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JULY—AUGUST 1998

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT



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From hand to bush



CALM Officer Alan Danks shows Hon Cheryl Edwardes how to hold a noisy scrub bird at the 150th release of the threatened species in the Darling Scarp.

Photo by Nigel Higgs-story page 3

Maritime pines extension



Left to right Collie MLA Hilda Turnbull, 'Tognella' farm owner John South, Hon Cheryl Edwardes MLA, Hon Bob Wiese MLA and Dr Syd Shea. Photo by Nigel Higgs

CALM's maritime pines project has been extended into the south-west to help tackle the region's salinity problem.

This is part of CALM's plan to establish, in partnership with farmers and other landowners,

150,000 hectares of maritime pines over the next 10 years, with the aim of increasing these plantings to 800,000 hectares over 30 years.

blish, in partfarmers and CALM Sharefarms landowners, Lower West, takes in an area from Harvey to Albany Highway in the north and south to Kojonup and the Tone and Frankland Rivers catch-

The 10-year target is for 30,000 hectares of maritime pines to be inte-

grated into existing farm operations.

Mrs Edwardes launched

the project at a ceremonial tree planting on John and Tracey South's farm 'Tognella' south-east of Darkan.

continued page 2

New home for woylies

JULY saw sixty woylies from Dryandra woodland reintroduced into Peron Peninsula as part of *Project Eden*.

This was the second reintroduction of woylies to the peninsula within the year and another significant step towards reaching the project's aim of reestablishing populations of native animals in Shark Bay.

The reintroductions follow more than four years of introduced predator control operations on the 105,000-hectare Peron Peninsula.

The woylie was selected for reintroduction following its removal from the IUCN Red List of Threatened Species in 1997.

It is a good indicator species—as its adaptation to the peninsula indicates the potential of Peron's ecosystem to sustain other mammals.

by Mitzi Vance

It is proposed to reintroduce captive-bred bilbies, western barred bandicoots, malas and banded hare wallabies, once populations numbers of these threatened species have increased.

The successful translocation of the woylies was due to the hard work of a number of CALM staff who trapped the animals at Dryandra and then drove them to Peron for release.

These included CALM-Science staff Keith Morris, Peter Speldewinde and Brent Johnson. Project Eden staff Colleen Simms and Brad Barton, Wildlife Branch's Peter Orell and Narrogin District staff Brian McMahon, Brett Beecham, Clare Anthony, Howard Robinson and Martin Clarke.

21st Bush Book out

BUSH Books, CALM's innovative, pocket-sized field guides to the State's natural wonders, have turned 21—titles, that is.

Bush Books have also become one of the State's publishing success stories with more than 80,000 copies sold since they were released just two-and-a-half years ago.

CALM Executive Director Dr Syd Shea said success of the series reflected the growing interest in the State's native flora, fauna and landforms.

"One of the underlying philosophies behind Bush Books was that people were more likely to support conservation measures if they understood just what it was we want to conserve," he said.

"So by stimulating people's understanding, Bush Books, like *LAND-SCOPE* and other CALM publications, are making an invaluable contribution to CALM's conservation work."

Dr Shea said although there were several excellent field guides to WA's flora and fauna, most were too technical for the layperson or not easily available.

"Bush Books combine scientific accuracy with easy to understand writing, and are available throughout WA."

In Perth recently, Environment Minister Cheryl Edwardes celebrated Bush Books' '21st' at a function attended by representatives of the book trade.

She launched the 21st title—Bugs in your Backyard.

"This title is particularly apt as even the bugs in suburbia are part of the ecosystems that make up our wonderful environment and well worth understanding and conserving, even if some of them bite!" Mrs Edwardes

continued page 2

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Environmental problems around the world, particularly those associated with land and water, are often an order of magnitude more difficult to resolve because of their scale.

I think this is one of the reasons why there is a huge literature describing the environmental problems we face and the serious consequences of failing to deal with them, but comparatively little material describing how the problems are actually being solved in the field

Research, planning and community consultation are, of course, essential prerequisites to solving any environmental problem. But I think sometimes, possibly because we compartmentalise the process, we tend to forget that these components of problem solving are the means to solve the problems, not the end.

I believe CALM, along with many other agencies in Australia, is undertaking excellent research, planning and community consultation. CALM also, however, is in a unique position because it has the capacity to take the research findings and apply them on a scale that does make a difference to the problems in the field.

This edition of CALM News provides two examples of how we are undertaking projects on a scale that will have a major impact in reversing environmental degradation. The news that we have been able to move another two mammal species from the endangered species list is an example of how we are meeting "real world performance indicators". The Western Shield program is based on superb research going back over 15 years. That research would have been to no end, however, if we hadn't been able to employ it on the grand scale we are with Western Shield.

The story of the Manjimup Nursery is another example of how we are developing a scale of operations that will enable us to make a real impact on the salination problem in the agricultural zone. Again, our ability to do this is based on excellent research into tree breeding and tree deployment going back 50 years, but all that wealth of information would be lost if we didn't develop the capacity to translate it into large-scale projects.

In the last edition of CALMNEWS I commented on how much pleasure I obtained from seeing people in CALM working together as a team on major projects. I am convinced CALM is able to do this because of our integrated approach to management. For example, much of the technology that allows us to efficiently bait more than 3 million hectares of land for foxes is derived from technology that was developed to enable us to carry out inventories of the forest and prescribe burn from the air. It is also significant that we have only increased our full-time staff by one in the process of implementing the Western Shield program.

One of the only disadvantages of an integrated large-scale approach to solving environmental problems is that there are so many people involved, who work exceptionally long hours to make these projects happen, and it is impossible to name all of them and see that they get appropriate credit. I hope, however, that everybody involved in these projects gets the same immense satisfaction that I get out of seeing what an impact we are making on real world problems in the field.

Dr Syd Shea, Executive Director



Here's how we build a bridge. Left to right John Gallagher, Pat Foley, Dennis McDonald, Brian Selkirk and, crouching in foreground, 'Nibs' Morganti. The new bridge replaces the one that took Allens Road across the Helena River behind the reservoir—about 14 km east of CALM's Mundaring District Office.

Photo by Nigel Higgs

Mundaring's answer to the 'Coat Hanger'

PEOPLE have long been fascinated by bridges. They have been the subject of numerous movies of human endeavour and tragedy—Bridge on the River Kwai, A Bridge Too Far—and elevated to icon status-London's Tower Bridge, San Francisco's Golden Gate and Sydney's 'Coat Hanger'.

Now there's the pride of CALM's Mundaring District, and the former 50-year-old wandoo bridge is no more.

Building the new bridge took only six months, but it tested the ingenuity of all involved.

CALM Mundaring forest officer Dennis McDonald, who managed the project, said the Helena River held Aboriginal heritage and cultural significance as well as being part of the catchment providing the Goldfields Water Supply.

"These concerns saw us

taking part in several lengthy consultations with four Aboriginal groups and the Water Corporation," Dennis says.

"Eventually we produced a design for a bridge spanning 12.3 metres, with an overall length of 14.3 metres.

"The bridge deck, comprising two railway carriage decks topped with 250 mm of double reinforced concrete, is suspended on two 4.5-metre high concrete abutment walls, that are tied into concrete anchor walls, which are buried 0.5 metres below the road surface.

"Nevertheless, we decided to have our own crews build it," Dennis says. "They'd had a lot of experience in working with timber, which is relatively 'forgiving' when it comes to accuracy, but steel and concrete, particularly when working to

the technical detail of engineering specifications were quite another matter."

"Mundaring District people who worked on the project were Tom Niven, 'Nibs' Morganti, 'Skip' Skipper, Pat Foley, Dave Evans, Barry Rhodes, Brad Walter, John Gallagher, Brian Selkirk, Wayne Rhodes, Les Doust, Christian Pollock, Cassidy Newland, Paul Tholens, Brad Hasson, Nevin Wittber and Barry Hooper-with Ross Mead keeping a sharp eye on the budget.

Mundaring District manager John Lloyd said the project was the biggest engineering feat the crews had tackled in recent years.

"The result is a tribute to their skills, their ability to learn new construction techniques, and the pride and determination they take in their work," John said.

Error

Please note that the fax number shown for Neil Moore at the end of the article headlined 'National park guide out now', at centre right of page 8 of the May-June 1998 issue of CALM NEWS should read (08) 9334 0432.

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. LETTERS . . .

Walks book kudos

On a recent visit to Western Australia I picked up a copy of "Bushwalks in the South-West" and found it a delightfully helpful and informative guide.

As a result of browsing through this I ended up doing a lot of tramping about your national parks, and panting and puffing my way up hillsides just to see the views promised. It added immeasurably to the pleasure of the trip, as it led me to places never previously heard of, and which would have been bypassed otherwise.

I particularly like the guidelines as to how long to allow for each walk and whether it was going to be easy for the non-athletic office-worker type or require a day's tucker and the stamina of a mallee bull. This made planning a day much more realistic until I got to the Fitzgerald River National Park and spent so much time stopping to look at all the fascinating plant

life that the time schedule just went out the window! And I probably would have missed this if I hadn't read your book. It was great!

The maps are lots of fun—they really make you want to go and explore. They led me out to Cape Arid, Cape Le Grand, the lovely Stokes

Inlet and all around Albany and the Porongorups—and there is so much more to go and explore next time,

Thanks again to you and all the CALM staff involved for an excellent reference.

Regards Maree Jobling KERANG VIC 3579

Maritime pines extension

(from page 1)

Environment Minister Cheryl said that with the support of local landowners, a significant component of the Salinity Action Plan would very likely be achieved with the growth of maritime pines.

"This season alone, 204 ha of maritime pines are being planted on eight farms in the West Arthur and Kojonup shires," Mrs Edwardes said.

CALM Sharefarms Lower West Manager Tym Duncanson said that by the year 2001, around 3,000 ha of maritime pines and 300 ha of landcare plantings using local native species would be established under the southwest extension project.

"This year, about 32 million tree seedlings will be planted on WA farms and in native forests—a massive effort that will help salt-affected areas," Tym said.

CALM Executive

Director Dr Syd Shea said every hectare of maritime pine represented more than 1500 trees that would drive down water tables and help overcome many salinity problems.

"Every 20,000 ha of maritime pines established in the region will supply enough timber to support a local downstream processing facility such as a wood panel plant, thereby creating regional employment," Dr Shea said.

"By the year 2020, WA could be generating enough timber to lock up six million tonnes of carbon a year.

"The development of 'carbon credits', where' Australia can meet its generission targets under the Kyoto agreement, will add a further impetus to investment in sharefarming arrangements between landowners, private companies and agencies such as CALM," Dr Shea said.

21st Bush Book out

(from page 1)

Bush Books are produced by CALM Corporate Relations special projects officer Carolyn Thomson-Dans with the assistance of a wide range of experts from within and outside CALM. They are designed by Sue Marais, Maria Duthie, Tiffany Aberin and Gooitzen van der Meer.

A special feature of the

books is their high quality photographs, many from the Babs and Bert Wells collection that CALM bought three years ago.

Dr Shea said CALM had other publications currently in production, including a new volume of the State's threatened plant species, a new edition of Wild Places, Quiet Places and a new guide to the Bibbulmun Track.

Staff Movements

Contract Staff

Tanya Vernes, to Kununurra as Field Assessor, Level 3; Alicia Lynne Taylor, to Sharefarms Lower West, Collie, as Field Officer, Level 1/2; Jane Hubble, to The Hills Forest, Mundaring, as Programs Officer, Level 2; David Hunt, to Marine Conservation Branch, as Clerical Officer, Level 2; Tara Donohue, to The Hills Forest, as Office Assistant, Level 1; Jonathon Phillips, to Finance Branch, as Clerical Officer, Level 1; Stan Sochacki, to Sharefarms Business Unit Albany, as Project Officer, Level 4; Margaret Lewington, to WA Herbarium, as Assistant Project Co-ordinator, Level 2.

Permanent staff

Bob Rickman, Leeuwin Naturaliste National Park, as Senior Ranger, SR Level 1; Don Carlson, Collie, as Administrative Assistant, Level 3; Adrianne Yzerman, Narrogin District as Administrative Assistant, Level 2.

Promotions

David Guille, to Area Co-ordinator, Level 3 at North Maritime Pines; Jason Puls, to Operations Officer, Level 3 at Perth District, from Karijini National Park; Don Boothey, to Forester, Level 3 at State Forest Resources Business Unit, Kirup.

Transferred

Alan Shields, from Karratha as District Wildlife Officer, to Department of Transport, Level 3

Seconded

Kylie Dyson, to Crawley as Relief Secretary, Level 2, from Science and Information, Woodvale; Gavin Wibrow, to Human Resources Branch as Principal Employee Relations Consultant, Level 6, from MetroBus

Retired

Ann Burchell, from Albany District as Clerical Officer, Level 1.

Resigned

Iain Alexander, from South Coast Share Farms, as Assistant Area Co-ordinator, Level 2; Linda Arnold, from The Hills Forest, Mundaring, as Programs Officer, Level 2; Kate Brown, from WA Herbarium, as Technical Officer, Level 2; Don Noble, from Wildlife Protection Branch, Como as District Wildlife Officer, Level 3; Patricia Saviel, from Corporate Information Section, as Records Officer, Level 1.

Noisy scrub bird returns to Darling Range

by Mitzi Vance

IN 1842, pioneer naturalist John Gilbert found a new species-the noisy scrubbird, (Atrichornis clamosus)in the Darling Range beyond the Waroona-Harvey area. Now, more than 150 years later, the species has been reintroduced into Driver Forest Block, 45 km north of Collie.

The species, once thought extinct until rediscovered in the Two Peoples Bay region around Albany in 1968, had gone unrecorded for 72 years.

The momentous occasion saw Environment Minister heryl Edwardes, Executive Director Dr Syd Shea, CALM staff from Mornington District and Bunbury Region, along with representatives from Alcoa and local shires, gather at Hoffmans Mill for the release.

With Two Peoples Bay Nature Reserve management officer Alan Danks, the Minister released into the forest two female birds and one male.

The Minister said the success of the noisy scrub bird recovery program was one of the most significant conservation achievements in Australia in the past 20 years.

"Internationally, the noisy scrub bird is regarded as a conservation icon," she said.

"Since the recovery program began in 1983, CALM has



Left to right Mornington District Manager Drew Griffiths, Hon Cheryl Edwardes, Alcoa Environmental Manager John Gardner, CALM officers Christine Gilbert, Bruce Withnell and Frank Colyer. Photo by Nigel Higgs

translocated and released more than 150 birds into areas where they used to exist."

The reintroduction was part of Phase II of the Darling Range Reintroduction Plan-a co-operative effort between CALM and Alcoa of Australia.

The birds will join 13 males released last year during Phase I, and this year's release is expected to lead to the establishment of a breeding population—the first outside the south coast.

Mrs Edwardes said since this rediscovery, scientific research and management had ensured the conservation of this unique native bird.

The second release of the noisy scrub birds into the northern jarrah forest reflected the success CALM officers were having with native species' recovery plans under

the Western Shield Program.

Successful fox control in the region, with the co-operation of Alcoa under Operation Foxglove (part of Western Shield) has led to the reintroduction, not only of noisy scrub birds, but also woylies, ring tail possums and chuditch.

Executive Director Dr Syd Shea said the reintroduction of the species and the excellent organisation of the release event was due to a co-operative effort between Alan Danks and Bunbury and Mornington District staff led by Bob Chandler and Drew Griffiths.

Gary and Richard keep ancient animals alive

ONE of 16 ecological communities assessed as Critically Endangered occurs in the groundwaters of six caves at Yanchep National Park.

It consists of invertebrates (animals without backbones) living among aquatic mats of fine roots of tuart (Eucalyptus gomphocephala).

This remarkable community includes *relictual animals that were widespread on the southern supercontinent Gondwanaland, more than 100 million years ago and depend on permanent water for survival.

Unfortunately, water levels in some caves have been declining ince the early 1990s.

A Recovery Team for the Yanchep root mat community includes members from CALM's Threatened Species and Communities Unit, Perth District, Yanchep National Park, and the Plantations Group; the Water and Rivers Commission, Western Australian Speleological Group, and Wanneroo Council.

March 1996. Recovery Team member Edyta Jasinska, while conducting a Ph.D. study on these caves, found that one of six root mat communities had dried. Although the flow did return to the cave, many of the species, including



Gary Hunton and Richard Lorkiewicz with the water pump that keeps the root mats moist. Photo by Stefan Eberhard

all of the *relicts, did not. In February 1998, Edyta found that in two other caves the root mat communities had nearly dried.

Fortunately, Perth District's Lyndon Mutter and Yanchep senior rangers, Ron Shimmon and Jim Smith were quick to provide the necessary support to save them.

Perth District employ-

ees Gary Hunton and Wayne Calvert helped Edyta to install lined pools under the root mats. Gary had to top up

these pools twice daily

with water obtained from

groundwater in each streambed.

small wells dug to the

ing pumping systems within each cave. To improve efficiency, Yanchep mechanic,

Within 24 hours Richard had purchased all Richard Lorkiewicz, acthe parts, made various cepted the challenge of modifications, and con-

arramma r r

designing and construct-

structed a small pumping system powered by a car battery and regulated by water level changes in the pools. All for less than

The system is highly successful. The caves are checked briefly once a day to ensure everything is operating and the batteries are recharged weekly. Three other cave streams supporting the root mat community still continue to flow natu-

Long-term plan

As part of the implementation of a recovery plan, the Recovery Team is designing a longerterm strategy to prevent the loss of cave waters at Yanchep.

This includes thinning the nearby Pinjar Pine Plantation, and monitoring and managing nearby groundwater levels.

Notably, the Softwood Business Unit has already modified logging plans to begin thinning in the catchment area for the Yanchep cave streams.

Meanwhile, the Recovery Team is confident that the co-operative emergency actions can prevent further losses of the root mat community in the Yanchep caves.

Note: *Relict refers to a plant/animal known to have existed in its present form in earlier geological



Dens, nests ready and waiting

NATIVE wildlife in and around The Hills Forest Activity Centre at Mundaring are being encouraged to return to their natural habitat—with a little help from some new-found friends.

A group of young trainees under the Commonwealth Government's Green Corps Program have built and placed nearly 200 artificial nest boxes and rock dens, as well as feeding and viewing sites around the Centre.

The work is part of CALM Mundaring District's Hills Forest Fauna Enhancement Project.

The nest boxes are for species that usually use tree hollows, and include cockatoos, brush-tailed possums, brush-tailed phascogales and mardos.

The rock dens are for ground animals like the chuditch, quenda, dunnarts and reptiles.

CALM's Mundaring
District nature conservation program leader John
Carter says that through
Operation Foxglove—a
joint initiative between
CALM and Alcoa of
Australia that's controlling foxes in the northern
jarrah forest—the number
of native animals is
increasing

"In April 1996, we reintroduced woylies into the forest to the east of the Activity Centre. Researchers are now finding second and third generations, which show that the animals are doin extremely well indeed."

"The new nesting and feeding sites will encourage native animals to return and breed around The Hills Forest," John said.

John said The Hills Forest Activity Centre focused on family and school groups, with activities designed to bring people to the forest to learn about animals and plants in their natural habitat.

"The Go Bush! Program, that started in 1991, is now attracting 16,500 people each year. The enhancement program will open up opportunities for more activities in Go Bush! and other educational and recreation

programs," he said

The project is also attracting sponsorship from the private sector: Timber Traders Cockburn, Hamilton Sawmills, Stephanelli Sawmills and Colli and Sons have donated timber and other materials for nest boxes, while Applecross Primary School's fundraising activities have raised \$2000 towards the project

Green Corps is a Commonwealth Government program that aims to give young Australians between 17 and 20 years opportunities to become involved in conservation projects.

Left:Leanne Moyle shows the entrance to a completed den. Photo by John Carter

Records out, space in

UNTIL recently, staff in the Corporate Information Section (CIS) were in danger of being squeezed out by a rapidly growing collection of records. Then the section's archives officer Leanne Thomas and Records Management System administrator Bob Mitchell began to win back space.

"By the time we moved to our new Records Management System, we wanted to have an uncluttered database, so everyone could access it directly without being sidetracked or misled by irrelevant data." Leanne said.

"People looking for the latest file don't want to accidentally retrieve ancient ones. There's a welcome bonus, toooffice space is freed up, and that means we've got more comfortable working conditions."

Bob said that in the last few years CIS had disposed of nearly 10,000 files as part of Stage I of a big archival project.

"Stage II has already begun, so lots more files will be going, he said,"

"No CALM records (paper, electronic or otherwise) can be destroyed or archived unless in accordance with CALM's approved 'Retention and Disposal Schedule'.

"New legislation due this year will introduce penalties of \$10,000 for unlawful destruction of government records.

CIS manager Jenny Moss said that various collections of records had grown up outside the mainstream Como system, and a number of Regional offices had flagged her about the heaps of old records 'in the back shed'.

"As a consequence, our staff were asked for advice on disposing of them, including old reelto-reel tapes, photographic material and e-mail," Jenny said.

"Our staff are developing a process to help Branches and Regional offices review those records.

"Meanwhile, Leanne is working with CALMfire to test some draft procedures—after all, we can't have CALM being hit with those \$10,000 fines!"



With nearly 10,000 files already disposed of, Leanne Thomas and Bob Mitchell take a well-earned coffee break before plunging in to the next phase. Photo by Verna Costello



A bouquet for a job well done

A BIG floral bouquet and heartfelt thanks were presented recently to administrative assistant (and Director of Forests Don Keene's right hand 'man') Shirley Dennett.

They were in appreciation of her role in keeping communications, priorities and follow-throughs on track for this year's State Forest Resources Business Unit (SFRBU) Conference in Bunbury.

Shirley was likened to the mortar holding the bricks together, and although there was some conjecture about who the by Tammie Reid

bricks might be, all agreed the description was apt.

"I think I have the best job in CALM. I really enjoy the work and it's great to meet the people I deal with by phone at this conference," Shirley said.

One of the conference organisers Liz Blee said that it was vital that she and her fellow SFRBU members meet regularly, to keep focused, share information, update on issues and maintain enthusiasm.

"We're also convinced

that we must make time to recognise the contributions individuals have made during the year," Liz said.

"This year, we held an overnight mini-conference and presentation dinner, and intend organising a bigger program every two years."

Liz herself received recognition for her efficiency, organisational skills and the administrative and logistics support she brought to the Southern Forest Group and to the Regional administration team—all in the cause of better integration

to smooth the way to achieving CALM's goals.

All in all, it was an excellent conference for people to listen, talk, look ahead and report on some of the outcomes over the past 12 months with an eye to the big one programmed for May 1999.

Shirley, almost dwarfed by the huge floral bouquet, is seen here with SFRBU monitoring and training officer Bill Towie and administrative assistant Liz Blee. Photo by Tammie Reid.

Swedish students and CALM staff in joint cloud study

CALM's Perth Observatory recently hosted two research project students from the Space Sciences Department at Umea University in Kiruna, Sweden.

In their studies they have acquired a mixture of engineering and practical physical science knowledge and skills that were put to good use while working at the Observatory.

Their project work involved the calibration of a rudimentary cloud sensor system, designed and built by the

CATAMIEUR L.L. A. 1000

by James Biggs

Observatory's technical staff Arie

Observatories world-wide are automating the positioning of their telescopes and opening of telescope enclosures, using computer control and a minimum amount of operator intervention.

The cloud sensor system is an integral part of the automation of Perth

Observatory's facilities, and will determine when high probability conditions are satisfactory to open telescope enclosures for observing. (The Observatory's technical staff have also built a rain sensor that reliably operates and determines when it is safe to open the enclosures.)

One main aspect of the students' work was relating the cloud sensor's digital output to the amount of cloud visible in the night sky.

They developed a computer pro-

gram that read the cloud sensor output, such as temperature and wind speed, from the on-site Bureau of Meteorology automatic weather station.

Predicting cloud cover

They then predicted the amount of cloud cover and made this information accessible to all computers on the Observatory network.

Their system works reasonably well, and is limited only by the rudi-

mentary nature of the cloud sensor and, in common with similar systems, has difficulty detecting light, highaltitude (cirrus) cloud. Even given its limitation, this is a great advance towards automation.

Clouds were not the only topics of interest to the students. They enjoyed visiting CALM-managed places, such as the Tree Top Walk and Monkey Mia, as well as other sites of scenic beauty in WA such Esperance, Wave Rock and Rottnest Island.

Pemberton section of Bibbulmun now ready



Left to right: CALM forest workers Michael Liebregts, Peter Beebe, Sid Sepkus, George Laws, District manager John Gillard, and overseer John MacDonald. They are on the 24-metre-long bridge across Gardner River, south of Northcliffe. Photo by John Gillard

CALM staff at Pemberton have recently completed construction of the section of the Bibbulmun Track that runs through the District.

One of the highlights of the new track is the section along the Warren River.

Walkers will experience some superb views of the river as they wander through the steep valleys, passing rough some majestic karri forest and

by John McKenzie

crossing the redeveloped 155-metrelong River Road Bridge, and the new Blackberry Pool Bridge, both built by CALM Pemberton District employees.

The Bibbulmun Track from Northcliffe to Lake Maringup and on to Dog Pool provides a wonderful

walking experience as it meanders through magnificent karri and jarrah forest, huge green flats and heathland, and the deeply incised terrain of the Gardner River Valley.

Following the Gardner River southwards, walkers will be able to appreciate the breathtaking scenery without getting their feet wet, courtesy of a number of superb bridges, which are features in their own right.

Upon arrival at Lake Maringup, walkers will see why this is one of the premier sites on the Bibbnulmun Track. The views of the lake, karri forest, and the sounds of the forest will make the walk well worthwhile.

And if you think this is the best the track has to offer in Pemberton District, a surprise awaits at Dog Pool.

Here, walkers will experience what former CALM Bibbulmun Track Project co-ordinator Jesse Brampton described as the "single greatest structure on the Bibbulmun Track".

This 35-metre long, 4-metre high bridge provides a magnificent view of the falls below Dog Pool and, together with the shelter, makes for a superb site for walkers.

CALM input at National Coast-to-Coast Conference

WESTERN Australia has a magnificent 14,000-kilometre coastline, much of which is managed by CALM in a network of major terrestrial and marine reserves.

This is certainly the case along the south coast where about 70 per cent of the coastline in CALM's South Coast Region from Denmark to Eucla is either national park or nature

By John Watson

Looking after this valuable conservation, landscape and recreational asset is a primary function, not only for CALM, but also for the various local government authorities that collectively manage much of the balance of the coast, frequently including very highly used recreation and camping areas.

So it was no surprise to see several CALM staff from around the State attending and contributing to the 1998 National Coast to Coast Conference, held in Perth.

About 300 delegates from throughout Australia and overseas also attended the conference, among them representatives from several of CALM's 'sister agencies' from other

The theme of the conference was 'Sharing Responsibility'.

CALM contributions included presentations on Island Management Conservation by Pilbara Region reserves management officer Fran Stanley; Meeting Community Expectations by Pemberton District ranger-in-charge Rod Annear; Marine Reserves by Marine Conservation Branch manager Chris Simpson; and Co-operative Coastal Care on the South Coast by South Coast Regional manager John Watson.

The latter paper was presented 'co-operatively' with Robin House, chair of the South Coast Management Group and Charles Hick, chair of the Jerramungup Coastal Committee, who also works closely with CALM on the STS South Leeuwin Adventure Eco Voyages. The South Coast Management Group is a committee of all South Coast local government agencies, CALM and other relevant government depart-

The conference was also attended by Regional Coastal Facilitators from around Australia including South Coast Facilitator Jamie Allnutt, who is based at CALM's Regional Office in Albany.



A many-faceted man in HRB

MEET Gavin Wibrow! and the Solomon Islands, and year 12 who wants to study CALM's Human Resources way. Branch for 12 months as Principal **Employee** Relations Officer.

Gavin's appointment is expected to provide muchneeded additional employee relations resources to further develop and implement labour relations policy and workplace bargaining, specifically workplace and enterprise bargaining agreements.

He is based at Como, but expects to spend time in the field liaising with interested

Gavin comes to CALM from MetroBus where he was Employee Relations Manager.

After starting off as a bus driver he ended up in industrial relations 15 years ago after stints in various operational and planning sections.

He grow up in Australia, Malaya, South Africa, England

Gavin has been seconded to attending 22 schools along the environmental science. (Her

Gavin spent the first 10 years of his working life travelling around Australia, working in areas spanning agricultural research stations, shipbuilding, truck driving, surveying, mineral exploration and erecting industrial coolrooms, to name only a few.

In the early 60s he gained a silver medal in the Tasmanian State Junior Springboard titles and an Award of Merit plus instructor status in lifesaving, and while at boarding school in North Queensland he became a Queen's Scout. He also reluctantly admits to becoming a handy axe man while surveying and working in mineral exploration in WA in the 70s.

He has been married for 25 years to Jean (a WA country girl), and the couple have a son Brad studying medicine at UWA, and a daughter Sarah in most enjoyable year 10 work experience at CALM only served to reinforce this desire).

Gavin describes himself as a 'homebody potterer', and in his spare time he is restoring an old federation home in Mt Lawley.

"I'll soon be testing how much I've learnt from a recent course on how to do (and maybe redo) tuckpointing in the old style," Gavin said.

"Then there's the serious business of maintaining supplies of my home brew," he said, adopting an appropriately solemn expression.

Welcome aboard, Gavin, you're sure to fit in admirably wherever you go in CALM.

Left: Principal Employee Relations Officer Gavin Wibrow, soon to be seen in a Branch/Region/District near you. Photo by Verna Costello



Alex has gone to Kew

CALM Herbarium research scientist Alex Chapman has secured a 12-month appointment, beginning on September 1, 1998, as Australian Botanical Liaison Officer (ABLO) at the Herbarium of the Royal Botanic Gardens, Kew in the United Kingdom.

Kew Herbarium holds major collections of Australian plant specimens and is therefore an important resource botanists involved in the collection and classification of plants (taxonomists) and other conservation scientists

An ABLO has been appointed annually since the 1930s. He or she responds to botanical enquiries from Australia and New Zealand (particularly from botanists working in State and Commonwealth herbaria), drawing on the resources at Kew, the Natural History Museum, London, and where necessary, other European herbaria.

As well as pursuing their

current scientific projects, he or she also helps staff at the latter institutions in botanical matters relating to Australia.

Each year, applications are invited from experienced Australian taxonomic botanists wishing to take up the prestigious ABLO appointment.

They are drawn from most State and Commonwealth herbaria. Since 1937, botanists from CALM's Western Australian Herbarium have held the position five times, the first in the inaugural year and the last

The liaison officers provide a valuable resource for WA flora researchers, as they commonly provide the most effective means of finding answers to many local botanical problems and specimen- or librarybased queries.

When a West Australian is in the position there are further advantages in terms of institutional information exchange, increased opportunities for making valuable contacts for

collaborative projects, promotion of the State's botanical research, and increased experience for the research scientist that can be applied on his or her return.

As the WA Herbarium's database administrator, Alex hopes to put its soon-to-belaunched web site FloraBase to good use.

Apart from using it to keep up with developments in WA, he plans to encourage overseas botanists to take advantage of its vast store of detailed botanical information.

He will also take every opportunity to demonstrate how CALM's WA Herbarium is an organisation with a high level of scientific expertise, ahead in the highly effective use of up-t the-minute technology.

Alex expects to be back at the CALM Herbarium in November 1999.

Alex Chapman with his highly impressive Flora-Base 'baby'. Photo by Verna Costello

CALM hosts a new coastal facilitator

UNDER the joint Federal-State Coastwest/Coastcare gram, five regional coastal facilitators have been appointed to Western Australia.

Among them is Jamie Allnutt, who is hosted by CALM's South Coast Region and funded by the Commonwealth and the South Coast Management Group (a local authorities' committee)

Jamie is responsible for encouraging and co-ordinating community input into the management and rehabilitation of the 800km-long South Coast Zone that runs from by John Watson

Walpole to Israelite Bay. Co-ordinated by WA's Ministry for Planning, the Coastwest/Coastcare Program is about linking government and commu-

nities in a joint assault on

coastal degradation. Jamie pointed out that the region had a \$150 million-a-year tourism industry, which showed that large numbers of visitors, holiday-makers and new residents were pouring into the region to enjoy its

outstanding attractions. "This means we have to be increasingly vigilant and pro-active in managing our coastal marine environment in a way that reduces the 'peopleimpact' on it, without discouraging visitors to the region," he says.

Jamie also said that he wanted to raise local community awareness, help them to identify problems, such as weed infestation and dune erosion, seek solutions and transform ideas into projects.

his work is to make sure projects are well-planned and fit into regional coastal management objectives. Another is to help groups apply for pro-

One important aspect of

Some 14 Coastwest/ Coastcare projects have already been funded along the south coast.

They include a seagrass survey in King George Sound, a walkway construction to the beach at Peaceful Bay, and dune rehabilitation at Hopetoun, as well as boardwalk construction at Middle Island, Esperance, and repairs to the blowholes path at Torndirrup National Park, Albany (both in CALMmanaged areas).

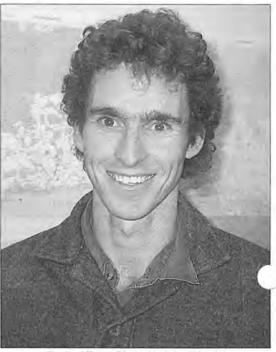
Jamie, 29, who has an honours degree in natural resource management,

development, says that the south coast contains biological values of international significance.

"It is one of the most important and bio-diverse southern temperate marine environments, and is a migratory and breeding habitat for significant populations of whales,"

"By acting quickly with appropriate management programs, we can preserve this spectacular coastline for all to respect and enjoy."

Jamie can be contacted via CALM at Albany by phoning him on (08) 9842 4500 or faxing (08) 9841



Jamie Allnutt. Photo by John Watson

CALM interpreters learn the language of the bush

SOUTHERN Forest Region senior interpretation officer Jodie Watts, dispels the illusion that forest interpretation is about translations into Japanese, or international deals.

"As interpreters, we translate the forest in terms that allow other CALM people to work hygienically and limit the spread of disease, especially Phytophthora cinnamomi, the scientific name for dieback.

"This involves walking the forest, looking for signs and symptoms of disease, often found in the plant understorey, and then producing maps and leaving physical boundaries in the field to identify the areas infested.

"Basically, it's a job that sees us on our feet most of the time. It's day in, day out walking through the bush, regardless of the weather.

"We look at the forest, assess the plants, take samples to check for the presence of disease, and work to meet constant deadlines, without compromising accuracy and

Jodie believes inter-

by Tammie Reid

preters must be people who want to develop an understanding of forest

"They must be observant, persistent and physically fit," she said, "and they must enjoy being in the bush, always dealing with pressure for the task to be completed on time, only to move on to another 'need it by yesterday' job.

"We work in pairs, so a sense of humour and a spirit of camaraderie is essential.

"And we try to match up, so we complement each other with our individual strengths.

Friendships forged

"Not surprisingly, strong friendships are forged, in spite of (or maybe because of) the intense nature of our work."

The hardest part about being an interpreter?

"Besides dealing with the thick impenetrable scrub of the southern forests, the ticks and snakes in summer, and fellow Swan Region interpreter Mike Pez's jokes-it would have to



Southern Forest Region interpreters at a training day field trip to Pemberton. Left to right, they are Jodie Dover, Janine Liddelow, Jodie Watts, Natasha Oke, David Anderson, Jim Brown, Anna Gerner, Ian Moore and Colin Hooper. The field trip was organised by Donna Green and Jodie Watts. Photo by Donna Green

be when we're mapping disease symptoms that are not always easily discernible.

work, it's important work, and there's strong support and encouragement from than just a job.

"I enjoy it-it's hard within our branch. That's why many of us stay so long. It's a vocation rather

"It's certainly not for the glamour or outrageous salary packages. We're just lucky I guess, that we

get satisfaction from the role we have to play in keeping the forests disease-free."

Koodah's a real friend

A NEW face at Park Policy and Tourism is that of Terrence (Koodah) Cornwall.

He prefers, however, to be known simply as 'Koodah', which is Nyoongah for 'friend', and it becomes clear soon after meeting him, that the name suits him beauti-

Koodah is based at CALM's Fremantle premises, and as Aboriginal heritage officer, is ideally placed, having been chairman of the Manjimup Corporation Aboriginal (MAC) for nearly 10 years.

Before leaving MAC to take up his new position with CALM, Koodah had been involved in training people to nn Aboriginal heritage tours in south-west.

"My work with CALM will be very similar, but on a larger scale," he said.

Koodah said MAC tours had two main aims: first, to re-educate those Aboriginal people who, because of the circumstances that existed over the past 200 years, had become cut Aboriginal practices how to

by Verna Costello

off from their culture-or if not cut off entirely, then badly fractured.

"It's great to see these tours give back to them a sense of belonging in their own country," he said.

The second part of the aim was to educate the wider community of Australians to a deeper understanding of the highly complex society that Aboriginal people had developed over many thousands of

"It's a civilisation that triumphed over an often hostile environment, learning to respect its awesome powers, then to control it without destroying it," Koodah

He is eager to share this knowledge. But there's a sense of urgency about Koodah who believes there is still time for the wider community of Australians to learn from

maintain a balance with nature.

"But there's not a great deal of time, and I'd like to see all Australians 'get serious' about this," Koodah said.

He believes that Australia belongs to everyone born here: "because their spirit entered their body out of the Australian earth at the moment they were conceived," he said.

"But this 'belonging' carries with it a responsibility to repair the damage that's already been done to the land-and to make sure it's properly cared for from then on," he said."

Welcome to a CALM world,

Standing before photos of 'Nyoongar typical country' Terrence 'Koodah' Cornwall. The book he's holding 'Sharing the Dreaming'. the community of Australians to learn from Aboriginal people how to create a balance in caring for the earth and its inhabitants. Photo by Verna Costello



Brace yourself - it's that Big Brook Relay time again

MOVE over World Cup, Tour De France and Commonwealth Games for the ever-popular bigger-and-better-than-ever CALM Big Brook Relay 1998, to be held on Saturday November 21.

It is hoped that this year some of the weaker districts such as Blackwood Walpole and Manjimup may be able to rustle up a team.

Events are crosscut sawing, cling, running, canoeing, and swimming, with the winning team receiving the Karri All Sports Trophy.

There will be an award for each event, as determined by a totally objective and unbiased judging panel.

Cyclists will vie for the Yellow Jersey Award, crosscut sawyers the Blown Phoofer Valve Award, swimmers the Susie Maroney Big Chunder award, canoers the Golden Paddle, and runners the Cliff

Young Award. Another new award sure to be closely contested will be the Tonia Harding Good Sportsmanship

There's also the Derriere Award for the team that finishes-not just last-but with flair, style and panache!

The success of previous relay dinners has guaranteed its place on the program again. Dinner costs will be advised when relay co-ordinator Rod Annear has a better idea of how many will attend.

There will also be a bush band, so relay participants can dance away any aches and

Full-weekend accommodation will be available at the Pemberton Camp School.

Accommodation and breakfast costs per day are \$25 for

adults and \$13 for students. Please contact Rod before September 25, so dinner and accommodation bookings can be confirmed.

Above all, the Big Brook Relay is a family day, with children's activities and-for the athletically challenged grownups-the quickly-gotten-over-with tug-of-war.

A sausage sizzle will be available at lunchtime on Saturday, but please bring other picnic or barbecue foods, cutlery, crockery and glasses, as well as your own frisbees,

sailboards, canoes, and so on.

If you would like to join a team, or form one yourself (or if your workplace agreement could be cancelled if you don't take part), contact Rod without delay for details, as:

Entries must be in no later than September 25.

Rod can be reached by phoning him on (08) 9776 1207 or you can email him at roda@calm.wa.gov.au.

See you at Big Brook!

Scholarship winners

IN MARCH 1998, the WA Treasury asked for applications from across the whole State Public Sector for 44 scholarships to study public sector financial management at Curtin University.

The scholarships were offered in recognition of the increasing focus on strong financial management along commercial lines in State government agencies.

CALM staff responded very well to the opportunity, with more applications from its staff than from any other Department. CALM staff ended

by Mark Neilson

up winning six of the 44 scholarships, each of which pay for about 30 per cent of the full course

A number of CALM staff who did not receive a scholarship (this time around) have nevertheless elected to study a number of finance units.

Winners of the scholarships were:

- Kylie Britza, Manjimup Nursery administrative assistant
- Ramon Ellery, Financial Services Branch banking officer

- · Cliff Gillam, Human Branch Resources manager
- Stella King, Marine Conservation Branch administrative assistant
- John Lloyd, Mundaring District manager
- Sue Martin, Softwood Business Unit administrative officer

CALM Director of Corporate Services John Byrne said that the six scholarship winners were to be congratulated on their achievement.

these "Undertaking studies will benefit both CALM and the careers of the individual staff members concerned," he said.



Wayne made a big difference

nimal spotters needed

DETERMINING the whereabouts of two of WA's endangered mammals in the State's midwest and Gascovne regions is the latest challenge for CALM, under its wildlife recovery program Western Shield.

CALM Executive Director Dr Syd Shea said greater knowledge of the distribution and occurrence of the chuditch and bilby in these regions was needed for effective recovery plans for the species.

"Part of this process is seeking information and knowledge from residents in local communities who may have seen these animals in bushland surrounding their towns," he said.

"In the past 10 years, we've received occasional, unconfirmed reports of chuditch and bilby sightings in some parts of the mid-west and Gascoyne.

"Recent sightings are of great interest to CALM's wildlife researchers, and any information we receive will help provide a better understanding of these sparsely distributed and difficult-to-locate animals."

Dr Shea said that, depending on the information received from the community, and after some preliminary background work, CALM may undertake a thorough search for the animals in these

regions later this year.

The chuditch (Dasyurus geoffroii) is mostly found in the south-west of WA, with large populations in the jarrah forest, and low numbers in remnant vegetation in the Wheatbelt region.

Mainly active at night, this meat-eating marsupial is characterised by distinctive white spots that cover its body and head.

The rest of the fur is brown with a black unspotted brushy tail.

Adult males reach about 60 cm in length and weigh about 1.5 kilograms, while the females are generally smaller at about 55 cm and weigh up to a kilogram.

- and then he got MAD WAYNE Keals was sin-

gled out to receive the 1998 Making a Difference (MAD) award from business unit manager Jon Murch at the State Forest Resources Business Unit (SFRBU) Conference in Bunbury.

Instigated last year, this in-house award recognises CALM people who are prepared to 'go the extra

by Tammie Reid

mile' in their daily work, and whose efforts 'make a difference' for the others who depend upon their work.

Recognised for his consistent and tireless effort, Wayne is known for the kind of attention to detail that is essential if things

are to run smoothly for those designing and implementing the native forest harvesting plans and strategies.

Incredible as it may seem, Wayne is credited knowing just about every tree growing in the southern forest. It isn't known whether or not he has names for them, but few would

be surprised if he did. Wayne Keals

pictured with the three foresters Donna Green, Mark Read and Greg Hodgson who have mam-moth task of catching up on Wayne's vast and intimate know-ledge of the forest. Photo by Bill Towie

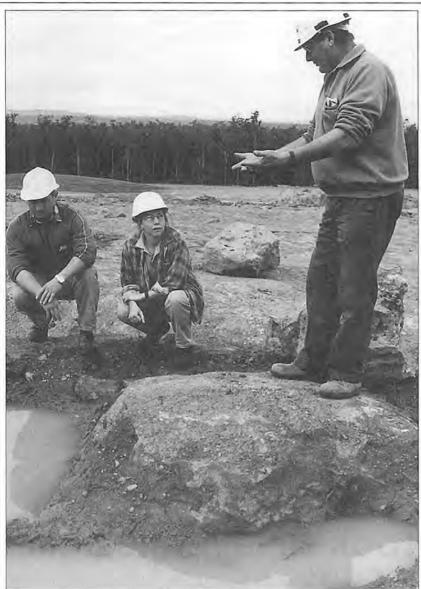


Photo by Tammie Reid

Sleuthing for dieback

PICTURED with Kelmscott District standards and training officer Abe van der Sande are new interpreters Dianne Pember and Leigh Trevorrow from the Kelmscott Forest Management Branch team.

They were visiting the Huntley bauxite minesite, where they experienced a worm's eye view of the sub-surface topography.

Abe believes such insights help explain the difficult job forest interpreters face when predicting the behaviour of dieback (Phytophthora cinnamomi).

The photo shows the exposed caprock, cleared of all topsoil, before blasting and subsequent bauxite mining operations begin. The ridges, valleys, and mini lakes run in many directions, and not all are downslope.

"Our job is to predetermine the hazards and by Tammie Reid

impacts of this disease which means we must find out what the drainage patterns beneath the surface are doing," said Abe.

"So this is a perfect opportunity for interpreters new to the game to get a feel for what we usually just walk over.

"Phytophthora is a water-borne organism, needing warmth and moisture, and often at caprock depth these conditions support the movement and development of the disease.

Dieback interpreters' work reads like a bush detective story. They painstakingly search for clues identifying the whereabouts of the 'villainous' Phytophthora, then demarcate and map the areas in which it occurs.

So what attracted Abe to this work?

"It was back in 1982, when Alan Lush (then Southern Forests Region planning officer with the Forests Department) recommended I consider this career move," Abe said.

"He thought my ability to work for long periods alone in the bush and still have an eye and aptitude for accuracy would hold me in good stead.

"But really it's the exercise and ecstasy that keeps me going," said Abe.

Apparently the ecstasy refers to adrenaline rushes experienced during snake and feral pig encounters, the constant barriers of water bush and that prickly wattle so aptly named 'buggery bush'. Deanne and Leigh wholeheartedly

"It's a tough life, but someone's got to do it. Luckily, the Forest Management Branch blokes and blokesses are darned good at it!" Abe said.

ISS project wins silver award

Silver Award in the Eleventh Government **Technology Productivity** Awards for its Global Connect Project.

The award was one of only three that went to Western Australia in the 1998 awards honouring 27 State, Federal and Local Government instrumentalities.

The awards are presentyearly by Technology in Government Committee in Canberra to outstanding recognise achievements by government agencies throughout Australia in the use of technology, to provide faster delivery of more, betterquality services.

Global Connect links nearly 1000 CALM staff at more than 30 sites across Western Australia,

CALM has received a helping them carry out the department's conservation and land management practices.

> The situation before completion of the project was that more than 300 staff, located mainly in three regional, 19 district and five local offices, had very limited, or no access to information on line.

They had to rely heavily on fax, phone calls, personal attendances, couriers and postal services for information, exchanging documents on hard copy or on diskettes.

"The processes were slow, inefficient, wasteful of paper, and expensive," said Information Services manager Peng Soong.

"Sometimes it took up to five working days to post a document to a remote office, while send-

ing documents by fax was time-consuming and generated lengthy and expensive fax calls."

Now with Global Connect, email is used extensively, allowing staff to acquire information from any of CALM's offices.

The main objective of the CALM Global Connect Project is to increase the speed with which information is exchanged, and to integrate CALM's private 'intra-network' and the public internet in order to connect staff with each other, staff with other sources of information via the internet, and staff with CALM's clients.

"Using the internet saves telecommunication costs," said Peng.

"So we expect to see increasing collaboration between individuals, work groups, and other government agencies, as well as with organisations in the wider community with whom CALM is involved."

The Department will continue to provide more information on line, and generally improve its client services.

Other benefits include a reduction of phone and walk-in inquiries and their associated administrative costs. Equally important is the improvement in staff morale.

"The project's success resulted from good partnership relations between the Information Services Section and CALM's c sourced IT service providers, The Net Effect and AlphaWest," said Director of Corporate Services John Byrne.



Director of Corporate Services John Byrne displays the Silver Award won by the Information Services Section. With him are ISS staff: Standing left to right at rear, Joanne Reany, Peng Soong, Paul Templeman, John Gonzalez, Troy Conlan. Seated centre, Barbara Thomas, Vincent Fordham-Lamont and John Dakin. Seated at front, Adrian Reynolds and Mario Tomas. Photo by Verna Costello

Cockatoos returned to the wild

CALM Wildlife officers cockatoos have released eight cockatoos in bushland at Yanchep National Park.

Volunteer animal carers had rehabilitated the

(Calyptorhynchus latirostris), which belong to a threatened species.

CALM's Wildlife Protection Branch special investigations officer Rick injured white-tailed black Dawson said that the exacting and time-consuming work carried out by the carers was irreplaceable.

"Unfortunately, there are not enough people with both the willingness and the time to devote to

the care of injured animals," Rick said.

"Nursing such rare birds back to health so they can be released back into the wild plays an important part in their conservation."

CALM and Notre Dame collaborate on Freo eco-tours



CALM Katanning District wildlife officer Tony Zidarich on the One Hit Wonder Walk Around Fremantle with Notre Dame University student Joy Horwood and course co-ordinator Gil Field. The photo was taken by course participant (and Edith Cowan University eco-recreation lecturer) Peter Baker

AN innovative collaboration between CALM and the Fremantlebased University of Notre Dame recently saw twenty-one students present the innovative annual ecotour program, Footloose in Freo.

The ecotour program formed part of the University's seven-week winter term course-Environmental Interpretation and Management and required students to design a variety of themes and tours to appeal to adults and families alike.

CALM senior interpretation officer Gil Field, wearing 'his other hat' as course co-ordinator of the University's four-day

Designing Interpretive Activities Workshop, provided the students with the basic concepts of interpreting ecotourism.

He also supplied lashings of encouragement to brainstorm for ideasthen find ways of putting the best of them into effect.

"There was an interesting mix of participants from the tourism, and natural and cultural conservation industries, as well as environmental interpretation students like said Jenelle myself." Taylor.

"This 'mind mix' provided fresh or novel points of view that motivated people to 'think the unthinkable', then look for ways to incorporate

the ideas into our tours.

"And, of course, the experience hands-on helped me find out if tour guiding, or some other aspect of the industry, would be what I really wanted to pursue as a career," she said.

Former CALM rangerof Geikie in-charge Gorge Gerry Deegan (now Whiteman Park operations co-ordinator) said that for 13 years he had been interpreting the natural environment for tourists.

"I found the course and the input from other participants highly stimulating, and learnt a lot about the environment created by human hands, such as heritage buildings, muse-

ums, transport system and so on," Gerry said.

"And, of course, this ties in beautifully with the work I'm doing at Whiteman Park.

The imaginatively contours ceived matched with equally creative titles, such as More than Buildings, Books & Brains, a tour that invited visitors to the University of Notre Dame to see curious places, mysterious spaces, a coin weighing more than a brick, and a chance to walk on water!

Tales of a Town was the name of a tour during which visitors could discover among Freo's folklore, scandals, sagas and myths at key sites around Fremantle.