

CALM NEWS

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

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September 1993

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DEPT. OF CONSERVATION
& LAND MANAGEMENT
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Timber harvest levels decided



THE new forest management strategy announced by Environment Minister Kevin Minson last month sets a new direction for the forest and the timber industry.

The emphasis is on ecologically sustainable forest management (including sustainable timber harvesting and value adding).

The key elements of the strategy are:

- CALM's proposals for an extended forest reserve system, as set out in its 1992 draft strategy will be implemented. A further 120 000 hectares of forest will be set aside from timber cutting. This means 33 per cent of the jarrah forest and 46 per cent of the karri forest will be in reserve systems from which timber harvesting is excluded.
- A system to protect river and stream zones will be applied throughout the forest.
- The annual timber cut will be 490 000 cubic metres of first and second grade jarrah sawlogs and 417 000 cubic metres of first grade and other karri logs for the next 10 years. This is a reduction of 30 000 cubic metres on the 1992 approved jarrah harvest.
- Big sawmillers will bear the brunt of the lower cut.
- Small sawmillers will

have their allocation of first grade sawlogs doubled to 20 per cent.

- All hardwood sawmills will have to initiate value adding processes for at least half their sawlog allocation within three years. Those mills that do not reach this target will have their allocations rescinded.

Mr Minson said value adding was the key to the timber industry's future.

"The Government is confident the industry will meet the challenge so that the traditional green-sawn structural timber will be a thing of the past," he said.

"It is hoped that within 10 years, the WA hardwood forest industry will employ significantly more people than it does today even though the overall timber harvest will be less."

Mr Minson said the new cut levels reflected the Government endorsement of the National Forest Policy objective of maintaining a permanent forest estate and managing it in an ecologically sustainable manner.

"This means optimising the social and economic benefits which forests supply to the community with the goal of maintaining the forested land, its biodiversity and options for future generations," he said.

Mr Minson said the Ministerial Review endorsed CALM's forest

management proposals based on sustaining the ecosystem.

"It is apparent that the biggest threat to mammals in south west forests comes from the feral cat and fox," he said.

"The fungus which causes dieback in jarrah and other species is the major threat to plant biodiversity.

"CALM already is making dramatic progress with its forest fox control program and there has been a major increase in the occurrence of native animals in those areas where foxes have been controlled.

"So far as dieback is concerned, I already have appointed a panel of eminent scientists to investigate the problem and advise on additional measures to control the disease."

Mr Minson said the Ministerial Review also endorsed CALM's submission to the Resource Assessment Commission that controlled logging of native forests did not threaten any plant or animal species.

"Therefore, provided sensitive management practices are retained or enhanced, harvesting native forests cannot be challenged on the basis of needing to protect biodiversity," he said.

Mr Minson foreshadowed a further reduction

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Visitors to CALM's display at National Forest Awareness Week in August were given a chance to learn about CALM's new forest strategy. Pictured at the display in Garden City, Booragoon, were Timber Production Branch's marketing manager Terry Jones (left). Terry answered questions from Peter Baly of Leeming, while daughter Rebecca held on tight to daddy. Could she be thinking over the words of wisdom from the 'talking tree' behind her? Photo by Verna Costello

Plantation trees to flourish on treated Albany effluent

CALM know-how is helping the people of Albany overcome a big environmental problem - what to do with the effluent from the town's sewerage treatment system that for years has been pumped into King George Sound.

Balanced management

The Water Authority of Western Australia teamed up with CALM to devise a

way in which the treated effluent could be managed in a more environmentally balanced way.

Irrigation

They looked at the possibility of using the waste to irrigate tree plantations.

The concept had been tried elsewhere in Australia but not on the scale needed for Albany.

Now, 300 hectares of vacant land north of the

town will be planted with Tasmanian bluegums

The trees will be irrigated with the treated effluent.

The first 50 hectares using bluegum seedlings from CALM's Manjimup nursery has been planted.

A further 200 hectares is scheduled to be planted next winter.

Job creation

Simon Penfold, former manager of plant propaga-

tion at CALM's nursery, said that not only did the project solve an environmental problem, it also would create jobs and yield a commercial return when the trees were harvested in seven to 10 years' time.

CALM and the Water Authority will carry out joint research programs at the site and similar ventures will be considered for other towns needing to upgrade their sewerage disposal systems.



Environment Minister Kevin Minson (left) and CALM's Executive Director Syd Shea could be discussing the government's new Forest Management Strategy. They are pictured after the Minister had launched National Forest Awareness Week on Tuesday August 24. Photo by Verna Costello



I recently spent some of my leave back-log in the USA, mainly to attend my daughter's wedding (most enjoyable, thank you), but being a CALM man to my bones, I also spent most of my time visiting wildlife areas and national parks, on field trips with Bureau of Land Management staff and at an international forestry conference in Oregon.

The trip was very stimulating. I found myself constantly looking for ideas to help CALM solve its problems, or looking for indicators of the sorts of issues that we will be dealing with in WA a little down the track.

In park management the over-riding issue is the raging competition between park users who want wilderness and ecological values and those who want to use the parks for recreation. Both interest groups are powerful and effective lobbyists and the park service is caught squarely in their cross-fire. As we know, it's impossible to produce compromise solutions to please interest groups who are themselves uncompromising in their demands.

A massive re-evaluation of forestry is taking place in the US, particularly in the Pacific northwest, where controversy about logging and fisheries on federal and private timberlands has raged for many years. The catchcry is 'New Forestry', its chief guru being Dr Jerry Franklin, who visited CALM earlier this year. New Forestry has now been officially endorsed by President Clinton and implementation will begin on all federal lands (but not on private forests).

The new policy has four main planks: (i) establishment of a representative reserve system in which timber cutting is not permitted; (ii) management of the inter-connecting multiple-use forest in such a way as to retain habitat trees and logs and patches or strips of mature forest; (iii) wise management of riparian zones and restoration of degraded rivers; and (iv) special management to protect threatened species.

These advances are to be accompanied by a substantial reduction in the level of the cut on federal lands. [The latter will inevitably be counteracted by an increase in the cut on private land and in Canada, because timber consumption in the USA continues to rise.]

All the new forestry proposals now being advocated in the Pacific northwest have been progressively adopted by CALM since the 1970s. The new US approach validates our thinking very soundly.

Like CALM, our counterparts in the US are suffering from difficult financial times. The biggest unanswered question I had after listening to calls for more sophisticated forest, park and wildlife management was: "Who is going to pay for all this?" No-one is putting up their hand.

Roger Underwood, General Manager

Timber industry uncertainty to end

CALM'S Director of Forests Don Keene welcomed Environment Minister Kevin Minson's decision that CALM's 1992 forest management strategy proposals would be implemented.

He said the proposals would result in a significant addition to the area of forest in secure conservation reserves.

In addition, it was pro-

posed to expand the stream reserve system to ensure all streams throughout the forest were protected, and introduce visual resource management to protect high quality scenic areas.

Old trees remain

Significant areas of forest dominated by old trees would be retained.

CALM also was very pleased the Minister had

determined the quantity of timber that could be harvested for the next 10 years, ending a period of uncertainty for the timber industry, Mr Keene said.

Long term contracts now would be negotiated with each timber company.

This would enable the timber industry to complete a restructure to produce mainly high value timber products

rather than concentrating on the green structural market that would progressively be serviced by the expanding pine sawmilling sector.

The State now could look forward to a forest management system that was second to none in Australia.

This would ensure that the various uses of forests were balanced to achieve

maximum benefit to the people of Western Australia and future generations.

Smaller mills to benefit

At the same time the future of the forest industry, especially the smaller sawmills and the communities in the South West that depended on them, now was assured.

Tradition upheld in golf day for all

by Michelle Widmer

NEARLY 30 years ago a deal was struck between the Pine Ridge Golf Club and the Forests Department to allow the forestry grader driver Allan (Bull) Guthridge to establish greens and construct drains on the course at weekends.

In return, Forestry Department staff were allowed to use the course one day a year - hence the origin of the Foresters' Golf Day.

Today, the tradition is still going strong and it is open to everyone from CALM, not just foresters. The aim is to get workmates, colleagues and their families together, whether they play golf or not. It is a chance to meet old friends and make new ones.

The day starts at 0830 hours with the Bush Ranger's Belt - an almost anything-goes competition - just a leisurely, nine-hole amble around a picturesque course, and is designed for non-golfers.

The competition is mixed - men's and women's - with multiple prizes, including Hardest Worker, awarded as players progress around the course. Those with club

handicaps can play but are ineligible for prizes.

After a light lunch, two more competitions will be held.

The first will be an 18-hole Stableford team competition for men with a recognised handicap, and the second, played at the same time, will be a nine-hole competition for women with a recognised club handicap.

Men's teams comprise a minimum of three and a maximum of five members and all members will be eligible for individual trophies.

Any CALM district may nominate more than one team for the men's competition.

Trophies will be awarded around the course in the women's competition.

Nominations for all men's and women's events must be lodged no later than Monday October 4.

Other highlights include Night Golf on Friday, October 8.

This is thought to be unique, as players use fluorescent golf balls and

greens markers, on a candle-lit course. It is an experience that shouldn't be missed.

Refreshments and a barbecue also will be provided.

Presentations will be made on Saturday night while you feast off a spit-roasted hindquarter of beef, followed by a social gathering in the clubrooms, where the day's play, captured on video, will be screened.

For anyone who misses out on the Friday night golf, a game can be arranged for the Saturday night - on request.

Food freaks need have no fear of malnutrition setting in between meals, as pies, pasties, beverages, etcetera can be bought from the club rooms throughout the day. Cold drinks will be available as you progress around the course.

Accommodation is plentiful and caters for all needs from 'crashing on the floor' at the Golf Club to hotel-motel or chalet. Everyone will be made most welcome, especially wages employees, park rangers, wildlife officers, etcetera. The football season will be over and

summer sporting activities not yet under way, so you could even make it a great weekend getaway.

Check your notice board

for more information or phone me or Shann Low at the Nannup District office on (097) 561 101 or fax (097) 561 242.

CALM publications - new and revised

The following publications have been produced recently and should be available from Stores Branch, Front Counter Como, or when out of print, from the CALM Library.

Leaflets

- Arbor Day Certificate
- Yanchep National Park Guide and Map
- Avon Valley National Park
- Forrestdale Lake Nature Reserve - A Guide to Visitors
- CALM Volunteers
- Winter Firewood
- Tree Growers Information Kit
- Avon Valley NP - Avon Descent
- Kennedy Ranges National Park
- Seed Price List 1993-1994
- Badgingarra Nature Trail - reprint
- Karijini National Park - reprint
- Dryandra Woodland Ecology - reprint
- John Forrest National Park - reprint

Newspapers

- Pilbara Parks
- Quality Improvement News - August

Booklets

- Growing Western Australian Sandalwood From Seed
- Mountains of Mystery Appendix \$4-95
- Technical Report No 21 - Preservation of Round Timber Products
- Mountains of Mystery Flora List \$4-95

Books

- Mountains of Mystery \$19-95
- Log Timber Reveal Record Book
- Nuytsia vol 9 no 1
- Landscape Calendar '94 \$14-95
- Discovering Hi Forest - Teacl. Resource Package Management Plan
- Two Peoples Bay Nature Reserve (Draft)
- Monkey Mia Reserve (draft)

Poster

- Arbor Day

Report

- Technical Report No 30 - Vegetation of depth-gauged wetlands in Nature Reserves of South-West Western Australia.

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Story deadline for CALM NEWS is the 10th of the preceding month.

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in the jarrah log harvest after 2003.

"The long term level of sawlog supply at today's standards is likely to be

around 300 000 cubic metres a year but could reach 450 000 cubic metres if utilisation rates increase," he said.

EDITOR...LETTERS TO THE EDITOR...LETTERS TO THE EDITOR

Dear Sir,

Having recently returned from the World Heritage-listed Shark Bay area via a UWA Extension Service Natural History course, I have a much better understanding and appreciation of that area.

This enjoyable and enlightening experience was enriched by the presence of Ron Shepherd from your Denham office. Ron's enthusiasm and exceptionally pleasant manner should be recognised. He is an excellent ambassador for CALM specifically, and the Public Service generally.

Last year I visited Perup with the UWA extension service and experienced the same commitment by the participating rangers. Their conscientiousness and infectious enthusiasm should be a source of pride to CALM.

They are indeed a valuable front line asset and have impressed many people who, typically, have not expressed their sentiments in writing.

Yours faithfully,
Richard Pawluk,
Richard Pawluk & Associates Pty Ltd
Town Planning Consultants.

From Mr Lionel Panot, 2 Allée Jean Noel, 54800 LABRY, FRANCE.

Addressed to Madame, Monsieur, le responsable du park national.

Being a naturalist, I would like to write in English or in French to a man or a woman who works in a national park.

My aim is to exchange photos on animals or scenery.

I am 21 years old and I

love animals, nature and the work you do. I got your address through a travel agency in Australia.

I hope you can find

someone for me to correspond with. In anticipation of your response, please accept my best wishes.

CALM Classified

THIS column is divided into sections dealing with 'for hire', 'for sale', 'surplus equipment', 'swap', or 'wanted'. If you have any equipment or requirement that you wish to advertise through this service, please send or fax type-written details to:

The Editor,
CALM NEWS,
Corporate Relations Division

Wanted

Chairs in good condition. Preferably ergonomic or similar. Contact Lynne Oakes, Dwellingup 538 1078.

Pair of worn out walking boots, any small size preferred. Phone Fiona Marr (09) 364 0716.

6 x 4 single axle trailer in reasonable condition. Con-

tact: Terry Ashcroft Jarrahdale (09) 525 5293.

For Sale

Toshiba T2000 (AT) Notebook computer, 3 megb. RAM and VGA screen. Price neg. Phone Patrick (09) 334 0495.

Complete sets of original Forest Focus publications. Also individual publications, all

in excellent condition. Phone Paul Marsh, Manjimup (097) 711 788.

Spend \$600 on new hard disk, and Apple Mac PC is yours. Phone Peter Hollings (09) 334 0372.

For Hire

Lewis saw with experienced operators. \$30.00/hr plus wages and plant. Contact Peter Moore, Collie (097) 34 1988.

Pines to help combat SW land degradation

PINES haven't been forgotten in CALM's program to help combat land degradation and give landowners a valuable tree cash crop.

CALM researcher Richard Moore, says while Tasmanian bluegums now may be the most popular tree crop in new plantations and timberbelts, a balance should be maintained so that demand for hardwood and softwood timber and woodfibre is met.

CALM and the Department of Agriculture have initiated a timberbelt project to show farmers how pines can be used as a multi-purpose tree crop to improve farm productivity, combat land degradation and yield commercial returns from the wood.

The two-year project costing more than \$608 000, has attracted a

\$198 000 Commonwealth Farm Forestry Program grant.

The softwood processing industry is planning to develop new export markets to Asia.

Profitable

Prices are rising, too. In the past two years, the price of New Zealand pine logs has more than doubled.

Richard says the existing area of pines on farms is only 4400 hectares and won't meet this increased demand.

"We estimate 50 000 to 100 000 hectares could be sown to pines which could begin to yield returns through thinnings after 10 years with log harvesting beginning in 30 years," he says.

The timberbelt project will include demonstration sites to show farmers how

pines can be integrated into the farm operation.

These sites will be established with input from the local community, mainly through land conservation district committees.

Demonstrations will be planned using whole-farm planning techniques that look at all factors including soils, water and economics.

This means pines will be planted where they can provide the maximum benefits for the farm. These benefits include shelter for crops and livestock and salinity control.

The four sites are at Dandaragan, Peel-Harvey, Busselton and Boyup Brook which are relatively close to softwood processing facilities at either Kewdale or Dardanup.



CALM staff casting a collective eye over The tree grower's information kit are, left to right, senior technical officer Wally Edgcombe, VATPAS manager John Bartle, administration assistant Glenda Godfrey and senior technical officer Tim Birmingham. Photo by Verna Costello

Seedling record to break

WESTERN Australia's tree plantings are set to reach a record 22 million seedlings this year.

The number reflects the big increase in interest in trees for plantations and land care programs.

CALM will supply 18 million seedlings from a bumper diversity of more than 400 species.

This is a record for CALM and one we will be delighted to see broken every year from now on.

A further 3.5 million seedlings will come from timber and mining company nurseries and about 500 000 from

private concerns. The previous record seedling production from CALM's nurseries was 12.75 million in 1989-90

Until recently, CALM's seedling production had been around the 12 million mark, including five million pines and 3.5 million karris.

But the upsurge in hardwood plantations and CALM's bluegum breeding program has put bluegums at the top of the list as the single most sought-after variety.

The entry of two overseas forest products companies into sharefarming

arrangements with south west farmers and CALM, means CALM will supply six million bluegums for Western Australian plantations this year.

A further 400 000 will be exported to South Australia and Victoria where growers are seeking Western Australia's genetically superior plants.

CALM's Narrogin nursery will supply more than 600 000 seedlings for revegetation and conservation projects in the Wheatbelt and Goldfields.

The seedlings include 180 000 oil mallees and local eucalypts such as

wandoo, york gums and flooded gums.

CALM plans to have between 250 000 and 300 000 available next year.

Over the next few years, these mallee species could cover more than 12 000 hectares in block plantings and hedgerows throughout the Wheatbelt, accounting for around 15 million seedlings.

CALM also has produced a new information kit to help farmers with tree selection. Copies are available from CALM's nurseries in Manjimup and Narrogin.



Ranger-in-charge of Avon Valley National Park Trevor Smith inspects Bristile clay pits' stockpile of surplus material used for roadworks on Quarry Road. Photo by George Duxbury

Some private help

WITH tight budgets it is easy to become despondent about the ability to get essential work done, so when a private company donates some materials it is doubly appreciated.

Mundaring District's senior ranger George Duxbury said they had been having trouble with some of the roading in the Avon Valley National Park.

"Due to the almost pure laterite soils we were having an extremely difficult time keeping Quarry Road in a trafficable condition," he said.

"The gravelly material continually moved off the road surface and when we did grade the gravel back over the road it was loose with vehicles losing traction on the ball-bearing surface.

"It wasn't practical to dig deeper into the road surface to obtain better material because apart from more of the same laterite, there are massive

Grahame Rowland

amounts of solid ironstone. "The other consideration of course was budget, so we were restricted in our opportunities and choices.

"After considerable discussion it was agreed that the best, and hopefully the cheapest option, was to obtain some good clay-based material to spread over the laterite which would then mix in with it stabilising the surface.

"With this in mind we went looking for suitable clay material within a workable distance.

"Both Midland Brick and Bristile have clay pits nearby so that was where we headed in our search.

"Although Midland Brick couldn't help they did suggest that it may be worth our while to talk to Bristile.

George said they immediately received a positive reaction from the

Bristile's Operations Manager Des Newman.

"After an inspection of Bristile's stockpile of gravelly clay overburden it appeared to be just what we were looking for, particularly as it was only seven kilometres from the Park.

"We had just started to draw up a contract based on the costs per metre for the material when we got a call from Des to inform us that in the interests of conservation and as a service to the public, Bristile would donate whatever amount of material we required to do the job.

"The donation of a thousand cubic metres was a generous gesture from a large and busy firm, and one for which we are very grateful.

"The nicest aspect of it all though, was that this quite unsolicited gesture was made freely by the Bristile people.

"To us, it shows confidence in CALM."

MORE than 70 people from a cross-section of State government departments, city and country shire councils, community groups and private enterprise gathered for the Watsonia Workshop held at the CALM training centre, Como on August 4.

Presentations were made on watsonia

by Patrick Pigott

(*Watsonia* and *Chasmanthe* spp.) ecology, control and management, including seven papers and three posters of a scientific and technical nature, and seven community and government case studies.

Many took part in a productive workshop

session in the afternoon, which dealt with the current status, problems and future needs for managing watsonia in Western Australia.

The proceedings of the workshop, including the outcomes, will be published soon in the *Plant Protection Quarterly*.

The workshop was funded by the Roadside

Conservation Committee, and organised by research scientist Patrick Pigott of CALM's WA Herbarium-Science and Information Division, with the assistance of consultant environmental scientist Mary Gray. For further information, please contact Patrick Pigott by telephone (09) 334 0495 or fax (09) 334 0515.

Do you want to save energy? Call in the ECU auditors

DID you know that you can get an energy audit of your office? (yes, even in Broome!)

The Energy Conservation Unit, a State government organisation, will assist in arranging for an assessment of the efficiency and effectiveness of the lighting, air conditioning, heating, hot water system and other energy guzzlers in your building. The Unit

by Rae Burrows

can also arrange cost-saving financial terms for the implementation of the audit's findings - and you can pay them off with the money you save by your more efficient use of energy!

Telephone John Pollock or Greg Elliott at the Energy Conservation

Unit (09) 321 1477.

On a more personal note - when buying clothes, limit your purchases of clothes that can be dry cleaned only.

Dry cleaning solvents used in the cleaning process escape into the atmosphere and contribute to the greenhouse effect.

Congratulations to the Swan regional office for its purchase of a plain

paper fax machine - and the decision to buy only recycled paper for printers and photocopy machines.

Congratulations, also, to the Southern Forest region. The region has appointed an Earth Wise Coordinator, Maria King.

Maria gives a progress report at the monthly regional operations meetings.

Mooring rope spells doom for pregnant dugong

A DUGONG found dead at Town Beach, Exmouth last July, had drowned because its snout was ensnared by a mooring rope.

Although a tragic loss of a vulnerable, gentle marine mammal, it created a rare opportunity for CALM researchers to expand on their scant knowledge of the biology of Western Australian dugong populations.

Because of the potential health risk to curious onlookers and the possibility of interference by them, their pets or scavengers, an Exmouth Shire loader was lent to CALM to move the dugong to a more secure area where measurements were taken and a closer examination made.

The dugong was an adult female 2.4 metres long.

Senior research biologist Bob Prince, assisted by the author, weighed the animal and carried out the post-mortem.

Bob said she weighed 345 kilograms, and was about 10 months into a 13-month pregnancy with a 10 kilogram male foetus.

by Ric Karniewicz

(Birth weight of dugongs is 20-35 kilograms.)

"It seems this was her third pregnancy," he said, "and she had been in an extremely healthy condition, with unusually good fat reserves and actively feeding when she was ensnared."

"The dugong is one of only four surviving species of sirenians, commonly known as sea cows. Its largest close relative, until hunted to extinction in the 18th century, was the giant eight-metre Steller's sea cow."

"The other three surviving species of sea cow are manatees which occur in the Caribbean, Amazon River and West Africa. They are basically terrestrial animals that returned to an aquatic way of life early in the evolutionary process. Manatees generally spend their lives in estuarine or fresh water."

"Dugongs live in the sea and feed almost exclusively on seagrasses, a group of flowering plants

now also adapted to an aquatic life. They occasionally graze on algae, but are regarded as the only strictly marine mammalian herbivore."

"They inhabit the shallow coastal and island waters of the Indian and western Pacific Oceans, from Mozambique in East Africa to the Solomon Islands, north to the Red Sea and Taiwan, and south to Shark Bay and the northern New South Wales coast."

"The mammals are uncommon over most of this range, but northern Australia harbours a substantial proportion of the world's dugong population."

Bob said that natural predators included large sharks, killer whales and salt water crocodiles, but humans undoubtedly were the major cause of dugong fatalities.

"Aboriginal and Torres Straits Islanders are legally permitted to hunt dugongs, but many accidental deaths occur through entanglement in nets and other fishing gear, especially commercial gill nets that target barramundi, and shark nets



Closeup of dead, pregnant dugong at Town Beach, Exmouth. Note bruise marks from mooring rope about chin and behind eye. Photo by Ric Karniewicz

offswimming beaches," he said.

"Other causes include illegal hunting, collision with boats, and avoidable marine pollution that either directly cause death or cause loss in the dugong's seagrass habitat are other factors to be

considered in the conservation equation.

"Conservation of the dugong, as well as many other marine mammals, reptiles and fish, can be helped by individuals if they: never leave nets and fishing gear unattended; minimise slack line and

avoid any unnecessary loops when rigging moorings and potlines; travel at speeds that make it possible to watch out for these creatures and avoid collisions when in northern inshore areas.

"I'd like to offer special thanks to 'Dutchy

and his staff' who operate Exmouth Aquatic Fun Hire on Town Beach, Exmouth Shire, and local butcher Gary Houghton for their cooperation in dealing with the animal and for their offers of assistance should a similar occurrence arise again.

Honorary CALM officers moving a step closer

THE appointment of honorary CALM officers has moved a step closer following amendments to the CALM Act.

Executive Director Syd Shea said that the honorary CALM officer (HCO) program was a major innovative step taken by the Department.

"The concept of honorary CALM officers working closely with CALM staff on many issues throughout the Department's estate is one of enormous potential," he said.

Following the gazetting of amendments, details of the proposed role of the HCOs were circulated throughout the department.

Concerns raised such as the honorary officers powers and authority, identification, training and administration have been addressed and a final proposal drafted.

Criteria for selection have been strengthened and the training program broadened.

A wide range of staff were involved in developing the training programs to ensure the training modules are appropriate to the tasks the voluntary officers will be undertaking.

The training program now being developed will provide for an introduction to CALM and its role in managing the public estate, emergency procedures, enforcement, safety training and environmental, educational and inter-pretational training.

CALM regions,

by Terry Hales

branches and districts have been sent a copy of the implementation report and asked to nominate honorary CALM officers.

These nominations must relate to the various type of HCOs required, for example:

Management: Honorary CALM officers would undertake tasks that provide surveillance or monitoring of a resource managed by CALM.

Examples include neighbours to CALM managed lands in remote locations, a commercial fisherman who frequents a marine nature reserve, an Aboriginal person who regularly visits a remote nature reserve, and selected endangered flora volunteers, including neighbouring landholders, who would monitor the effects of public activities on a species of rare flora or fauna.

Heritage: A person could apply or be recommended by a local Aboriginal community to become a heritage HCO.

Such appointments would be made to help CALM meet its responsibilities by providing an Aboriginal perspective in relation to traditional cultural issues, as well as helping with wildlife management and research activities.

Emergency Co-ordinators: These HCOs would act as co-ordinators or facilitators of other volunteers and volunteer



Geoff and Sue Rolland (clue: Sue is the prettier one). Inset Jeff Skull with trophy. Photos by Terry Passmore

A bouquet for the 'Skull'

WEDDINGS are in fashion in the South Coast region.

In January, regional planning officer Ian Herford married Jane Udale and in May, Albany district forest officer Geoff

by Terry Passmore

Rolland married Sue McBride. Competition for Sue's bouquet was fierce, the victor being Inventory Manjimup forest ranger

Jeff Boulton, (known for obscure reasons as 'Skull'), who displayed his football skill in marking, then proudly showed off his trophy. Best wishes to Ian, Jane, Geoff and Sue - and good hunting to Skull.

groups in the event of emergencies such as Cetacean strandings or oil spills (not fire emergencies).

This group is seen as an essential link between volunteers and CALM officers. At all times these HCOs would be under the supervision of the appropriate CALM officer.

Volunteer Facilitators: Already many volunteers have taken on the responsibility of co-ordinating other volunteers. In some cases they actively encourage people to join the volunteering effort. This situation could

be formalised by making them HCOs.

It is expected that this group would take education and information programs into schools, assist in the creation of Friends Groups and new volunteer programs and provide advice and help to newly formed volunteer groups.

Affiliates

In addition to the four main groups there will be a group of 'trusted affiliates' - former CALM staff or close affiliates (for example ex Australian National

Parks and Wildlife Services (ANPWS) members or senior academics) who may wish to make a continuing contribution to nature conservation in a voluntary capacity.

Recommendations

It is expected that CALM districts and branches will approach people suitable for a particular situation and if the person is interested, conduct an interview and, following a successful outcome, make recommendations to the Executive Director for an appointment.

New boronia plan to avert plant's over-exploitation

A NEW management plan, prepared by CALM wildlife botanist Sarah McEvoy, is being implemented to ensure wild boronia is not over-exploited.

In addition, harvesting limits have been set and royalties introduced for the 1993 boronia season that started on July 1.

The future of the small, but locally important, boronia industry depends on supplies from State forest, where sustainable picking practices must be maintained if the species is to be conserved.

"Brown or scented boronia is harvested from moist lowlands west of a line from Harvey to near Albany.

Most of the blossom harvested is sent to the eastern states where oil is extracted for use in food flavouring.

Flower sprays are gathered, mainly for the local market through florists and traditional street sellers between July and September.

Propagation

Small amounts are taken for propagation, either as seed or cuttings.

The management plan was prepared in consultation with the Western Australian Flora Industry Advisory Committee.

The committee comprises CALM's director of nature conservation Keiran McNamara (chairman) and senior botanist Ken Atkins, with representatives from the Agriculture Depart-

ment, flora pickers, growers and dealers, the National Parks and Nature Conservation Authority, Kings Park, the WA Wildflower Society and Curtin University.

Harvest levels of 4000 kilograms of blossom and 1000 kilograms of flower sprays have been set for the 1993 season. No quota applies for material collected for propagation as CALM is encouraging the development of boronia plantations on private property as a way of helping conserve the species.

Quotas

Quotas will be set each year to ensure harvest levels are sustained.

Royalties in the 1993 season were 75 cents a kilogram of blossom, cents a kilogram for sprays and \$7.50 a kilogram for unprocessed seed material.

The royalties will fund a boronia monitoring and research program that will determine sustainable harvest levels for the setting of quotas.

This research will be undertaken by the newly formed Natural Products Section of the Sustainable Resources Group in the Science and Information Division, headed by wildlife senior research scientist Neil Burrows. Each year, the season for boronia blossom and sprays runs from July to September.

Seed and cuttings can be gathered between October and December.

It's Big Brook time again

THE popular annual event, **The Big Brook Relay at Pemberton will take place on Saturday, 20 November 1993 at 10.30 am.**

Pemberton District staff would like to see even more teams taking part this year, so get a side of seven

people together to strive for the honour and glory - or just to have loads of fun.

The sequence of events will be:

1. Cross cut sawing
2. Cycling
3. Running
4. Canoeing
5. Swimming

Look on your social notice board for the circular with further details and an entry form (that you can photocopy). Complete your entry form and return it **no later than October 16** to David Meehan at CALM Pemberton. Both David

Meehan and Alan Sands are happy to field any questions about the relay.

David can be reached at Pemberton by phoning (097) 761 207 or faxing (097) 761 410. Alan is at Kelmscott on (09) 390 5977 or fax (09) 390 7059.

NP activities now run all year

INTERPRETIVE activities programs at Yanchep National Park are now running throughout the year.

The programs are full of fun for all members of the family with activities such as adventure caving, swamp safaris, wetland explorer, historic tours and much more.

Yanchep National Park's interpretive ranger Therese Jones said the programs focus on the park's special values, which fit into four broad categories - wetlands, woodlands, heritage and caves.

"We hope that by providing interesting, fun

by Rod Annear

activities within these categories, people will grow to appreciate the park's natural values," Therese said.

"In the past all that visitors could do was to perhaps have a barbecue, see the koalas and caves and maybe go rowing on the lake."

The activities are run by a wide range of people, with the WA Museum, Education Department, Wanneroo Shire, Wildflower Society, local business, volunteers and visiting experts all contributing.

"People who participate

can develop skills and knowledge which will increase their appreciation and enjoyment of the bush," Therese said.

"From sharing an experience in the park it is hoped that people will also develop a more caring attitude toward the natural environment, which means everybody benefits."

Winter program

The park's winter program focused on Aboriginal culture, culminating in a week of activities that coincided with the National Aboriginal and Islanders' Day of Celebration in July.

An Earthcare Market Day on October 4 will launch the spring program in full swing. There will be buskers, clowns, art and craft stalls and environmentally friendly products.

It will coincide with the opening of the McNess Visitor Centre, refurbished to provide information facilities for the thousands of visitors to Yanchep National Park.

School holidays will see children kept busy with activities now being planned for their enjoyment and education.

Anyone who wants more information on the programs should call Julie or Lee on (09) 561 1004.



Leeuwinn-Naturaliste National Park ranger Bill Taplin shows Busselton acting parks and reserves officer Neil Taylor a likely spot for safety rings. Photo by Kim Murray courtesy Augusta-Margaret River Mail

South west anglers hooked on a ring

ANGLERS will soon be able to fish in safety by tying themselves on to safety rings designed to reduce the high number of drownings in the infamous south west coastline.

The rings are to be installed at popular tourist and fishing spots Contos Beach, Bob's Hollow, North Rock, Wyadup, Torpedo Rock and Sugarloaf Rock.

The WA Recreation and Sports Fishing Council, which has lost three members in as many years in drownings in the area, will supply the rings.

This has been given extra impetus by Angus Horwood, the Council's president and NPNCA representative.

The recent drowning of a six-year-old Perth boy who fell from Merchants Rock, near Contos, prompted calls from the

Augusta Sea Search and Rescue Group for safety equipment to be installed.

Both fatalities prompted local fishing and rescue groups, representatives from CALM, the Augusta-Margaret River Tourist Bureau and the police to call a special meeting to discuss safety measures.

About 12 of the rings are expected to be installed in the next few weeks each comprising a stainless steel ring on a post which will be drilled and glued into the rocks.

Anglers will be able to tie themselves on to the rings, tying off to a length that will stop them from sliding into the ocean if they fall.

"The rocks can become treacherously slippery and anglers can easily lose their footing and slide into the ocean, often being knocked unconscious and

sustaining other injuries in the process," said Busselton district manager Roger Banks. "This will be the first time this project has been tried in Western Australia and it is intended to have it well publicised, in an effort to educate people to use the rings," he said.

"We will suggest a type of harness they should use, which costs about \$40 - a small price to pay for one's life. CALM has agreed to the installation of the rings on a trial basis and would prepare new signs warning of hazards."

Roger said a 'code of the coast', prepared in consultation with local tourist bureaus and others at the Margaret River meeting, would drive home the safety rules for recreation in coastal areas.

A CALM knees-up on the good ship Endeavour

DWELLINGUP district forest worker John Chapman, pictured below, inspects one of the many jarrah 'knees' that originated in the Dwellingup forests and are now in place securing deck beams to the side of the ship in the focsle and quarter deck of the replica Endeavour.

The full scale replica of the Endeavour is being built at Fremantle Harbour and it is hoped to have the ship in the water by December, 1993. Once in the water, it will take three months to rig the vessel.

Apart from a laminated oregon pine mast and pine top planking, the wood used is exclusively West

by Tammie Reid

Australian: blackbutt, sheoak, karri, marri and tuart.

Knees are cut from limbs that grow at a sharp angle from the crown of a tree and are eagerly sought by the Endeavour's shipwrights in our blackbutt and jarrah forests, just as they were highly prized and sought after in oak forests by English shipwrights more than 200 years ago.

The knees act as hinges beneath the deck corners and resist the strain of the sea and the mast.

Without them these combined forces could collapse the hull.

Captain Cook's original

Endeavour was a Whitby-built collier ship of 368 tons. The timbers were oak and pitched pine and it was ungainly and slow to sail.

Cook sought two advantages when choosing the round-bowed, broad-beamed ship: the ability to remain upright at low tide or if running aground (something that did happen on the Great Barrier Reef during the three-year voyage), and comfort relative to her size.

The Endeavour left England in 1768 with 94 people on board in a space similar to a basketball court, 130 feet by 30 feet by 30 feet.

Cook's mission was to observe the transit of Ve-

nus from Tahiti on 3 June 1769. The measurements taken would enable astronomers to calculate the distance of the earth to the sun. The next chance was not for another 100 years.

However, Cook's secret orders were to sail into the 40-degree south latitudes and beat the French in search of a southern continent. This he did and in 1770 laid claim to Australia in the name of King George III.

Today, the lovingly crafted, WA-timbered replica has orders to sail to the eastern states after its launch in December.

Then it's hoist the canvass and sail away to make the landing at Botany Bay - again!

Trees return to south coastal landscape

TO paraphrase Bob Dylan, 'the landscapes are rapidly a-changin' in the South Coast region.

There, trees are returning to the rural landscapes at an astronomical rate.

CALM's South Coast Sharefarms and Landscape Management Programs have been developing joint landscape planning and design guidelines for the *Eucalyptus globulus* project.

Sharefarms manager Gavin Ellis said commercial trees are being integrated into farms not only to produce timber but for many 'on farm' values as well.

"Using the landscape design process in planning

by Grant Revell

our tree planting layouts we can easily help the farmer capitalise on aesthetic values associated with rural landscapes," he said.

"By adopting some simple principles, we can maximise the beautiful and minimise the ugly - it's an opportunity there for the taking."

Integration

This exercise is one step closer to the concept of 'whole farm' planning where an integrated design plan is produced for overall future farm improvements - something most

farmers would proudly display on their kitchen fridge.

Coordination with neighbouring properties and Land Conservation District Committees then lead to further integrated catchment planning and management.

Gavin and forester Barry Jordan and their team have been busy preparing this year's plantation plans, where it is now standard procedure to include the training and implementation of landscape planning and design guidelines. For further information on farm forestry landscape projects contact Gavin Ellis on (098) 41 7133 or Grant Revell on (09) 364 0777.



How a casual comment led to a trusty, rusty rifle recovery

A CHANCE remark during a chat between a CALM forester and a veteran bushman-timber feller has led to the discovery, after 56 years, of the owner of a .303 Martini-Henry single-shot rifle.

The rusted rifle was found last February by CALM Walpole rangers Gary Muir and Greg Hodgson while working on dieback demarcation at Spring Block, 75 kilometres south east of Manjimup.

A few months later, Vic Starkie casually mentioned to CALM forester John Evans that he had once cut sleepers in the Mattabandup area many years ago.

John, knowing the area had been renamed Spring Block, recalled hearing that an old rifle had been found there, so asked Vic if he knew of anyone who might have lost it.

Owner found

"Yes, it's mine," said an astonished Vic.

Now 78 years old, Vic had lost the rifle in 1937 in a massive bushfire that ravaged the area between Mayanup and Walpole.

He was then a fit 22

year-old railway sleeper cutter, working with twelve Yugoslav immigrants on a conditional purchase block belonging to the late Shirley Muir.

The men camped nearby; Vic in a hut and the others in tents on an open flat.

Dairy farm

The hut had been built about 1925 by Charlie Bloxom, for a Mr Braun who wanted to begin dairy farming there, but the cattle wandered off and the venture came to nothing.

One afternoon in late February just after lunch the sky began to darken and Vic suspected rain. However, a huge noise, like a violent hailstorm, began and total darkness quickly descended.

Realising it was the sound of a 'massive fire' he began running towards the flat where the others were camped.

The sky had darkened so quickly that their campfire became a bright glow in the distance.

The fire approached rapidly and there was no time to save anything - not even their only transport, a 1937 Maple Leaf truck, which had clocked less than

1000 miles (not kilometres in those days).

All their tools, tents and personal belongings were lost and the hut, built of jarrah slabs and containing Vic's personal gear, was gutted.

All they could do was head for whatever shelter they could find on the open flat.

So intense was the fire that stacks of green, freshly hewn sleepers, ready for cartage were destroyed.

The heat and smoke almost overpowered them, but all managed to survive.

Burnt tyres

When the fire front had passed, Vic returned to the site of the hut in time to see the tyres of his bicycle 'burning like catherine wheels'.

Later still, when the heat from the fire had subsided, he walked 10 kilometres to Willy Muir's farm at Lake Muir to raise the alarm.

Burning trees with falling limbs made the walk highly risky.

Vic returned to the hut site a month later and collected what he thought to be his only surviving possession, the push bike frame.

Meanwhile, the rifle

lay, undisturbed, next to the stone fireplace.

Work for the next few years was felling trees for the Jardee Sawmill and although he volunteered several times for active service during World War II, the Federal Government decided he could best help the war effort by continuing the work he was doing, which he did for more than 20 years.

Vic accompanied John Evans to the area recently and met the officers who had found the rifle.

Coincidentally, one of the officers, Gary Muir, is a great-nephew of the late Shirley Muir.

After more than five decades, Vic remembered details of the hut layout and many other features.

Even more amazing, in spite of the fires the area had experienced over the years, tiny wooden pegs he had used to pin kangaroo skins to dry were still in the bark of a large redgum tree beside the ruins of the hut.

It was in 1936 that Vic bought the rifle, then in good condition, for two pounds from Fred Coombes, a former World War I British army captain who was living near



Remains of rifle lies on map belonging to the Muir family. The map shows old locations, since resumed by Crown, in Lake Muir-Mattabandup area. Photo by John Evans

Manjimup at the time.

The Walpole Historical Museum now proudly displays the rifle, as it was found, together with a plaque detailing its history.

Vic later became a bush fire brigade officer, and said it took him some time

to overcome the concern he felt at the sight and sound of a bush fire but he is adamant about one thing.

"It's absolutely vital that the regular burning of the forest be done to reduce the possibility of large bush fires, Vic said. "Only those

who've lived through a horrifying experience such as the 1937 fire can appreciate the ferocity and speedy devastation that fires can cause. Fires like that should never be allowed to happen again," he said.

New book on 'paws'

KANGAROO paws and Catspaws - a definitive book on these unique species that include Western Australia's floral emblem - has been published by CALM.

The book is a natural history and field guide, written by Stephen Hopper, a former senior principal research scientist with CALM and now Director of Kings Park and Botanic Garden.

It is superbly illustrated by local artist Margaret Pieroni, with most of the photographs by internationally acclaimed wildlife

by Nigel Higgs

photographers, Babs and Bert Wells. The book illustrates all the kangaroo paw species and subspecies and provides information to help, not just with identification, but with understanding.

History

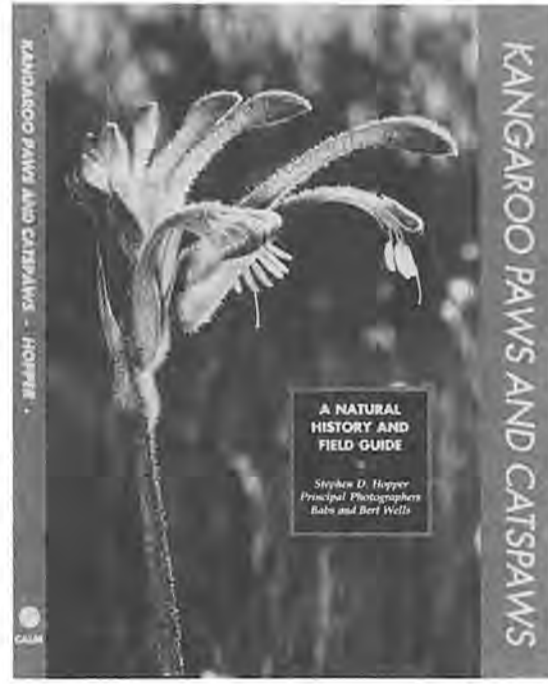
It includes a section on the history of the identification of the plant since it was first collected and recorded by a European botanist in 1792. One of these specimens is still stored in

the Paris Museum.

Part of CALM's strategy to conserve Western Australia's flora is to stimulate public awareness of the State's megadiversity of plants.

Kangaroo Paws and Catspaws does just that and is a book that deserves a spot in every plant lover's library.

Kangaroo Paws and Catspaws - a natural history and field guide. Author Stephen Hopper. Edited by Ray Bailey and Kate Hooper. Published by CALM, the recommended retail price is \$24.95



The return of rose mallee

by Anne Kelly

RECOVERY of the rose mallee, *Eucalyptus rhodantha*, is well under way with the planting of more than 500 seedlings into their natural habitat at Watheroo.

Moora district officers Ken Borland and Russell Bone, and I planted the seedlings over two days in early June.

On the second day we were helped by local residents Fred Mogridge and Steven Yates, who are employed by the Wheatbelt Aboriginal Corporation (Northam) and are helping CALM with reserve management and special projects such as prescribed burning, rubbish removal and sign erection.

The rose mallee is a spectacular plant with silvery-grey leaves and large red flowers that hang from the branches on long stalks.

Less than 500 plants are known from a few populations near the wheatbelt towns of Three Springs and Watheroo and negotiations are under way to acquire the area as a nature reserve.

The seedlings are being introduced because no new plants have been recorded in any of the populations since observations began almost two decades ago.

The habitat has become badly degraded over time due to grazing, rabbits and weed infestation. The seedlings were

grown by RGC Mineral Sands Limited at their Encabba nursery from seed collected during research in 1985-86.

Trials varying the level of watering, fertiliser application and weed control were established to determine the best methods for larger scale plantings into the populations in future years.

The weather conditions have been excellent for seedling establishment with good rains preceding and following the plantings.

Leftover seedlings were distributed by the Moe District office and RGC staff to schools in the Watheroo-Three Springs area for Arbor Day activities on June 11.

Reintroduction programs will be undertaken next year at Watheroo and at one of the two northern populations near Three Springs.

Ken Borland and I recently met members of the Three Springs Shire to discuss rehabilitation of a road verge gravel pit in the centre of one of the populations.

The gravel pit will be landscaped by the Shire over the next few months and planted next winter with *Eucalyptus rhodantha* seedlings and associated species.

ASCIENTIFIC paper reporting a study of the ecological impact of dieback disease (*Phytophthora cinnamomi*) in the Stirling Range National Park was recently published in the *Australian Journal of Ecology*.

The paper was based on a study carried out by research scientist Ray Wills of CALM's WA Herbarium between December 1988 and April 1989.

The study showed that some plant families had large numbers of susceptible species, while others were apparently unaffected by the pathogen.

Over one-third of the 330 species assessed were found to have at least some individuals in a population killed by dieback.

The three most important woody plant families in Western

Dieback and impact on Stirling Range

Australia are the Myrtaceae (e.g. eucalypts, paperbarks and bottle brushes, making up 737 described species), the Papilionaceae (pea-flowered plants with 639 described species), and the Proteaceae (e.g. banksias, grevilleas, dryandras and hakeas, making up 536 described species).

All of these families are important in the Stirling Range and all have species that are susceptible to the disease.

Most notably, 85 per cent of species surveyed from the Proteaceae were susceptible.

Species of Proteaceae have markedly declined at sites long infested by

dieback disease, while species with low susceptibility (e.g. sedges and rushes) have become more abundant.

Often, there are more species of Myrtaceae and Proteaceae at any one location than species from all other plant families combined.

Almost invariably, a few of these species are dominant.

Dominant species may also be critical to the survival of many of the plants and animals that also live there. If these species die from dieback disease, the foundation of the ecosystem may be affected.

Plants that grow in the

shelter of a dense canopy may disappear as the susceptible plants that shelter them are killed.

Animals may suffer, too, since the susceptible plants may be a key food source or may have been important as shelter from predators.

Scientists Newhook and Podger highlighted the virulence of dieback disease in the *Annual Review of Phytopathology* in 1972 when they stated that this fungus was "probably the most destructive plant pathogen ever recorded in native vegetation."

Since then, more and more plant species have

been found to harbour dieback disease.

Research in the Stirling Range National Park suggests that as many as 2000 of the 9000 native plant species in south-western Australia may be susceptible to dieback.

This study highlights the serious ecological impact of dieback disease on native plant communities and suggests that significant components of the flora and associated fauna of the south-west of Western Australia are endangered by this virulent pathogen.

Wills, R T (1993) "The ecological impact of *Phytophthora cinnamomi* in the Stirling Range National Park, Western Australia." *Australian Journal of Ecology* 18 (2) 145-159.

Cliff rescue course

THE gorges of Karijini National Park, some with sheer drops of 125 metres, provide an ideal setting for training CALM staff in cliff rescue techniques.

At Kalamina Gorge, with a drop of some 30 metres, eight CALM staff and one volunteer recently took part in a course on the erection and use of the CRUX 2000 in cliff rescues:

The course was run by Vern Delgado of Rescue Training Australia. CALM staff were: senior ranger Keith Cunningham, national park rangers Luke Coney and Maitland and Ian Parker all of Karijini; ranger-in-charge Geoff Kregor of Millstream; ranger-in-charge Roy Harris and national park ranger Gerry Deagan both of Kalbarri and forester Brad Barton of Karratha. The volunteer was Cathy Chatterton from the USA.

Brad Barton said all agreed that the appearance of the ungainly-looking

equipment did not inspire confidence. "But it soon became clear that it was surprisingly stable and absolutely safe," Brad said. "All the same, there weren't too many volunteering to catch a ride up and out of the gorge on a stretcher - maybe they just didn't trust the blokes at the top.

Rapid drop

"Ascending and descending techniques were also part of the course, and one participant soon found that it doesn't take long to descend three or four metres, especially if you forget to take the slack out of the rope before going over the edge.

"In spite of the oppressive heat and ever-present flies trying everyone's patience and concentration, all managed to pass the final test.

"This involved putting together the CRUX 2000, each on his or her own. Not too difficult considering we had put it up and pulled it down about 20 times in four days.

"So, for those of you who visit the Karijini or Kalbarri National Parks, you may rest assured that competent help is at hand, should the unthinkable happen. Meanwhile, just hope the pain is excruciating enough to deaden your feelings of stark terror - I'm kidding, honest!"



Assembling cliff rescue equipment at Kalamina Gorge are, left to right, Keith Cunningham, Brad Barton and Maitland Parker. Photo by Geoff Kregor



Practising ascending and descending techniques in 80-metre-drop at Three Ways Lookout are, left to right: Luke Coney, Johnny Parker, Gerry Deagan, Roy Harris, partly obscured by Cathy Chatterton; Brad Barton, Maitland Parker and Keith Cunningham. Photo by Geoff Kregor

The high price of success

THE continuing fox control program within the proposed Perup Nature Reserve has created a novel problem for staff from Manjimup District.

Due to fox numbers being kept reasonably low, populations of native species such as woylies, numbats, possums, phascogales and tamar wallabies have been increasing.

The extent of the tamar numbers in particular was not realised until a report was received from Mr Michael Askew, an owner of land adjacent to the reserve.

Mr Askew was concerned that his lupin crop was being heavily grazed by animals coming to his property from the nature reserve.

The damage was inspected by district staff

by Rod Simmonds

and it was found that a strip approximately 1.2 kilometres long and 30 metres wide was closely cropped to the extent that it had a 'mown lawn' effect.

A spotlight survey revealed that the culprits were tamar wallabies, and approximately 30 animals were seen contentedly grazing in the crop.

The crop was fenced with 'Ring-lok' through which the tammers were able to gain access to the crop.

After consultation with Mr Askew, CALM erected a battery-powered electric fence adjacent to the 'Ring-lok' fence.

The aim was to discour-

age the animals from grazing until the lupins became established past the seedling stage.

This was supplemented by the issue of a Damage Licence by the Wildlife Branch allowing Mr Askew to fire his shotgun to scare the tammers away from the crop.

He did this once a week until the crop was past the stage where the tammers were causing damage.

Follow up

A follow-up spotlight survey proved the success of the exercise when a number of tammers were sighted 'eyeing off' the crop from a safe distance outside the fence.

Mr Askew commented that the tammers must have made regular attempts to get to the crop because they rapidly returned to grazing

the lupins when the power to the electric fence was interrupted or the battery went flat.

The respite from grazing allowed the lupin crop to establish sufficiently for Mr Askew to make a reduced hay cut.

At harvest, Mr Askew also reported sighting 70 to 80 southern brown bandicoots in the lupins. These bandicoots are recent additions to the endangered list. It seems that the reduction in fox population numbers is allowing an increase in a wide range of species.

It may be that the incidence of this type of problem will rise as native species numbers increase, and CALM staff will need to work closely with their neighbours to ensure that the impacts are minimised.

What do our visitors think?

VISITORS to Yanchep National Park have been surveyed to assess current use patterns, and visitor attitudes towards the park and the services offered.

Information collected included the visitor's age, home location, group size and length of stay in the park.

They were also asked to list the park's attractions, noting their most and least liked attraction, and to rate

Rod Annear

each feature they had used. Once collected the survey information was entered onto a database for analysis and comparison with a similar survey conducted in 1987.

It was found that since 1987, significantly more people from Perth's northern suburbs were visiting the park while there were far fewer from overseas and

interstate (due primarily to a reduction in coach tours since closure of Atlantis Marine Park); and that most visitors came with friends and family to picnic or barbecue with many wanting improvements made to the inn and kiosk.

It was also found that out of all the attractions, the cave tours were still rating number one but the koalas had slipped as their numbers diminished due to disease. Recent

additions to the colony have reversed this visitor-attendance trend.

With the park undergoing significant change, it was important to collect this information as it will allow the current redesign to be further tailored to visitor needs.

It will be interesting to gauge opinion in a further five years to see the impact that the current redevelopment has had on public opinion.

CALM-Westrek project helping young people

THE Hills Forest project in the Hills district less than 40km from Perth has reached a further milestone in its development.

A 1.5km Weir View Walk that takes in wonderful views over Mundaring Weir, split rail fencing and wooden decking around a king jarrah tree, have been built in the past 26 weeks in a joint venture between CALM and Westrek.

CALM Executive Director Dr Syd Shea presented CALM certificates of appreciation to the young men and women who undertook the programs.

Dr Shea said the aim was to give long-term unemployed 15 to 20-year-olds skills that could help them get permanent employment.

The program focused on carpentry and joinery skills as well as an understanding of land management through building walk trails and tree planting.

Dr Shea said two of the 15 young people who took part in the program already had started full-time jobs

before the project was finished. Others were confident of gaining employment soon.

CALM was assisted by Bob Rado of Manjimup who worked with the team to teach some of the skills of cutting and erecting split rail fencing.

"This type of activity which centres on art forms used by our pioneers also creates and projects the heritage aspects of the Hills Forest project," Dr Shea said.

"The team did a particularly impressive job in building walkways and putting decking around the base of what is believed to be the oldest jarrah tree near Perth.

"This tree at Sawyers Valley is a magnificent specimen and the decking will protect its fragile surface root system from damage so that future generations can enjoy its majesty."

Other Hills Forest project work the Westrek team completed included stage one of the Patens Brook camp site and a trail that leads to a swamp along a creek with imposing

granite outcrops and displays of wildflowers.

The Hills Forest Activity Centre near the Mundaring Weir also had a major clean up.

Dr Shea said the Westrek team also helped CALM crews plant 130 000 pines in CALM's softwood plantation this winter.

The Westrek work was funded through the Federal Department of Education, Employment and Training.

A second Westrek program due to begin next month would build on the success of the latest work.

"The Hills Forest project basically is confined only by imagination," Dr Shea said.

"The fact it is so close to Perth means we have a wonderful opportunity to create a facility that can be used for learning, recreation and conservation.

"The young people who take part in the Westrek programs will be able to look back on their time in the Hills Forest knowing that they now are part of something that will be enjoyed by generations to come."

Landscapes preserved using new techniques

BUILDING roads for hauling logs in the Southern Forest region is a major task in any timber supply program.

These roads have the potential to cause major changes to the forest landscape and so the region's roading program coordinator Terry Court recently conducted a trial to help reduce such impacts.

An area known as Lochart Block, north of Walpole, was chosen to test a new technique on the large earth slopes, known as batters, that result from road construction cuttings.

Most batters have smooth sides that are diffi-

cult to revegetate, and where the soil is clay there is a colour change contrasting vividly with the natural surroundings.

This time instead of smooth-grading the slope, it was step-cut using a machine scraper.

This allowed for the topsoil, stored at the top of the batter before excavations began, to be returned and held in place on the steps, ensuring fast rehabilitation of the disturbed area and a return to the natural landscape colours.

Terry said the trial showed that environmental and landscape management could easily be in-

corporated into a road construction program without added cost.

"While this type of construction has been practised by Main Roads on major highways for some time, the challenge for CALM was to ensure integration of construction and rehabilitation to help reduce costs," Terry said.

"The extra machine time required for topsoil management was offset by the saving in grading time normally required under the old method."

It is now hoped, to include this specification into road construction contracts for the next year.



Kevin Ashcroft (left) and Brian Smith take up a winning stance before setting out for national championships. Photo by Taryn Linning

Axemen bring home four titles

CALM Dwellingup overseers Brian Smith and Kevin Ashcroft acquitted themselves admirably as members of the Western Australian Axemen's team that competed in the national championships in Queensland last July.

The team brought back four of the fifteen titles, with Brian and Kevin making it into the semi-finals in the underhand 17-inch and 13-inch, missing out by seconds to qualify for the event final.

The team relay was the only event without a handicap but Queensland took a convincing 3-0 win over WA.

This evened the score

by Tammie Reid

after WA humbled the banana benders last year at Perth's Royal Agricultural Show 3-0.

The States will meet again in two years to renew their rivalry.

A big unknown for our axemen was the properties of the wood being cut. Last year the competition was held in Adelaide and mountain ash was the wood used.

This is much softer to cut than jarrah and the axes had to be prepared with a thinner edge.

This time the Queensland stringy bark proved to

be harder even than karri and the axes needed a thicker edge to get the chips to fly.

Kevin said he took six good axes with him but came home with only one in reasonable condition - and that was the one he didn't get to use!

Kevin has been chopping for over seven years, after being introduced to the sport by his uncle Terry Ashcroft, and Brian.

He liked the sport and was 'a bit of a natural' with his favourite event, the underhand on a handicap of 27 seconds.

Kevin is vice-president of the Central Districts Axemen's Association,

(CDAA) was runner-up Axeman of the Year and runner-up Champion of Champions for 1992-1993.

Brian has been competing for 15 years and he also prefers the underhand event, with a handicap of 26 seconds.

He is official handicapper for the CDAA and believes it is the different State systems of setting handicaps that make or break a State's chance of winning.

Community fundraising helped to get the two axemen over to Queensland.

To 'Ashy and Smithy,' congratulations on a great effort.

A rare bird relocated

by Alan Danks

CALM has begun the second phase of a program to establish colonies of one of Australia's rarest birds on a safe island haven off Western Australia's south coast.

Technical officers Leigh Whissen and Ian Wheeler, volunteer Kate Von Schill and I released two female noisy scrub-birds on Bald Island about 20 kilometres east of Albany.

The birds joined five males released last year as part of a plan to re-establish noisy scrub-birds on the island.

Fire is one of the big threats to new scrub-bird colonies, which prefer bushland that has not been burnt for many years. One of the site's major advantages is that it is not threatened by mainland wildfires. It is also free of feral predators.

The noisy scrub-bird was rediscovered at Two Peoples Bay in 1961. It had been considered extinct as it had not been recorded since 1889.

Since 1983, a program of translocations from Two Peoples Bay Nature Reserve has increased the size and spread of the scrub-bird populations. It is estimated there are now about 800 scrub-birds compared with just 100 in the 1960s.

Female noisy scrub-

birds are among Australia's most elusive birds, but CALM staff, with the help of volunteers, captured the two females for the Bald Island operation and television station Channel 10, supplied its helicopter to transport them.

The males, which are caught more easily, were released on the island last year to test the suitability of the site.

Penetrating song

This year, CALM officers have noticed at least two of the males defending territories with their characteristic loud and penetrating songs.

The program to increase noisy scrub-bird numbers is particularly encouraging at Gull Rock, east of Albany.

Evidence that birds there had begun breeding was obtained sooner than at any other noisy scrub-bird translocation site.

CALM brought noisy scrub-birds to the Gull Rock area between 1990 and 1991, after a single singing male was found there in 1988.

Five males and six females were released in the area and a recent census shows how well the birds have been breeding.

A search of all known and potential sites in the

Gull Rock area revealed nine males now singing their territorial song. An unknown number of female birds presumably had hatched as well.

The success of the breeding population of noisy scrub-birds is further incentive for the area to be vested as a national park under CALM's management.

Other rare species at Gull Rock include the western whiplark and southern brown bandicoot, and the red-eared firetail finch, which is in need of special protection.

In addition, five species of declared rare flora have been found in the area: granite banksia (*Banksia verticillata*), crystal helmet orchid (*Corybas limpidus*), James' paperlily (*Laxmannia jamesii*), Albany woollybush (*Adenanthos cunninghamii*) and Plantagenet triggerplant (*Stylidium plantagenium*).

Gull Rock also has a number of priority flora species and the Albany pitcher plant (*Cephalotus follicularis*). The area is jointly managed by CALM and the Shire of Albany, which supports the need to change the park's status.

It is hoped the proposal to vest the park in the National Parks and Nature Conservation Authority will be included in the next Reserves Bill.

Marooned in Shark Bay

PLANNING for the Shark Bay marine reserves was temporarily marooned recently when a charter boat became stranded on a sandbank near Denham.

The charter was organised for the Shark Bay Marine Reserves Advisory Committee to inspect management issues associated with the Steep Point and Dirk Hartog Island areas and to discuss these with local tour operators, CALM and Fisheries Department officers.

Committee chairperson and CALM's Midwest regional manager Greg Leaman said that the four-hour wait for the tide to refloat the boat was the only hitch in an otherwise successful meeting.

"Fortunately, damage was limited to the skipper's pride," he said.

The committee was established earlier this year and has met twice to advise CALM on matters relating to planning for the Shark Bay Marine Park and Hamelin Pool Marine Nature Reserve.

A wide range of groups including the Shires of Carnarvon and Shark Bay, professional and recreational anglers, tourism, conservation and scientific interests, as well as CALM and the Fisheries Depart-

ment are represented on the committee.

Most of the committee members are from the Shark Bay region and were appointed by Environment Minister Kevin Minson.

During the four-day meeting, the committee considered a range of issues relating to the preparation of a management plan for the marine reserves.

These included protection of important habitats, commercial trawling, marine pollution and community liaison.

Issues were also discussed on site with the World Heritage Area planning team, tour operators and dolphin researchers at Little Lagoon and Monkey Mia.

Greg said that substantial progress had been made at the meeting.

"The committee is working well as a team and making good use of individual members' knowledge and interests," he said.

The next meeting of the advisory committee will be held in October (this time on dry land) at Carnarvon.

The draft management plan for the marine reserves is expected to be available for public comment towards the middle of 1994.

THE local community at Denham played host recently to Lord Byron, a wedge-tailed eagle found in Francois Peron National Park.

The bird, when introduced to local CALM staff, was found lacking in both body weight and strength.

He had also sustained some damage to its primary feathers, which are essential for flight.

A leg problem had also developed, needing treatment with antibiotics.

by Bill Cuthbert

After consultation with CALM officers, local bird enthusiast, John Rick, embarked on a recuperation program.

It was hoped that after a short recovery period Lord Byron could be released into the park.

He accepted the warm hospitality offered by John, dined on wild goat, fresh rabbit and snake, and kangaroo 'road kills' as

and when they tempted his

fancy. In return Lord Byron remained patient and tolerant, awaiting his day of freedom and a return to the wild.

That day finally arrived, and when John and park ranger Mark True escorted the bird back to his home range the air was filled with excited anticipation. The bird was left on his own, free to fly as Mark and John awaited take-off.

Despite several attempts and much to everyone's disappointment the

flight failed and Lord Byron was packed off, courtesy Western Airlines, to Margaret River Raptor Rehabilitation Centre.

There he would have his leg lanced while awaiting regrowth of his primary feathers and undergo an intensive flight program under the guidance of raptor expert Phil Pain.

Local CALM staff would like to thank John and Helen Rick for their valuable contribution in rescuing Lord Byron, and

to acknowledge the generosity and support of both Western Airlines and the Margaret River Raptor Rehabilitation Centre.

Update: Lord Byron, like all true nor' westers, finds the environs of Margaret River a little cold. However, he is believed to be happy with his recovery.

He hopes to be soaring above Francois Peron National Park by the end of 1993.

Greater value adding with solar kilns

SOLAR kilns developed by the CALM's Wood Utilisation Research Centre at Harvey are helping the State's timber industry to focus more on value adding processes to improve profitability.

The new forest management strategy means smaller sawmills in particular will have to adopt value adding as an integral part of their operations if they are not to be left behind by bigger companies that can gain economies of scale.

The strategy has reduced the total tree-take from the forests meaning

recovery rates from each tree will have to be increased if the community's demand for native timbers is to be met.

The strategy also has set a three-year deadline for all mills to add value to all least 50 per cent of their sawlog allocations.

The CALM kilns work on the 'greenhouse principle' using solar energy as the primary heat source.

The kilns resemble plastic-clad Nissen huts. Air is pumped between two plastic membranes supported on steel frames.

The timber is stacked

inside and covered with other plastic blankets that help direct the warm airflow from low-cost fans.

Drying times have been developed for various species and timber thicknesses.

So far 14 solar dryers have been installed in mills at Manjimup, Busselton, Mundijong and even Mt Gambier in South Australia.

One also is being built in Kalgoorlie and there have been firm expressions of interest in installing 10 at other centres including Dwellingup and the metropolitan area.

The development of Valwood, in which 10mm-thick timber billets are laminated to produce high quality panels suitable for a wide range of furniture construction, also gives small sawmills further avenues of value adding through downstream processing.

The solar kilns and Valwood technique allow a 2.1 metre long 100 x 100mm jarrah to be seasoned within two weeks.

Previously, the seasoning process would have taken two years.

There are about 800

small sawmills throughout Australia that could take advantage of value adding techniques such as solar kilns.

According to Environment Minister Kevin Minson, Australia's forest products industry, whether based on native forests or plantations, represents one of the greatest avenues for Australia to increase its manufacturing sector and add value to our raw materials.

The industry now needs to show more vision and pick up the technology that exists and run with it.