story altogether!)

bud), stored in a liquid

For future identification should it return to the spillway, each rescued crocodile is marked by the removal of a thick, horny protuberance known as a tail scute.

The 'patient' is then returned to a quiet backwater in the lake to recover from its bodily wounds and injured pride. We might get the same

boring sunny weather and the same boringly high temperatures all year roun

### Head start for safer cycling THE Bicycle Entrepreneur is offering CALM

neur is offering CALM employees and their families the chance to purchase TCB bicycle helmets, normally retailing for \$49-\$55, for between \$27-\$29.

TCB helmets are attractive, available in a wide range of adult and child sizes and are manufactured in Australia to meet Australian Standards.

The offer has been made possible through the cooperation of the Bicycle Entrepreneur and CALM.

The helmets are being made available virtually at cost through bulk purchasing arrangements.

Helmet wearing for cyclists is expected to become compulsory in January 1992 and this is a great chance for people to buy helmets for the whole family without burning a hole in their pockets.

Tom Wood of CALM's Health and Safety Section said the offer was an important safety initiative.

"A great many CALM

staff cycle to work and it is important that they wear a helmet to help protect them from head injuries should they have an accident," he said.

"At least one CALM employee has had a serious bicycle accident while cycling to work."

Three models are available:

The *Streamlight* (normal retail price \$55) is a lightweight, soft-shell helmet recommended for adults and teenagers who require a sports/performance helmet. It is available for \$29 in blue and white, burgundy and white and orange and yellow.

The Airshell 342 (normally retailing for \$49) is a lightweight microshell helmet suitable for children. It is available for \$27 in black, white, yellow and orange. Sizing pads provide for increasing head size as children grow, expanding the helmet's lifespan.

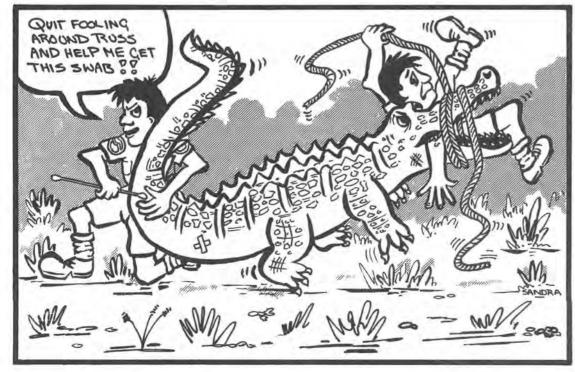
The *Tot Top 342* (normally retailing for \$49), designed for the smaller child, is a scaled down version of the Airshell 342. It is available for \$27.

CALM personnel who would like to take advantage of the offer should phone Health and Safety Branch, who will send them a coupon.

The coupon can then be taken to Bicycle Entrepreneur outlets at 157 Great Eastern Highway in Belmont (phone 277 9181), 475 Charles Street in North Perth (444 3483) or at the corner of Chapman Road and Duralacher Street in Geraldton (099 64 1399).

To minimise paper work for the health and safety section, each district is asked to appoint a coordinator to organise the number of coupons needed for their staff.

If there is enough interest from CALM personnel in districts or regions that have no Bicycle Entrepreneur outlet, the Bicycle Entrepreneur may be able to send a helmet sizing kit to the office and arrange for helmets to be ordered by mail.



to mention the awesome strength of their armourplated body and a tail that could stun a grown man, or break his leg.

The capture technique involves using a rope snare that is run through a six to seven foot length of PVC piping. This is manoeuvred over the croc's head and onto its neck, or lodged between its jaws.

It then becomes a matter of hanging on for dear life until your partner (in whom you have *unquestioning* trust and who really *does* trust you) manages to fling a hessian bag over the animal's head, and covers its eyes.

The next trick is to hurl oneself onto the croc and grab and restrain its jaws.

might be lying in wait in the quiet backwater you've chosen for your landing, can make your scalp prickle with apprehension.

the crocodile deciding it

would rather be elsewhere

(usually, the feeling is

mutual), and the resulting

providing a highly

entertaining interlude for

crocodiles have had to be

floated across the spillway,

with access on one side

only, and although being

washed downstream in

icily invigorating water

and bouncing off rocks

while trying to prevent

further injury to the

crocodile can be an

exciting challenge, the

niggling thought of what

On several occasions

display

gymnastic

passing tourists.

Once a crocodile is rescued, it is treated on site, mostly for severe abrasions to the belly, tail and the pads of its feet. Antibiotics are

administered and measurements taken, then as if its pride had not already been seriously affronted, it is subjected to the indignity of cloacal

swabbing. For reasons of selfpreservation as much as any other, these swabs are *not* drawn from the mouth but from t'other end, where a mucous sample is taken (using a gigantic cotton in the Kimberley burworking here is ... well ... it's d-i-f-f-e-r-e-n-t!

Footnote: Russell reports that during patrols with CALM ecologist Gordon Graham, eight crocodile carcasses measuring up to 1.25 metres were found, and in one two-week period recently, 14 freshwater crocodiles had died in the spillway, bringing the total to about 30 for the year.

> We'd love to hear about any out-ofthe-ordinary experiences you may have had on the job. Put it on paper and mail to us. For address see page 2.