

# CALM NEWS



DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

COMO RESOURCE CENTRE  
DEPARTMENT OF CONSERVATION  
& LAND MANAGEMENT  
WESTERN AUSTRALIA

February 1990



**PLANTING BLUES:** Professor David Bellamy, a strong supporter of CALM's tree sharefarming program inspects two year old Tasmanian bluegums on a Southwest property.

## Tree trust to lead the way

An independent and autonomous company is being formed to implement the State Government's initiative to plant 100 million trees in the South West over the next 10 years.

CALM Executive Director Dr Syd Shea said the creation of the company was a major part of the Government's commitment under the Tree Trust program and would be responsible for funding the entire project.

The new venture has already been given a boost with Bunnings and

WESFI agreeing to both invest \$1 million each in this year's planting program.

This is in addition to the \$1 million the two organisations have already committed to establishing the company.

The concept of planting 100 million trees has been endorsed by British ecologist David Bellamy, with other Australian states contacting CALM for information on how to implement their own schemes.

In the department's new TV commercial,

Professor Bellamy appears, describing the fast-growing Tasmanian bluegum as "the envy of the world" and that the government's program is "showing the world the way."

### GROW TREES FOR PROFIT

The Tree Trust's target planting will run in tandem with the Government's Land and Water Care Program, which was designed to help land owners overcome problems associated with land and water degradation.

A key part of that program was the planting of at least 100 million trees in agricultural areas, also in the next 10 years.

"The combined impact of these two projects will make a major contribution in the fight against the problems of soil erosion, salinity and phosphate pollution, as well as help in the global effort to reduce the greenhouse effect.

"The Tree Fund will also have vital economic implications for the State, as it is expected to generate more than \$299 million in export income annually and create about 4000 new jobs."

Land holders will be assisted with their tree planting programs by CALM and the Agriculture Department.

Dr Shea recently launched the Growing Trees for Profit program

in Albany and Bunbury, attracting several farmers into the new venture.

A "tree line" has been established by the department for farmers in the South West interested in establishing trees on farms.

The department is also advertising in rural publications and inviting farmers to visit existing sharefarming projects in the South West.

Dr Shea said there was no question that the Tree Fund was a realistic project as 8000 ha of commercial hardwood plantations had already been established.

He also acknowledged the contribution of the Federal Government to the development of the scheme.

Senator Peter Cook had been a great advocate of the WA project through the National Afforestation Program, he said, which had contributed more than \$1 million to research and the establishment of demonstration tree plots throughout the South West.

Tree Fund Ltd will be chaired by University of WA Vice Chancellor Professor Roy Lourens.

Members of the board are Ian McKenzie (Bunnings chief executive), Denis Cullity (Western Forest Industries chief executive), Sir Donald Eckersley (South West Development Authority chairman) and Dr Syd Shea.

## FITZGERALD RIVER FIRE

About half of the Fitzgerald River National Park was burnt in late December by four fires lit by lightning.

The park was closed over the holiday period as firefighters fought for two weeks almost continuously from December 15 to 21 and for a further two weeks as crews mopped up and patrolled the long fire perimeter.

(The park was again closed in late January when the same areas were literally flooded - some areas recording up to six inches of rain in one day.)

The fires were the largest and most severe that WA had seen for several years and ran in extreme fire conditions similar to those which caused the Ash Wednesday disaster in the Eastern States.

A total of 152,600 ha of the park was burnt while about 3000 ha of private property was burnt. (Fire perimeter was about 200 km - some sections of the western perimeter taking up to 10 hours to travel. Water was so scarce that it took three or four hours for fire trucks to refill and return to the fire edge.)

At one stage more than 80 CALM personnel from several regions and forest districts were involved in the fire suppression effort within the park, along with numerous Bush Fires Board members and local bush fire brigades from the shires of Jerramungup and Ravensthorpe.

Responsibility for the control and mop up of the various sectors of the fire perimeter was predeter-

by Tanyia Maxted

mined by mutual consent, so that the Ravensthorpe brigade was in charge of the eastern sectors and the Jerramungup brigade assisted CALM on the south-west sectors, whilst CALM was responsible for the long western sectors through the middle of the park.)

The fires started by lightning on December 21 were the most severe (an earlier fire lit by lightning storms on December 15 burnt 5000ha of the Whoogarup Range) as they occurred in severe weather conditions with 40 plus degree temperatures and strong northerly winds followed by strong south westerlies.

Two of the three fires joined up late on December 21 and together burnt out about 100,000ha in about six hours.

The entire ordeal tested the South Coast Region's strengths, stretching their resources, abilities and staff to the limit.

The regional office in Albany was continuously manned from December 15 until January 10, as was the Jacup control point, from where all communications and resources were coordinated.

Additional fire fighting crews and controllers were flown in and driven to Albany from other CALM regions and CALM's contract aircraft (normally employed for aerial ignition operations) patrolled the park several times a day for three weeks.



Fire controller Terry Maher and fire boss Kelly Gillen show Roger Underwood the extent of the fire.

### STRATEGY

At the onset of the fires, fire controller Terry Maher's first concern was for the safety of park users, residents and properties within the park and immediately adjoining the park boundary.

The next priority was to confine the fires to an area as small as possible and in particular to keep the fire from burning out the important fauna rich sections along the park's northern sections.

This was achieved by a direct attack along the flank fires by dozers and fire trucks, as well as back burning from roads and established buffers.

Backburning was only achieved safely by chaining standing bush to a depth of 30 to 40 metres from roadsides.

Strict dieback hygiene controls were enforced on all machinery and vehicle activities in the park. Through the help of Fitzgerald River National Park ranger Chris Hart, important fauna and rare flora sites were identified

and where possible, protected from damage by machinery or fire.

In his post fire report, fire boss Kelly Gillen wrote that the high wind strengths - up to 56 kmph - had increased the difficulty of the suppression effort.

The large area of the

park also presented a problem due to variation in conditions, according to the report.

**Coastal recreation sites spared - page 3**

## UNIFORM BRIEF

The CALM uniform committee has developed a design brief that considers: the CALM image we want to portray; the various functions of the uniform (staff duties and tasks, environmental conditions and public profile); and the range of items of clothing for male and female staff and special conditions groups.

All CALM staff are asked to review the design brief to see that it addresses all the issues and situations the uniform designer must consider.

The brief is available for review at all CALM offices.

Uniform committee chairman Gil Field said all staff needed to agree that our design brief was a good one.

The challenge is then up to the chosen designer to interpret it to the majority's satisfaction, he said.

Gil said he saw the process of providing a CALM uniform as akin to producing a brief for an architect, artist or other consultant.

"You tell the specialist what you want and they come up with the design," he said.

"You don't have a committee do a specialist's job - leave that to the clothing designers."

However, he said, the challenge still remained for the committee to choose the designer that

would best meet the criteria of the design brief, then choose the preferred designs and seek their acceptance by CALM staff.

Send your thoughts on the design brief to Gil Field or make them known to committee members Roger Banks (Nannup), Bob Cooper (Como), Judith Harvey (Woodvale), David Lamont (Serpentine), Alan Lush (Manji-mup), Dave Mell (Como), Jill Southgate (Mundaring/Kelmscott) and Gerard van Didden (Como).



## From my desk . . .

In March CALM will celebrate its fifth birthday. I believe (not surprisingly) that the department has been a success.

We have made mistakes, but our successes far outweigh our failures.

I don't propose to produce a list of CALM's achievements to celebrate, but there is one that does need highlighting. That is, the success we have had to date in producing an effective team made up of all the diverse talents and personalities in the department.

One of the principal reasons for CALM's formation was that it was illogical and grossly inefficient to have three separate land management agencies in this State.

Yet the critics of CALM's formation claimed that it would be impossible to form a cohesive and effective single land management agency for the State.

Well, we haven't fallen apart. On the contrary, CALM's greatest achievement has been our ability to capitalise on the diversity of the people who exist in the department and work as a team.

The obvious proof of this is seen in events like whale rescues, wildfires, management plans and desert burning programs, but I believe a culture of team work has permeated throughout the whole department.

At the time of the second industrial revolution more than 100 years ago, society recognised the benefit of specialisation. More recently it has become obvious that we can magnify those benefits one hundred times when specialists work together as a team to achieve common goals.

In fact, much of what is written about management science today revolves around achieving a teamwork ethic in organisation.

While we have been successful, we can't be complacent. Over the next few months we will be working even harder to promote the culture teamwork in CALM and emphasising the common goals which bind us together.

SYD SHEA

## Rare species located

CALM forester Les Robson has located a previously unrecorded population of the rare flora species *Lechenaultia laricina*, the scarlet lechenaultia, on a nature reserve in the Northern Forest Region.

The discovery of 316 plants on the reserve represents the largest known population of this species in the wild.

Only 138 plants were previously known to exist in WA.

The location of the rare lechenaultia on the nature reserve is significant and the district will establish a protective fire break around the population to provide some protection from wildfires.

## Safety figures

The number of days lost due to accidents in the year to November 1989 was 1304, up 912 on the number lost in the year to November 1988.

(Note that in 1988 CALM recorded the least number of days lost for some years.)

The number of medical treatments rose to 127

in the year to November, up from 122 in the previous 12 months.

Last November there were three lost time accidents and 11 medical treatment accidents.

This year the figures are three and five respectively.

- Tom Wood.

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# Keeping tabs on our coral reefs

A new way of gathering information on WA's coral reefs has been developed by CALM research scientist Jim Stoddart.

Jim has designed an assessment form that can easily be filled out by a recreational diver after exploring coral and then posted free of charge to the department.

CALM Minister Ian Taylor launched the form at Little Island in Marmion Marine Park last month.

## QUESTIONNAIRE

The system will give CALM a clear picture of reef condition in remote locations that are often difficult for CALM officers to monitor regularly.

The questionnaire asks the diver to record any sightings of Drupella snails, crown of thorns starfish and dead coral.

It will produce accurate and comparable information and will be widely distributed through dive shops and CALM offices in Broome, Karratha, Exmouth, Geraldton and Perth.

The forms are post-paid and addressed to CALM. Once filled out, they simply need to be folded and placed in a postbox.

The information gathered will provide statistics for managing reefs for conservation and a regular newsletter will be produced and sent out to divers.

## PUBLIC LECTURES

This approach has been successfully used by the Great Barrier Reef Marine Park Authority to describe the spread of crown of thorns starfish

and the subsequent recovery of coral populations.

Following the introduction of the coral reef assessment form, a series of public lectures will be held in Perth, Geraldton, Dampier and Exmouth.

For further information contact Jim Stoddart on (09) 448 5800.

## VALWOOD NOMINATION

CALM's Valwood process has been nominated for the 1990 Government Technology Productivity Awards.

The awards, this year to be held in Canberra as part of the annual Government Technology Event from February 26 to March 1, are presented to Government depart-

A management system used by CALM in fires, whale strandings and search and rescue operations is being developed by the Australian Association of Rural Fire Authorities.

The Australian Inter-Service Incident Management System (known as AIIMS) will make it easier for Commonwealth,

State and local Government agencies to exchange resources and coordinate effective suppression action during emergencies.

Fire Protection manager John Smart (a member of the group developing AIIMS) said the system had been developed from a similar system in use in North America which was now accepted internationally as the best system available for incident management.

"The Incident Control System uses common standards in organisation and procedures, can apply to any emergency, and is applicable from the smallest to the most complex incident.

"In particular it provides for logical and smooth organisation expansion and, importantly, maintains autonomy for each cooperating service and can be applied to all emergency services.

"This flexibility is achieved through common standards in organisation procedures, communications and technology."

ments and statutory organisations across the three tiers of government around Australia.

The nominating body must have used computer or telecommunications technology to significantly improve productivity.

The conference will cover technical and management issues facing governments today.

Areas examined include network management, artificial intelligence, quality control and computers in administration.

Editor,

It was earlier reported in CALM News that I had successfully completed my graduate diploma in Business Administration.

While this is correct, the opportunity was not taken to express my appreciation for the efforts of CALM's Woodvale Library staff, particularly Bev Arza, who provided me with much assistance in obtaining research information (books) from near and far, through the inter-library loan system.

I would also like to take the opportunity to encourage other managers distributed throughout CALM's network to consider undertaking management courses available by correspondence, even if only selected subjects were studied.

Thanks again to the Library staff.

Alan Briggs,  
Acting Scientific Adviser,  
Forests.

## AMNESTY INTERNALLY

CALM staff members who have "borrowed" books and journals without letting the library staff know will be forgiven if they return the items by the end of March.

Far too many books and journals have gone "walkabout", and given that the library's stock and funds are woefully inadequate, lost stock cannot easily be replaced.

Please check and see if you have any books which should be returned and help the library help other people in CALM who might need to use these items.

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## A letter from two thankful campers

Editor,

Some two weeks ago we camped at Warren National Park for a few days.

Our relaxing stay was made more memorable as a result of an informative encounter with the ranger whose name we recall as Tony Tapper.

He took the time to explain the nature of the flora to be found at Warren and shared his knowledge of others parks in WA with us.

Both these matters were most useful as we have not long been residents here and do enjoy camping.

Sharing a cup of coffee with the ranger was certainly a highlight and our knowledge of flora, in particular orchids, is certainly richer for the experience.

Yours faithfully,

Lorna and Fred Garner.

# Staff News

## Promotions

Margaret Wilke, Administrative Assistant, Public Affairs; Stefan Dumitro, Chief Clerk, Finance, Como; Malcolm Graham, Senior Reserves Officer, Katanning; Jon Murch, Manager, Resource Management, Como; Jan Sutton, Establishment Officer, Human Resources, Como; Cliff Winfield, Information Officer, Manjimup; Phil Durell, Forester Grade 1, Walpole; Phil Davies, Clerk-in-Charge, Workers' Compensation and

Rehabilitation Commission and Natalie Littlefair to Administrative Assistant, Walpole.

## Transfers

Gary Muir, Forest Ranger, to Walpole; Nathan McQuoid, Park Ranger, D'Entrecasteaux National Park; Ric France, Ranger in Charge, Stokes; Arvid Hogstrom, Trainee Park Ranger to Walpole-Nornalup; Barry Hooper, Forest Ranger, to Mundaring; Peter

Hutchison, Training Officer, Murdoch House; Mark Reed, Forest Ranger, Manjimup; Allen Grosse, District Manager, Broome; David Rose, Acting District Manager, Moora.

## Appointments confirmed

Ron Kawalilak, Manager, Public Affairs; Kathy Haley, Officer, Camarvon and Roy Wills, Research Scientist, Manjimup.



# THE BRIGHTER SIDE OF WILDFIRES

by Lachlan McCaw

The Fitzgerald wildfires provided the opportunity to gather valuable information about the behaviour of fire in mallee and heath vegetation during extreme fire conditions.

Much information can be gained from careful analysis of wildfire spread patterns, provided that basic data is available for weather conditions, fuel types and location of the fire at successive times.

Studies of this type were conducted following the large forest fires at Dwellingup in 1961, Boorara in 1969 and the multiple outbreaks associated with Cyclone Alby in 1978.

Fires of large size and high intensity cannot generally be implemented

as part of an experimental program because of cost and safety limitations.

Therefore analysis of wildfires provides the next best means of extending the range of data available to the researcher.

Weather data from an automatic weather station located near Jerramungup have been made available by the Agriculture Department.

Wind gusts in excess of 56 kmph were recorded on December 21 when the main fire run took place.

Preliminary analysis indicates that fires may have spread at up to 8 kmph during this period.

High rates of forward spread are characteristic of fires in mallee and

heath.

During the current program of experimental burning at the Stirling Range National Park spread rates of 3 kmph have been recorded on days of only moderate fire danger rating.

Useful observations were also made during the Fitzgerald fires with regard to which fuel types continued to burn overnight.

As a rule, fires went out overnight in the sparser heath fuels but continued to burn steadily in the litter beneath the mallee thickets and yute woodlands.

These fires provided potential sources for flare-ups on the following day.

The fact that fires

burnt through vegetation of a wide variety of types and ages provides an opportunity to determine the length of time for which fuel-reduced buffers remain effective.

Post fire plant and animal responses will also be a high priority for research.

By making good use of the research opportunities provided by the Fitzgerald wildfires, it should be possible to improve the fire management of all parks and reserves in the mallee/heath zone.

**WELCOME SUPPORT GIVEN**

## FITZGERALD RIVER FIRE

from page 1

While cooler conditions during the night made it possible to attack flank fires and eventually control the fire, they hindered efforts when burning edges, pockets and constructing breaks.

Vegetation fuels within the park consisted of varying densities of mallee-heath with yute woodlands occurring in riverine and swamp situations.

Edge burning of standing bush which did not produce total defoliation presented a future risk as fire could come back out through the unburnt tops under a wind change - a situation experienced on a number of occasions during the fire resulting in fire escapes that required instant attention.

### THE TASK AHEAD

The fire aftermath has brought several different sections of CALM together to back up ongoing efforts by the South Coast Region.

Fire controllers, fire protection, managers, planning, volunteer coordination, policy, public affairs and research staff have become involved in the post fire effort to deal with rehabilitation, future fire control measures, local park usage issues, public education, commu-

nication and continuation of the park management plan.

Debriefing sessions have been held in Albany, Ravensthorpe and Perth between fire authorities, CALM staff and conservation group representatives.

A trip to look at management plan issues (including recreation, landscape and access aspects) on site and a research reconnaissance trip to evaluate the impact on flora and fauna have been planned for this month.

Concerns include endangered fauna such as the ground parrot and the fact that there are hungry foxes on the prowl and no cover for wildlife. Research scientist Steve Hopper has predicted a superb orchid season for spring.

In the park itself, rangers have started replacing bollards and railings on closed tracks, and will soon begin the long task of constructing erosion barriers on fire tracks and roads to prevent further erosion damage.

Most of the coastal recreation sites have been spared, but in other areas facilities have been totally destroyed.

It is anticipated that with volunteer coordinator Colin Ingram's help, a volunteer effort to help reinstate these facilities and rehabilitate damaged sites will soon begin.

## AWARD RESTRUCTURE FOR A.W.U. by Alan Scott

The national and State wage decisions of August and September 1989 maintained the trend established in

previous decisions and linked structural efficiency with current and future wage fixation.

In doing so, the Industrial Relations Commission ruled for a six per cent increase to be paid in two instalments no less than six months apart.

Last October the Australian Workers' Union and CALM agreed to restructure the AWU Award to increase

productivity and efficiency as well as provide opportunities for more rewarding jobs.

A memorandum of agreement was ratified by the Industrial Commission and an order was issued to grant a \$12.50 per week wage increase to AWU employees in CALM.

The following letter appeared in The Albany Advertiser in mid-January after a person's comments on CALM's burning methods during the Fitzgerald River National Park fires. Its heading:

Fire control a tough and thankless job.

"- you have the right to comment, but I was out there for 10 days including Christmas.

I was impressed by the way CALM controlled the fire which was started by lightning in four different places in the park, which consists of 260,000 ha.

Their main concern was for the private property adjoining the boundaries of the park but they also protected, where practical, as much of the flora and fauna as possible.

Some of the country out there is impossible to get to even by bulldozers.

I think CALM did an excellent job, and as for all the men and women who were out there, they put in extremely long hours and it's a credit to them.

So unless you were out there, I suggest you "shut up and butt out" or apply for a job with CALM for the position of fire controller for the State.

Perhaps you will realise what a thankless job it can be.

Rolly Hindriksen,  
Albany.

Editor,

I was very pleasantly surprised to find a photograph and article on my retirement on page one of the Dec/Jan issue of CALM News.

I would like to thank you for the kind comments, but would also like to correct a couple of points for the sake of accuracy.

\* I became chairman of the WA Scout Executive, but was never a commissioner, and I am still a vice president of the WA Branch Council.

\* I lectured part-time (at night) at Wembley and Perth Technical Colleges and at Curtin University for a total of 11 years from 1965 to 1976.

Keep up the good work,  
Regards,  
Peter Hewett

## HELITORCH THE RED

### DRAGON

A training school for the new Helitorch incendiary device was recently held at Como in the Bush Fire Board's lecture theatre, followed by a practical field day at Jarrahdale.

### IGNITED PETROL

The Helitorch is a device that dispenses ignited gelled petrol in large droplet form to start fires for controlled burning operations.

The unit is carried as a slingload underneath a helicopter and can be jettisoned by the pilot in an emergency.

Also known as the Red Dragon, it has special application for the construction of fuel-

reduced buffer zones in coastal heaths, and lighting regeneration burns in hardwood forests.

Originally designed in New Zealand, the Helitorch was imported to Tasmania in 1985 and was extensively modified to meet Australian conditions.

Two further units have recently been built in Tasmania out of steel, which has made the unit particularly heavy.

CALM's protection branch are building two units out of aluminium to save weight.

The Como course was attended by CALM staff Gary Kravanis, Larry Hantle, Bob Selkirk, Greg Mair, Tim Mitchell,

Ben Slynn and David King and Bush Fires Board representative John Bradford. (Also observers John Smart and Rick Sneeuwjagt.)

Training was provided by Tasmanian Forests Commission assistant fire management officer Peter Bennett, Westcoast Helicopter Services helicopter pilot Tom Osborne and Gerard van Didden from Como Fire Protection.

The course included practical and theory on the Helitorch operation - mixing gelled petrol, helicopter safety and general and safety requirements and aspects.

## Project success

by Frank Batini

ACIAR Project 8613, Fuelwood and Sandalwood Silviculture in East Indonesia, has made sound progress since its inception late in 1987.

CALM is the commissioned organisation for the project, working in cooperation with the Indonesian Ministry of Forestry Research Station at Kupang.

The project has completed three planting seasons of trial plots in West Timor, testing a wide variety of species for fuelwood for their adaptation to the soils and climate of Timor.

Several of the introduced species - *Eucalyptus tereticornis*, *E. camaldulensis*, *Acacia crassicaarpa*, *A. ampliceps* and *A. holosericea* have made excellent growth and have real promise for the production of fuelwood in the region.

In the first season of trials, about 25 tree species considered to have potential for fuelwood were successfully established, along with the several local species as "markers" for the growth of the introduced species.

In the second year, species selection concentrated on multi-purpose trees that would have value for fodder as well as fuelwood, since Timor has a large and important beef industry.

Plots were also established on a wider

range of soils to cover all three main soil types on the island, and in two climatic zones - the drier lowlands and the cooler, wetter highlands around Soe.

Preliminary results from the second series of trials indicates that *Sesbania formosa*, from the north of Australia, has outstanding performance on the difficult Bobonara clay soil type in the highlands, greatly exceeding the growth of *Sesbania grandiflora*, widely used as a fodder plant in the province. Unfortunately, it is also very attractive to the local deer, *cervus timorensis*.

### PROMISING SPECIES

For the third year of the project there was another change in emphasis. Some new species introductions took place, there were provenance trials of the most promising species, further studies of the potential of *Sesbania* species and the establishment of relatively large scale production trials of fuelwood and fodder species.

The latter will be used for further research on cultural techniques.

The second part of the project is research on the regeneration of the culturally and economically important

*Santalum album*, or cendana, of East Indonesia.

This research is being carried out at Curtin University in Perth and in Timor.

It has not made as rapid progress as the fuelwood species selection as cendana is not as fast growing as the other species.

Nevertheless, useful work has been done on the germination problems and on screening nursery-phase host plants.

Like its Australian relative, cendana is a parasitic plant which must attach itself to the roots of host plants to survive. It appears that at this stage a two-stage host arrangement is required; one small and relatively short-lived host to provide sustenance to the cendana for the first 12 months, and a second, long-lived host thereafter.

There is some evidence that the best regeneration of cendana is achieved in partial shade, and with a mixture of secondary host species.

The final part of the project is the improvement of the research capacity of the Kupang research station by staff training and the provision of some equipment. Two research officers from Kupang visited WA last year for a five week intensive training period. Others are expected to follow this year.

On January 17 a group of CALM managers and AWU delegates were addressed by Dr Shea in Bunbury to discuss the consultative process necessary to investigate the issues related to improved productivity and job satisfaction.

Dr Shea spoke briefly about Australia's

economic position and told the meeting that CALM had a significant role to play in reducing the balance of trade deficit.

He said one example of this was to produce more timber. This, he said, would increase our export dollars and reduce our dependence on the

importation of timber. "It is inconceivable", he said, "that we grow the tallest trees in the world yet we still import timber and timber products."

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One of CALM's Aboriginal employees, Wildlife Officer Trevor Walley, often gives lectures about his work to Aboriginal groups.

## CALM set to double Aboriginal employees

An Aboriginal Employment and Training Plan just released by CALM aims to double the number of Aboriginal employees in the next five years.

The plan was prepared by Isabelle Procter, herself an Aboriginal, during six months she spent with the department as part of the Executive Development Year Program.

One of the most important recommendations has just been imple-

mented, with the recent appointment of an Aboriginal employment and training co-ordinator for 12 months.

### EXTENSIVE CONSULTATION

There was extensive consultation with all groups of CALM employees, outside Government agencies and representatives of Aboriginal groups during the preparation of the plan.

"The plan will address

equitable distribution of Aboriginal men and women in various job categories throughout the Department," said Aboriginal Policy Adviser Mary Colreavy.

"It will address career development, such as training programs, as well as recruitment," she said.

The plan aims to consolidate CALM's excellent record of Aboriginal employment.

CALM operates in remote and rural areas where its programs are

much more visible and relevant to Aboriginal people and where Aboriginal populations are much higher than the State average.

### EXPERTISE

There are also many natural abilities and areas of knowledge and expertise which Aboriginal people offer CALM.

The plan recommends using Aboriginal staff within CALM to promote recruitment of additional Aboriginal employees.

# On the scent of sandalwood

**CALM Rural Adviser Pat Ryan advises landowners on revegetation and conservation on non-CALM lands.**

Seeking his advice are farmers, local and State government authorities as well as the general community.

Pat oversees some agroforestry plots in the higher rainfall zones near Eneabba and Badgingarra, but this is not a high priority in the dry Wheatbelt and northern sandplains.

### REGENERATION

He's also on the scent of aromatic, and valuable, sandalwood.

"Sandalwood timber was the first export from this area," Pat said "but it has been cut out from the Wheatbelt since early this century."

CALM is now looking at regenerating sandalwood through direct seeding, he said.

Pat claims to have had some success at getting farmers to plant sandalwood on degraded, non-arable land.

Sandalwood needs a host plant, such as jam (*Acacia acuminata*), and it takes many years to mature.

### DEMONSTRATION SITES

"It probably takes about 50 years to mature but no-one has ever done it so you don't know for sure," he said.

As a comparison, he said, it takes 40 years to grow a decent pine crop.

Five demonstration sites have been established on farms in various areas and it appears that in the Wheatbelt, sandalwood is relatively easy to regenerate from fresh seed.

Pat said that Shark Bay sandalwood was of special interest, as it had the ability to coppice

readily.

With soil erosion and salinity on cleared farmland a major concern, Pat has been trying to get farmers to grow windbreaks and take other measures to improve the quality of their land.

He also supports the development of corridors all over the country.

### ATTITUDES CHANGING

Pat said farmers' attitudes were rapidly changing and CALM's rural advisory service couldn't keep up with the pace.

He pointed out that in Morawa Shire alone, 100,000 trees would be planted this year.

"Some farmers are planting 7000 to 10,000 trees per year and, in the past, many farmers have fenced off areas of remnant vegetation without any government assistance."

## ...sorry wrong number at

## Survey unveils new species

A CSIRO wildlife survey of the Purnululu (Bungle Bungle) National Park has turned up several new and rare species.

New species of turtle (*Celodina* sp.), gecko (*Gehyra* sp.) and two skinks (*Lerista* sp. and *Ctenotus* sp.) were recorded.

The CSIRO, assisted by park ranger and keen bird-spotter Bob Taylor, recorded at least 134 bird species in the area, including the rare and endangered Grey Falcon and the Red-capped Robin, a southern species that is rarely seen in the

Kimberley.

The CSIRO recorded 30 species of mammals in the park and found an abandoned burrow system, possibly that of bilbys, which were thought to be locally extinct.

Purnululu Community leader Raymond Wallaby also told the CSIRO that several other species were, and perhaps still are, present in the Park.

These include the quoll, bilby, spectacled hare-wallaby, golden bandicoot and possum.

Bob Taylor has also seen an unidentified

mammal unlike any on the CSIRO list.

It would seem that the park is a transition zone for fauna, as the species composition has elements of the wet/dry tropics and arid Australia.

About 500 plant specimens of about 250 species, ranging from rainforest to arid species, were also collected. They are still being identified at the NT Herbarium.

This was the first time a detailed fauna survey had ever been done in this area.

A further survey during the late-dry to

early-wet is now underway.

Aboriginal trainee rangers at the park assisted the CSIRO scientists throughout the study.

The CSIRO team benefited from their cultural knowledge of 'bush' botany and zoology and the trainees learnt fauna and flora sampling and recording techniques.

District manager Mark Pittavino said the information being collected on the natural resources of the Park would be invaluable for management.

## Chain saw pants and chaps

In 1986 when chain saw pants and chaps were made compulsory for saws used on a continuous basis a number of operators deemed the equipment unnecessary.

Over the past three years there has been an acceptance that the pants-chaps are an additional safety measure and are therefore worthwhile.

During this time there has been a number of personnel who have been saved from serious leg injury while wearing the pants and chaps and would now be thanking the department for its foresight.

It is pleasing to note

that other government departments have followed our lead.

In a recent issue of the Main Roads Department Safety Bulletin a lead story appeared illustrating an operator who had been saved from serious injury by wearing chain saw chaps.

It must be remembered, however, that protection does not take the place of good safe working practices.

As we were the first organisation in WA to introduce chain saw pants, this story adds to their worth and points out that we are still amongst the leaders in health and safety initiatives.

## Stepping out in style

Visitors to Hamersley Range National Park have been stepping out in style.

Six men from the Ngudarra Banjima Corporation of Onslow were employed under an Australian National Parks and Wildlife Service (ANPWS) scheme to install new steps into Kalamina Gorge and upgrade those to Joffre Falls lookout and into Weano Gorge.

Local rock was used for the risers and the tread was a blend of concrete and red dirt, to complement the surrounds.

Kalamina is one of the most accessible gorges, and will become a day picnic area.

Although access to Weano is steep, it has been made safer with the upgrading of the steps and a number of elderly visitors have tackled the climb.

Another ongoing ANPWS-funded project employing people from the same corporation is the fencing contract being carried out at Hamersley Range.

Cattle from neighbouring stations have been entering the park along creeks and tributaries of the Fortescue River on the western border.

Fifteen kilometres of fence is being erected from ridge top to ridge top in strategic areas.

Perth radio station 6WF discovered they had a new category of audience last month - listeners with termite mounds in their backyards.

Public Affairs ran Dr Tony Friend's plea for termite mounds in the media for the captive numbat breeding colony and came up with more mounds than he, his technical assistant, and Woodvale's receptionist could handle!

### INTERVIEW

While the West Australian ran an article pleading for mounds, both 6PR and 6WF interviewed Tony on air from Beacon where he was on a field trip to track numbats in Karroun Hill nature reserve.

6WF initially gave out CALM Public Affairs' fax number as the contact, but when the presenter - Greg Marston - gave out the correct ones, the phones ran hot. One caller even stopped his car to call in from a telephone box!

### SUCCESSFUL PLEA

Some 60 callers left details of their mounds for Tony's return. As well as the collection of all these mounds, Tony also had to look forward to making peace with Woodvale's receptionist, to whom he had promised a bottle of port.

The successful mound plea meant that the nine numbats, who were in the middle of annual mating

rituals, would be up to their ears in termites for the rest of their stay.

Something that, if you ate about 20,000 termites a day to survive, you'd be pretty happy about too.

## NEW PLANT SPECIES

by Vicki Hamley

Angora goats and a blue-tongued skink led to the discovery of an undescribed plant species in the wheatbelt recently.

The Herbarium's Ray Cranfield and Phil Spencer carried out a rare flora survey north east of Merredin last year.

While searching granite rock pools for the declared rare species *Myriophyllum petraeum*, they were surprised by two angora goats with kids.

"We scooted around the rocks to get a closer look at the goats," Ray said "and instead came across a blue-tongued skink drinking from a deep rock pool."

"Floating on the pool was an unfamiliar species of *Myriophyllum*."

On their return to Perth, the pair sent specimens of the plant to *Myriophyllum* expert Dr Tony Orchard at the Tasmanian Herbarium.

Tony declared it a new species! He said the plant is closely related to *Myriophyllum petraeum*, but differs in a range of characters including fruit shape and size, number of stamens and leaf shape.

Seven numbat young have so far been born. The breeding colony is due to return to the zoo later this month.

Ray's plant collection has now been designated as the species type on which Tony will base the scientific description.

## Field days for farmers

A series of field days on CALM's pine sharefarming and bluegum establishment projects were recently organised by South Coast Region staff.

Although only a small number of farmers attended, the interest was high and several additional properties are likely to be considered for tree establishment as a direct result.

Thanks are extended to John O'Dea (*Manypeaks area*), David Treeby (*east of Porongurup*) and Heytesbury Holdings (*Rocky Gully*), to Terry Maher and Barry Jordan, CALM Albany office and liaison officer Ross Young.

- John Watson



# Shore survivor

CALM has once again put itself on the map as a world-leader in the whale rescue business.

When a scamperdown whale was returned to the Indian Ocean in late December it was the first time in Australia that a beaked whale had ever been rescued and released.

The animal was found by tourists on Dunsborough Beach late on December 27 and wildlife officers Ray Smith and Mark Barley arranged for it to be held overnight by Westwhales volunteers.

## VIOLENT SPASMS

The animal, a female about three metres long, suffered violent spasms on the first night but by the next day its condition had stabilised and continued to improve. It had no external signs of injury.

When wildlife officers Doug Coughran and Peter Lambert arrived on the scene on Thursday morning it was decided to hold the whale for a further night.

"Had it been released on Thursday I don't think

## Stranding success

it would have survived, as it was very stressed," Doug said. So for two days, dozens of Westwhales volunteers and other concerned members of the public nursed the whale in the shallows.

Fortunately, holding the animal for another night seemed to make the world of difference, and when a local vet checked it on Friday morning - just before the release - it was in good condition.

He gave the animal a shot of antibiotics, then freeze-branded it and took a blood sample for research purposes.

## SWIMMING STRONGLY

Wildlife officers used a boat belonging to local fisherman Alan Miles to release the whale at 12.20 pm on Friday about four to five kilometres west of the Cape Naturaliste lighthouse.

They tracked the animal, which was heading west and

swimming strongly in about 178 feet of water, for some distance.

CALM General Manager Roger Underwood said the release was a credit to CALM officers and the many volunteers who participated in the rescue.

According to the wildlife officers on site, the new whale trailers proved to be invaluable during the rescue; the gas lighting, lanolin, canvas slings, barricade tape and other equipment were all used extensively.

## GREAT ADVANTAGE

"The fact that the trailer was on-site early on in the piece gave us a great advantage," Peter said.

The carcass of a male scamperdown whale was found a few nautical miles west of the live stranding.

Ray Smith recovered its body and will arrange a post-mortem in Bunbury to determine the cause of its death.



## Rockhoppers head home

CALM wildlife officers are hoping that three Rockhopper Penguins that stranded on the WA coast recently have safely returned to the sub-Antarctic.

The trio were released by Bunbury wildlife officers Ray Smith and Mark Barley behind St Aluoarn Island at Augusta in February.

From there, they should have easily found the currents that will take them back to colder

climes.

The penguins, which usually inhabit rocky areas on sub-Antarctic islands, were found emaciated and ready to moult.

Two of the birds were taken under the protective wing of Rita and Norvall Watts of FAWNA, a wildlife rehabilitation group near Busselton. The third, found at Safety Bay, was cared for by CALM's ranger on Penguin

Island, Gerry Deegan.

Rockhopper Penguins don't eat or drink during moulting, which takes about three weeks. When they've finished shedding feathers, they head back to sea.

The birds hop with great agility over rocks with their feet together and jump into the sea feet first, instead of diving like other penguins.

Rockhoppers (or Rocky as they are all affectionately called)

have been visiting our coast for a number of years.

Next year CALM research and wildlife officers will band the birds and hopefully be able to keep tabs on where they end up with the help of Antarctic researchers.

The banding will allow documentation on whether the same birds revisit the WA coastline, the frequency of visits and when and where they come ashore.

## Volunteers needed

Volunteers are needed for Perup Field Study Centre courses.

In past years these popular courses have run on four weekends, two in autumn, two in spring - in conjunction with University Extension (UWA) - and an annual course for CALM staff.

Previous courses have concentrated on the mammals of the Perup, but now four new courses are proposed for this year specialising in plants, wildflowers and birdwatching.

Each new course will be run by two CALM volunteers, one as a specialist and the other as a group leader.

If you have already participated in a Perup course and are interested in volunteering as either a specialist or leader in these weekends of learning, fun and fellowship, contact course coordinator Cliff Winfield at Southern Forest Region office, Manjimup.

A special course will be run during the week on March 27 and 28 for potential specialists and group leaders.

The course will be free to bona fide volunteers with a strict limit of 16 places.

Contact Graham Norrish at Manjimup District office for an application form.

Farmer, keen diver and wildlife enthusiast Ted Wright isn't your average cocky.

Over the years Ted has played an active role in wildlife conservation in the Augusta area and established an excellent working relationship with CALM wildlife officers.

Ted has dived in the waters around Augusta all his life.

As a result, he was one of the first people to notice the reappearance of the New Zealand fur

# The Wright stuff

by Carolyn Thomson

seals that were hunted to extinction along this coast last century.

Ted and CALM Wildlife Officer Peter Lambert were diving in the area when they noticed three seals perched on one of the rocky Flinders Bay Islands.

At that stage the 34 islets off Cape Leeuwin where the seals were seen

were classed as vacant Crown land, and CALM set about having them proclaimed "A" class reserves for fauna conservation.

CALM officers now survey the islands every year to monitor the seal population.

Ted usually accompanies them on the survey, providing

assistance and back-up with the use of his boat.

"Ted is a practical conservationist. He has grown up with the ocean environment and can appreciate both sides of the story," said Peter.

"He has seen South-West coastal areas when you could walk to the ocean edge and see blue proper feeding at the edge of the rocks."

"I first became involved with him through diving but we soon realised that we had a common interest in conservation," said Peter.

## MASS WHALE STRANDING

The relationship built up with Peter and other CALM wildlife officers over the years produced even greater spin-offs for CALM with the first mass whale stranding in Augusta in 1986.

A rescue operation of that magnitude obviously involves a huge amount of organisation and large commitment of resources.

CALM needed a base for communications, media liaison, food preparation to feed the hungry volunteers, and sundry other tasks.

They turned to Ted, who willingly allowed CALM to use his holiday home at Augusta.

His house has since been used in the mass whale stranding in 1988

and the mass dolphin stranding of 1989 and during wildlife surveys in the area.

During whale rescues he is always in the background.

"Ted provides a lot of local knowledge: when we need a front end loader, a generator or 50 hot dinners Ted knows where to go to get them. He provides his boat and his expertise of local waters," said Peter.

He also provides a valuable 2-way radio link between his house and control points on the beach.

"As a young man I was a keen hunter and spear fisherman, but by middle age I began to change. I saw the abundance of wildlife 40 years ago and since then I have seen the numbers of plants and small animals wiped out because of clearing," said Ted.

"In the ocean I have seen the fish population go down perhaps by two thirds in that time - I realised that we were only here for a moment in time and something has to be left for our children and generations to come."

Ted's wife Glenys has also taken an active interest in wildlife issues.

She is a keen wildflower photographer and a local authority on orchid species; she has been used in the mass whale stranding in 1988 to CALM in locating and

reporting populations of rare orchids.

Glenys is also Ted's back-up: when he is at whale strandings she'll go on running the dairy farm at Witchcliffe, and at night she'll bring food and clean linen down to the house at Augusta.

Ted most recently accompanied CALM personnel on a survey of the Flinders Islands in December.

An experienced boatman, he skippered his boat around the treacherous, swirling waters of the rocky islands, allowing wildlife officers to get close enough to make an accurate count of the fur seals.

In all, seven seals were perched on the rocks, occasionally plunging into the chilly waters for a swim and a fish. Australian sea-lions are also sometimes seen in the area.

Wildlife Officers Ray Smith and Mark Barlee disembarked on the larger St Aluoarn and Seal Islands.

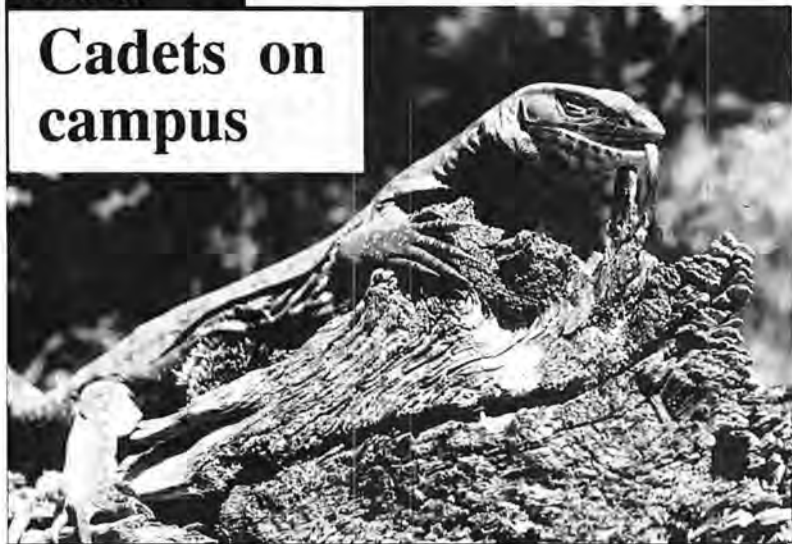
On Seal Island there are large populations of nesting terns; they carefully counted about 200 bridled terns and 250 crested terns warily guarding their nests from the watching gulls.

Cormorants, shearwaters, oystercatchers and several rock parrots were also seen.





## Cadets on campus



**Nature study:** this goanna was sunning itself on a roadside log in the Margaret River area when it was photographed by CALM cadet Derek Wright. The other photographs were also taken by Derek of the cadets at work. Above centre: First year cadets survey Picton Church grounds in an effort to map contour lines supervised by cartography lecturer Ken Dunne. Above right: Kieran Stack puts the finishing touches to his insect collection.



# Feral palms

Many of our national parks have feral animals - be they goats, pigs, donkeys, foxes, or even camels.

But CALM officers in the Pilbara are battling a menace of a different breed - feral palms.

Date palms were planted in Millstream-Chichester National Park last century by Afghan camel drivers who transported stores from the port of Cossack to inland sheep stations and mining towns.

The palms have now almost taken over the lush tropical Chinderwarriner Pool near the old Millstream homestead, crowding out native vegetation and creating a fire hazard.

"The rate at which fuel loads build up around the dense palms is incredible," said Pilbara regional ecologist Peter Kendrick.

Burning also wipes out the indigenous species and promotes the growth of the date palms.

### ALMOST IMPOSSIBLE TO KILL

So just how do you kill a date palm?

According to Peter you have to cut them down, dig them up and carry them out.

He claims it may take as long as 20 years to bring the feral palms under control.

"The palms are very sturdy and almost impossible to kill - they have a huge root mat and a very resilient trunk," he said.

"They sucker, so if you don't cut them close enough to the ground they produce a miniature forest.

Peter said ecological control wasn't viable.

"If we introduced the palm beetle that has recently become a problem in Broome it may also threaten the native

Millstream palms.

"Date palms fruit when they are quite young so they are a menace from a very early age; at the moment we are employing a worker full-time just to grub out the little ones."

Some date palms have been dug out and sold to members of the public - a few of which now make an impressive spectacle at Buckland Hill, near Fremantle.

But removing the trees in this fashion can

only have a limited effect when there are literally thousands of them.

Most members of the public now regard the palms part of the park's attraction. They are undoubtedly an interesting part of the park's early European history, so any attempt to eradicate them will have to involve public education.

The most practical solution is to remove the female palms and leave the sterile males.

## Vicious cycle

**Quick action by CALM staff recently helped two cyclists involved in a bicycle accident outside Public Affairs' office in Crawley.**

The cyclists collided on the bikepath at the corner of Hackett Drive and Stirling Highway.

Stella King from the Crawley Head Office was cycling home from work when she spotted the two men, who were dazed and bleeding.

She rushed into Public Affairs to telephone an ambulance and the men's families.

CALM's Louise Burch was soon on the accident scene with bandages, water and ice.

One cyclist sustained only superficial injuries but the other had received a bad knock on the head.

Fortunately they suffered no permanent damage, although one cyclist had a cracked skull and spent several days in hospital.

Public Affairs staff notified Bikewest about the accident and a meeting was arranged on-site with engineers from Bikewest and City of Perth.

City of Perth are now examining a request to remove shrubs that obscure sightlines and to redesign the path to make it less dangerous.

Bikewest has also urged all cyclists to wear an Australian Standards-approved helmet.

## Research Bulletin

CALM recently published *Jarrah Dieback: The Dynamics and Management of Phytophthora cinnamomi in the Jarrah (Eucalyptus marginata) Forest of South-western Australia* by B.L. Shearer and J.T. Tipper.

Edited by Marianne Lewis, the bulletin integrates information relevant to the management of the jarrah forest in the presence of *P. cinnamomi*, focussing

primarily on research carried out by CALM and the Forests Department since the 1960's.

Additional funding for the research was provided by a Foundation for Jarrah Dieback research.

Much information had been obtained on the biology of *P. cinnamomi* in Australia and overseas. However, most of this had been published in technical papers or reviews or existed as

unpublished reports or files. Limited attempt had been made to provide a readily available and comprehensive synthesis of the various interactions between *P. cinnamomi* and the jarrah forest ecosystem.

The research bulletin looks at the jarrah forest environment and vegetation, its diseases and their dynamics, assessment of damage, disease management and research priorities.

## OAR-INSPIRED!!

by James Smith

**Twenty three CALM staff recently competed in the annual Swan East Fremantle Dragon Boat Club Regatta at East Fremantle.**

A motley-yet-dedicated crew represented the department, drafted together by Bob Mitchell and Les Marable.

CALM's mixed team was pipped at the post in the first heat and didn't manage to qualify for the final.

Nevertheless, CALM's mens team - complete with macho girls Jenny Smith and Sharon Eccleston - came second in their first heat, successfully beating the

S.A.S. team and qualifying for a finals position.

CALM managed a creditable fourth - just missing out on third spot by Readymix and Primaries Wool Stores.

Barbecue dinners and trophy presentations concluded the day's events at the Swan Yacht Club, and proved a time to reflex on our efforts for the day - not to mention the recurring back pains.

Thanks must go to the spectators, team manager Bob Mitchell, coach Les Marable and all of CALM's 23 person crew who put in the hard work to make it a successful event.

## BOOK REVIEW - Mountains Without Handrails, Reflections on the National Parks, by Joseph Sax. University of Michigan Press, 1980.. 109pp.

by Ian Rotheram

**Have your thoughts about national parks been getting a little stale? Then I recommend this short book to you.**

*Mountains Without Handrails* is persuasive in arguing that visitors to a national park should not just be spectators of nature, but should have to immerse themselves to some degree in the natural setting of that particular park.

Only then, it is

claimed, can visitors have an experience which involves the senses, stimulates the mind, teaches them about nature and shows them something about themselves.

To do this, according to author Joseph Sax, the parks service should not be catering to tourists' demands for entertainment, but should be offering the national parks as an experience requiring some

commitment on the part of the visitor.

People who go to national parks want and need something quite distinct from, and more demanding than, a Disneyland.

*Mountains Without Handrails* doesn't claim that everyone can or should hike for days in the wilderness in order to immerse themselves in nature.

A large number of visitors to national parks do indeed come "...ready to take the plunge if a practical opportunity is presented", but being urbanites find "...the wilderness backcountry is too rugged for him and the popular gathering places too urbanised."

Many visitors to national parks are too inexperienced or too old to plunge into the backcountry, so it seems essential to Sax "...that places that are accessible to them are not so deprived of their natural qualities as to put (an immersing) experience beyond their reach."

A major theme of the book is that if the first step onto the trail leads to an adventure in nature, it

could also lead to the wilder areas beyond.

One phrase used repeatedly in the book is "setting one's own agenda".

As one reads the book it stops being a piece of jargon and comes to embody much of what Sax has to say. A person has to set their own agenda when they are outside of the usual influences.

They can then react to nature in their own way, at their own pace.

Taking away unnecessary distractions forces the visitor to make their own agenda, but in return for their effort, Sax believes, they will see "that nature, taken on its own terms, has something to say that (the visitor) will be glad to hear."

*Mountains Without Handrails* is easy to read in a short sitting because it is so well written.

If you are a manager of national parks I think the book will convince you that your efforts should go far beyond just minimising the impact of visitors on parks. With your help national parks should become special places for an adventure in nature.

## GONE FISHING...



Many CALM staff work in the field on weekends - but how many manage to help fish out this much rubbish in one morning? Marmion Marine Park technical officer Peter

Dans and Marine and Islands manager Greg Pobar were on hand last month when the Friends of Marmion did their bit for the Clean Up Perth Day.

What you can see in

the photograph (chairs and rod included!) was about three quarters of what was fished out of the harbour and along the bottom of the harbour walls on the ocean side by divers.



# Ningaloo Videodisc

## THE P.I.T.S

One of CALM's remote north-west locations houses a solar-powered video disc that is revolutionising visitor information.

The Milyering Bicentennial Visitor Centre in the remote Cape Range National Park houses Australia's first solar-powered video disc. It works like a video game combined with a movie and a slide show, and is controlled by simply touching particular points on the screen.

Commissioned by CALM as a Bicentennial project, the videodisc is a solar-powered Amiga-controlled Public Information Terminal System (PITS). It is a high-tech method of educating the public about native flora and fauna in both the Cape Range National Park and Ningaloo Marine Park, as well as showing how to make the most of the parks' facilities. (Expert knowledge can be presented to visitors on demand without tying up scarce staff resources.)

### CAPACITY

The videodisc has a phenomenal capacity for information storage, using text, computer graphics, slides and video sequences.

To cope with problems of heat, dust and insects, it is contained in an insulated, sealed kiosk with filtered air and two extractor fans. The whole system is solar-powered and saves energy by turning itself off when not in use. An infra red security device turns the videodisc on when a person enters the kiosk.

The system was designed by interactive media consultant Anthony Temple and graphic artist George Borzykowski, who have

developed a simple visual and oral syntax for the program.

The program begins with a repeating cycle of four images. Written under the screen is the message "TOUCH THE SCREEN". Once the screen is touched the images dissolve and the opening menu appears. Touching a menu item will start sequences such as "Journey of Discovery" and "Nature's Communities", using the videodisc's collection of nearly 50 video segments, 500 slides of plants, fish, molluscs and coral, as well as sketches, diagrams, computer graphics and supporting text.

There are endless ways to travel through the system using a series of sub-menus and icons. At any time you can exit by touching the CALM logo in the corner of the screen.

If you are looking at a map of the coastline and decide you want to see an aerial view, you can. In fact it is possible to take an aerial journey down the coast. The videodisc even talks to you! If you would like to know something about the tides on Saturday June 14 next year, the computer-generated voice will tell you all about it. The Ningaloo video disc is a great favorite with the kids; fortunatley it's kidsproof.

### STAFF USE

There is also a secret menu for staff use. This enables the signal from the video disc to be sent to a large screen projection room for conferences, staff-training and education and group viewing.

Special staff sequences can be put together to illustrate

lecture requirements such as talks on corals, fish or molluscs.

It's hoped staff can be trained to customise the system on-site to meet new needs in the park. For example, a Canon Zaphot video camera with underwater housing would allow still pictures to be shot on the reef or in the park in the morning and then presented in the afternoon to a busload of tourists in the theatre.

The system also has an auditing program that records the time viewers spend on each segment. This can be analysed to assist in profiling public interest.

Although the Ningaloo system is a custom program, the disc can be easily re-designed for other purposes. Future extensions may include a second language such as Japanese and computer graphics animations to better illustrate concepts.

It is hoped that the videodisc will have other applications within CALM. Designing a program that could be used in more than one location would reduce development costs and expose more people to information. A sequence about forest management and strategies for land use could be used for both staff training and public education in any forest region.

Another possible use is a program that could be co-ordinated by land management and tourist organisations all around Australia. It could enable, for instance, a tourist in a Sydney information centre to access video sequences about areas of interest in WA.

This proposal has been put forward but is not being pursued this financial year.

## A.W.U. AWARD RESTRUCTURE

from page 3

Dr Shea recounted occasions when he worked alongside AWU employees and paid tribute to the efforts and contribution they make to the department.

He finished by reiterating his commitment to the project of award restructuring and stressed the need for consultation and participation at all levels within the department.

AWU delegates at the meeting had recently attended a three day

training course at the Trade Union Training Authority in Perth.

The course was designed to inform delegates of the issues involved in restructuring the award and the processes which they could use to investigate and analyse each issue.

Senior training officer Alan Scott said the Bunbury meeting was the second since delegates had attended the training course.

The first meeting of the enterprise committee was held in December to discuss the appointment of CALM's Keith Lillie to special

duties as well as determine objectives and strategies for the award restructuring project.

This month at Wanneroo, an AWU organiser, Keith Lillie, and Alan Scott plan to visit districts to set the scene for award restructuring and get the workplace committees started on the first task of examining exactly what skills and knowledge are required by an AWU employee to do his/her job.

All AWU employees and District staff who supervise or plan their work will be invited to attend the meeting.



Daphne Choules Edinger, Terry Sproule and Ursula Preston at the Herbarium.

## Herbarium volunteers

by Vicki Hamley

Vicki Hamley, from the Herbarium, writes about three Herbarium volunteers, how they came to lend their assistance to CALM and the help they are giving us.

A chance meeting between a botanist and a nature lover at the Walcott Inlet in far north Kimberley in 1983 resulted in six years' voluntary service for the Herbarium.

When Daphne Choules Edinger retired as a science teacher she joined a Scientific Exploring Society's trip to the Walcott Inlet.

Kevin Kenneally (a senior botanist at the Herbarium) was the consultant botanist on that expedition.

Daphne asked Kevin if he would like some help

processing the collections back in Perth and has worked as his voluntary assistant ever since.

Daphne's dedication was rewarded in 1986 when she was made an Honorary Research Assistant of the Herbarium.

Terry Sproule, who is studying at Bentley Technical College towards a Diploma in Horticulture, began working at the Herbarium once a week last March.

Terry, who came to Perth from the Eastern States, said that working at the Herbarium was a good opportunity to learn and become more familiar with WA's flora.

Ursula Preston lives in England where she has done voluntary work for the British Museum (Natural History).

She visited Perth in 1986 and approached the Herbarium to do voluntary work.

When Ursula returned last October to visit her son, she resumed working in a voluntary capacity, coming in at least four days a week.

Her duties included mounting plant specimens, proof-reading, packing up loans of plant specimens to send to other herbaria and checking off returned loans.

Ursula returned to England in mid-December, promising to come and work for us again next time she was in Australia.

"I like pottering about with plants and I received a marvellous welcome here!" she said.

These three volunteers have made a substantial contribution to the Herbarium's technical area.

An important aspect of this liaison has been the volunteers' reliability, thus enabling the Herbarium to plan activities with the knowledge they will be available to take on specific duties over a designated period.

It's hoped volunteers will play a greater role in the Herbarium's operation in the future.

Curator Jim Armstrong would like to see a "Friends of the Herbarium" group established.

Ideally, such a group would be self-administering and a place to seek voluntary assistance for special projects and on-going tasks.

## EFFORTS REWARDED

Members of the Northern Suburbs branch of the WA Wildflower Society were given a thank you recently for their volunteer efforts in Yanchep National Park.

The branch became involved with the central wildflower garden in the park a year ago.

With the help of park staff, the overall plan of the garden was defined, a theme developed and garden bed usage redesigned to fit the theme.

(The theme is to cover botanical regions, land formations, localities and genus groups and in doing so present an overall example of the State's wildflowers.)

### HOURS OF WORK

Over the past year members have weeded, pruned and planted within the concept of the plan.

In return for the many hours of work done by the volunteers in the garden, park staff organised a barbecue in a remote area of the park.

The society members and their families were met in the recreation area and were taken by four wheel drive vehicle via management tracks to an

## Pride of Workmanship

One of CALM's Kununurra staff won a Rotary pride of workmanship award recently.

Debbie Lee Fairhead was nominated for the award by her CALM colleagues.

The inscription on the back of the award read:

"Debbie is a vibrant and dedicated worker, maintaining a calm disposition under all circumstances.

"Her outlook, personality and responsibilities are far beyond those expected of someone so young.

"She smiles a lot and is a valued member of our team."

## ON THE TRAIL . . .



Walyunga National Park Ranger Ross McGill proudly shows the park's new Heritage Trail signage, steps and railings (background).

Works are continuing on the park's heavily used areas. Record river levels were recorded on the Avon last month - the highest for 10 years.





Discussing proposals for access to Black Point are (from left) national park rangers Rick France and Nathan McQuid, Southern Forest Region recreation and landscape officer Vicki Metcalfe and CALM Nannup staff Jim Green and Linden Piggott.

## Focus on Black Point

Black Point in D'Entrecasteaux National Park was the subject and venue of a recent meeting between Southern Forest Region and Pemberton District park rangers, managers and Nannup officers.

Its aim - to form a plan to conserve the Point's nature values while retaining its fishing and recreation activities as outlined in the park's management plan.

Black Point has become a popular coastal fishing and recreation area, especially for CALM people who live in Nannup.

Regular visitors to the

area had become concerned at erosion and degradation caused by irresponsible four wheel driving and wild camping.

Nannup staff had previously held a busy bee to revegetate some sand dune blow-outs with marram grass but realised they could not progress further without deciding which tracks could be closed and what activities were appropriate for specific areas.

Service clubs, fishing clubs and other concerned users formed an interest group and asked Pemberton staff (who manage the

Park) to coordinate conservation initiatives.

The Black Point meeting led to agreement on options which propose to limit access to sensitive conservation areas whilst keeping open popular fishing and swimming spots.

Tracks will be relocated, walk trails formed, parking and camping areas identified and toilets provided.

Because of the distance of the area from the Pemberton office, volunteers have offered to maintain facilities and act as campground hosts for other visitors, to be coordinated with the Nannup office.

## Turtle study in its third year

A long term study of marine turtles nesting on the north and north-west coasts of WA is involving volunteers from all walks of life.

The project, coordinated by CALM senior research scientist Bob Prince, involves the tagging of green, flatback, hawksbill and loggerhead turtles and aims to provide a better understanding of the biological characteristics of populations frequenting the coast.

Volunteers from all over the state are helping

with the survey, including WA Petroleum workers on Barrow Island.

So far nearly 5000 green turtles have been tagged in major rookery sites in the Exmouth Gulf, on Barrow and Lacepede islands.

While the abundant WA green turtle has been the focus of previous studies and provided a foundation for learning more about its relationship to other Australian and regional green turtle populations, further information is now being sought

on the distribution and nesting sites of the other three species.

As part of the study, a beach surveillance program will run throughout the 1989/1990 tagging season to find out how many nesting attempts are being made by individual turtles. Turtle "re-migrants" will also be monitored.

Hatchlings and tissue samples from adult turtles are being collected to add to information collected so far on the populations' genetic structure.

"Turtle wrecks" - animals that have previously died on land and decomposed sufficiently to leave intact skeletal remains - will be bagged for the WA Museum.

CALM is distributing information pamphlets in both English and Indonesian to explain the tagging program, how to identify marine turtles, give examples of marine turtle tags and instructions about what people should do if they come across tagged turtles.

## Rare fern on Sth Cst island

An excursion to a remote south coast island to find a rare fern produced some interesting spin-offs.

The ferns, known only from this and one other island in WA, hadn't been recorded there for 14 years.

On the trip were wildlife officers Peter Lambert and Ray Smith, Walpole-Nornalup National Park rangers Bruce Bond and Rod Annear, and Atlantis Marine Park technical officer Alastair Cheal.

Most of the island, a nature reserve, is bare granite rock soaring to 182 metres above sea-level.

The rare fern

(*splenium obtusatum*) was growing in semi-humid conditions under moss-covered rock ledges with fresh water seeping through crevices in the granite rock.

"It was just like a Japanese garden, with crystal clear rock pools," said Peter Lambert.

The fern has shiny fronds about 50 centimetres long and is extremely attractive.

The men also located seven new species of plants that had never before been recorded from the island.

"A lot of the plants were in flower and the eastern slope was just like a garden," said Peter.



The height of new discovery: exploring a pool for new crustacean species.

## WOYLIE AWARD

The Wheatbelt Region recently held its inaugural fire exercise for the much-coveted burl "The Woylie Award", kindly donated by Greg Durell.

Four teams competed, each covering three sections of fire suppression. Each event was scored on a points system involving teamwork, technique, knowledge and performance, standards, efficiency and safety, with the trophy being awarded to the team with the maximum overall points.

### HIGHLIGHTS

Manual suppression (raketraill and knapsack): the team of Dennis Hilder, Darren Graham, Rodney Clifton and Martin Clarke lost their way while constructing a 30m raketraill and still came second in the event. (Winners: Greg Leaman, Mal Graham, Brad Bourke and Des Plumb.)

Light units (draughting, obstacle course and live reel): unable to drive over a log, Ken Wallace attempted to bog a four wheel drive on gravel by digging a hole for himself. In the same team Rob Brazell attempted to garrotte himself with the live reel when he found that the hose was too short to reach his target. (Winners: Greg Leaman, Mal Graham, Brad Bourke and Des Plumb.)

Heavy duties (draughting, obstacle course and hose lay): Merv Beacham covered the obstacle course in record time (10 minutes

faster than the next team) by ignoring his swamper instructions.

Greg Leaman and team were unable to deliver water to their hosemen because whilst they were running out the canvas hoses the team managed to tie a knot in one!

Steve Blythe released the hoseclamp too early, promptly wetting his hosemen, Ken Atkins and Dennis McDonald, who were still trying to connect their directors. (Winners: Ken Atkins, Merv Beacham, Steve Blythe and Dennis McDonald.)

Overall winners by a margin of 2.8 points from their nearest rivals were Ken Atkins, Merv Beacham, Steve Blythe and Dennis McDonald.

(Observed trying to buy points for his team by handing out cigarettes after the event was Ken Wallace.)

The Northern Forest Region's annual fire competition saw Dwellingup district declared winners for the second consecutive year.

The judges' decision was difficult as all crews displayed high standards - the safety shield awarded to all four participating teams.

Dwellingup, led by forest ranger Paul Mammone and overseer Barry Ashcroft, performed well in all events and it was this consistency which earned their narrow victory.

# D W E L L I N G U P

ELLING ALES

funny faux pas

ALL CONTRIBUTIONS WELCOME

JUST HOW DEEP MUST YOU GO?

CALM officers in the Pilbara spotted a strange request in the draft text for the CALM book on the North-West.

Under the section on Minimal Impact Camping it asked campers to dig a hole 15 metres deep to bury their toilet waste.

The officers wondered if it was a typo or whether there were new environmental standards they didn't know about.

### AWAKE ON THE JOB

It doesn't pay to wake up a slumbering wildlife officer.

Two bird smugglers rue the day they woke up wildlife officer Peter Trembath after he had spent a hard night spotlighting for crocodiles.

Peter, two crocodile consultants from Darwin and a Fisheries officer from Broome recently carried out a crocodile survey of the Fitzroy River

and King Sound.

They didn't finish until 4 am, so were quite annoyed when a vehicle drove into their campsite at 7 am and woke them up.

Two men casually got out of the vehicle and went fishing.

Peter noticed some rather unusual equipment in the back of their vehicle. It turned out that the men had been trapping finches in the area.

"They must have been Irish bird smugglers," he said "to have parked next to the only wildlife officer on patrol in the West Kimberley."

### A BED ON WHICH TO REST THEIR WEARY HEADS

Wildlife officers at the recent stranding of a scamperdown whale at Dunsborough found another use for the new whale rescue trailers.

The men had to sleep on site and found the trailer mattresses just the ticket.

Ranger Roopaw

THE JOYS OF BEING A RANGER N° 29

CARRYING OUT FAUNA SURVEYS