

CALM NEWS

THE BRASS
DEPT. OF CONSERVATION
& LAND MANAGEMENT

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT 12 JAN 1993

DECEMBER-JANUARY 1992-1993



- ◆ Australian Environment Education Conference - pages 2 and 3
- ◆ Feral dates fall for CALM fellers - page 4



- ◆ Numbats return to Batalling - page 5
- ◆ Aboriginal cultural festival - page 5
- ◆ Perth Outdoors book launch - page 6



- ◆ CALM releases another Kimberley flora book - page 7
- ◆ Straptooth beaked whale at Broome - page 7
- ◆ Dragon Rocks share a secret - page 8

DEC/JAN 92/93



National park ranger Lyndsay Brown at Cape Peron in the proposed Francois Peron National Park. Photo by Carolyn Thomson.

New national parks at Francois Peron and Kennedy Range

NATIONAL parks are to be created at Kennedy Range and Shark Bay.

The proposed Kennedy Range National Park which is about 175 km east of Carnarvon, is a spectacular sight, with elaborately branched gorges and cliffs rising some 80 metres on its eastern side.

Valuable habitat

Because of its size - about 140 000 ha - the park provides valuable habitat for plants and animals.

Euros and rock wallabies shelter in caves along the top of the eastern ridge and the area has outstanding geological, fossil and botanical values.

In excellent condition

The range is very dry, therefore it has not been heavily grazed, even by feral animals, so the flora is in excellent condition.

The spectacular orange-flowering Ashby's banksia (*Banksia ashbyi*) is one of the more distinctive plants

by Carolyn Thomson

there. After rains everlastings are also spectacular.

Numerous artefacts indicate the area was used by Aboriginal people, as the local rocks were ideal for making stone tools.

Kennedy Range is of traditional interest to Aboriginal people and discussions have been held with the Mungullah Community about their future involvement in management of the park.

Attractive to visitors

The imposing nature of the range, along with its remote location and surrounding wildflower spectacle in winter, is a strong attraction to visitors.

From about 1975, the State Government has purchased land in the area from pastoralists with a view to establishing a national park.

The Government intends to add further areas to the park, including

sections of the eastern scarp, as negotiations with adjacent pastoral stations are finalised.

Francois Peron National Park

The proposed Francois Peron National Park is only a few minutes' drive from Denham (Shark Bay) and is becoming more and more popular with visitors.

Peron Peninsula was visited by early explorers William Dampier in 1699, and by its namesake, the French naturalist Francois Peron in 1801 and 1803.

The old homestead complex that remains from the days when it was a sheep station is a focal visitor destination, and an old pearling camp can still be seen at Herald Bight.

Outstanding value

The area was bought by the State Government in 1990 because of its outstanding conservation values.

The new park will protect rare wildlife, spectacular coastal scenery

and arid shrublands and offer visitors a wilderness experience.

The proposed park covers about 40 000 ha of rolling sandplains and Big Lagoon, an important fish breeding area, has extensive views over the blue water and white beaches around it.

The spectacular red cliffs of Cape Peron are another major attraction with dolphins, dugongs, turtles and manta rays that can often be seen in the ocean below.

Thick-billed grass wren

A rare bird, the thick-billed grass-wren, is restricted to an area that includes Francois Peron.

There is a long-term plan to reintroduce endangered mammal species into the park.

Because Peron Peninsula is almost an island, being connected to the mainland at the narrow Taillefer Isthmus, the peninsula may eventually be sealed with a vermin-proof fence and baited intensively to reduce fox and rabbit numbers.

CALM wins new growth industry

by Caris Bailey

LENGTHY negotiations by CALM have paid off with the announcement of a \$60 million dollar investment in WA tree plantations.

The agreement between CALM and Oji Paper Company and Itochu Corporation was announced this month by Premier Carmen Lawrence.

It is the first time overseas companies have invested in commercial hardwood plantations in Australia.

The \$60 million will be spent over the next ten years as 25 million blue gums are planted on already cleared farmland in the Albany region.

All of these seedlings will come from CALM's Manjimup nursery, which last winter dispatched nearly four million blue gum seedlings.

A total of 20 000 hectares will be planted, with the companies funding the entire project and contracting CALM to supervise the operation.

Wood fibre from the trees will earn the State \$50 million in export in-

come per annum as the trees are harvested.

Executive Director Syd Shea said Oji and Itochu chose to invest in WA after assessing the potential for commercial tree plantations in 38 regions around the world.

Oji Paper Company is Japan's largest pulp and paper company with an international reputation for outstanding management and research. Itochu is another leading Japanese company which is already a major contributor to WA's economy through the iron ore industry.

The blue gum project will be an extension of CALM's sharefarming scheme, forming partnerships between investors and farmers, who will be paid a percentage of profits.

"The investors will not acquire any land," Dr Shea said.

"The trees will be integrated into other farm activities so there is no conflict with traditional farm production.

"In fact, the shelter from trees can increase the production from other crops and stock.

"The Oji/Itochu project is a very significant one, but there's no reason why WA cannot establish 200 000 hectares of tree plantations in the south west within the next 15 years.

"Tree planting on this scale would generate half a billion dollars of export income per annum and because the trees would be established on already cleared agricultural land, there would be a major reduction in salination, phosphate pollution and soil degradation."

Dr Shea said a number of other major overseas companies had now begun negotiations with CALM with the intention of establishing further plantations.

Detailed technical and economical studies undertaken by CALM over the past five years showed that high quality wood fibre could be produced in WA's south west as efficiently - or even more efficiently - than anywhere else in the world.

Western Australia's natural advantage

THE isolation and harsh climate that hamper some WA ventures are the very features that give us a natural advantage in ecotourism, delegates to the Into Asia conference were told recently.

CALM Executive Director Dr Syd Shea said the growing demand for nature-based tourism could not only help maintain our living standards, but help protect the environment.

"Tourism is the world's fastest growing industry - some estimates put its growth at eight per cent per annum," Dr Shea said.

"Nature-based tourism is thought to be growing three times as fast at 25 per cent per annum.

"While CALM isn't responsible for tourist promotion in this State, it is responsible for the management of nearly 20 million hectares of the State, an area which includes many of the natural attractions which draw tourists.

"The significance of the natural environment to the existing tourist industry shouldn't be underestimated.

"The Australian Tourism Commission, for example, found that 71 per cent of all American visitors put as their first choice for visiting Australia the 'unusual birds, animals and flora'.

"Our isolation and climate have led to the

incredible diversity of wildlife we enjoy.

"The 12 000 species of vascular plants found in WA compares with only 1 400 in the United Kingdom - about the same number that occurs in one of WA's national parks.

"Rather than seeing nature-based tourism as a threat to CALM's mission to conserve WA's wildlife and manage lands and waters for present and future generations, we see it as an essential partner in achieving that end.

"There's no doubt that unmanaged people pressure will cause severe environmental degradation.

continued on page 2



Some people might feel that the Queen's view of 1992 - *anus horribulus* - could also be applied to CALM. Certainly the last few months have been traumatic, and it has been an incredibly busy year.

But I don't think this has been a horrible year, quite the contrary; I think I will look back, and I hope many people in CALM look back, on this year as being the year in which we really matured as an organisation. Although I have seen, throughout the time since CALM has been formed, many examples of achievements by the organisation and individuals, I think this is the first year we have fully capitalised on the benefits of integration.

One of the strengths of CALM is the diversity of the people who work in the organisation. In some organisations, however, that strength can turn into a self destruct button because it is allowed to generate discontent and compartments. I'd hate to see the day in CALM when we don't, at all levels, have disagreements, but what I think we've shown this year is that no matter where we come from, we can combine to deliver management and research unequalled by any other similar organisation.

I don't want to list any particular achievement because in doing so I would miss out on so many others. If you want to get a view of how this year has passed, look at the 12 issues of CALM News for the year.

I think it is only realistic to expect that the tumultuous environment that we live in will continue this year. What I am confident about is that whatever the year brings us, we will still be able to perform as well as we did this year.

I thank everybody for your effort and I particularly thank your families. Merry Christmas and all the best for the New Year.

Syd Shea

Dr Syd Shea, Executive Director

Nature reserves signed up

by Steve Toole

LIKE most Districts, Katanning is sign-posting nature reserves.

The signs at Katanning are a little different, however, in that they are manufactured by local Nyoongars.

The work is carried out under the watchful eye of supervisor and local farmer Duncan Chadbourne at the Nyoongar work cooperative KAL Services in Tambellup.

During the past three years approximately 12 trainees have been employed at KAL Services on this and other projects.

Funding for this project is provided by Australian National Parks and Wildlife Services and by CALM.

In 1990-1991, 40 jarrah signs were made, 20 for the Merredin District and 20 for Katanning.

In 1991-1992, 30 similar signs were manufac-

tured for Katanning.

This financial year and depending on availability of funds, we hope to have 40 signs completed for the Katanning District.

Once the lettering is completed the signs are then painted by reserve management assistants Brad Bourke and Des Plumb at the Katanning District workshop.

During the winter and spring months when the ground is a little softer, the signs are erected on the nature reserves needing them.

This project and others like it help to improve work opportunities for local Aboriginal people.

It also helps to continue the close contact between CALM staff and the local Nyoongars.



Photo by courtesy "Echo" newspaper

Conference delegates in hold-up in Hills

by Fiona Marr

EVERYONE who has ever been to a thoroughly worthwhile conference knows that participation is the key to its success.

The National Biennial Conference of the Australian Association for Environmental Education held in Perth recently was no exception.

It soon became obvious to all and sundry that conference delegates had better participate in a big way during the field trip to the Hills Forest, Mundaring - or else!

Here, Peter Baker (Edith Cowan University) participates in a welcome prepared by CALM's 'Wild Bill Banksia' (alias Adams) and off-sider 'Casual Chas' (alias Casotti).

Unorthodox

Delegates enjoyed the unorthodox welcome to the Hills Forest experience. CALM staff Stev Slavin

and I worked with Forest Industries Federation of WA (FIFWA) representatives, Terry O'Brien and Joe Kalajzich to present a series of afternoon workshops and activities.

Presentations included: The Hills Forest, Tracing Forest Connections, CALM's Forest Education Program and FIFWA's newly developed Live with Our Forests school curriculum package.

See page 3



Duncan Chadbourne (right) supervises as Tony Farmer works on a nature reserve sign. Photo by Steve Toole

STAFF NEWS

Promotions

Mike Fitzgerald, District Manager, Merredin; **Tony Sutton**, Planning Officer, Wheatbelt Region, Narrogin; **Peter Mapson**, Computer Programmer, Crown Law Department.

Transfers:

Janine Rosman, Officer, to Pemberton; **Peter Jones**, Forest Ranger, Nannup; **Gary Robinson**, Senior Radio Technical Officer, Communications, Manjimup; **Roger Foxlee**, Senior Radio Technical Officer, Communications, Como.

LETTERS TO THE EDITOR...LETTERS

Dear Dr Shea

The 1992 Telecom Rally Australia is now well behind us and will undoubtedly be remembered as the most successful of the four Australian rounds of the FIA World Rally Championship organised since 1989.

Increases were seen in

all aspects of the event with a record number of entries, unprecedented media interest and a community profile that has undoubtedly confirmed Telecom Rally Australia's position as one of Australia's premier international events.

In order to achieve these results we require the support of a great many organisations and, in particular, we would like to thank you for the support given by the Department of Conservation and Land Management.

Your Department's efforts have been instrumental in allowing Western Australia to not only secure economic benefits to an approximate value of \$13 million but have also resulted in the State receiving enormous publicity both nationally and internationally.

Could you also pass on our thanks to all your staff who assisted in this project.

In particular, we are extremely grateful for the invaluable contribution made by Kevin Pollock, Peter Keppel, Alan Sands, Terry Ashcroft, Peter Gibson, Nevin Whittber, Glyn

Yates, Peter Moore, Keith Low and Steve Raper.

As you may be aware, we have been successful in again being awarded World Championship status for 1993 and in appreciation of your contribution to this success please accept the enclosed certificate*.

Plans are well under way for 1993 and I trust we will be able to look forward to your continued support in ensuring Perth retains this valuable event.

Yours sincerely,
Shane Crockett
Executive Director.

**The framed certificate is the fourth Telecom Rally Australia certificate, and is waiting to be hung (when they find wall-space) at Kelmescott office.*

Continued from page 1

"But WA is a vast land and with appropriate management we could quadruple current visitor levels without damaging the environment."

Dr Shea said CALM had a permit system that had registered 82 tour operators.

The potential revenue from nature-based tourism, through fees and charges, had an immense role to play in reducing management costs, and as a means of controlling the level of activity.

"Much of the value of nature-based tourism comes from providing the visitor with information about the place, animals or plants.

"CALM does this by signs, brochures and a number of quality publications, and innovative programs for both residents and visitors.

"One of these was the recent ecotour that took 20

paying volunteers to help trap, identify and monitor animals returned to their former habitat in the Gibson Desert.

"Ecotourism is also generally linked to cultural tourism and again, WA has a natural advantage with the number of Aboriginal people returning to and protecting their traditional lands.

"Nature-based tourism offers employment to these sometimes isolated communities and indeed to communities across the State.

"Visitors invariably want to see a cross-section of Western Australia. This means a wide range of accommodation and services is required to meet the needs of tourists."

Dr Shea's description of the State's diverse wildlife was brought to life when he introduced conference delegates to a bit of the bush, including a wallaby, possum, python and native owls.

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

For Hire

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

Wanted

Electric typewriter, preferably Olivetti ET 111 or similar, in good condition. Contact Taryn, Store, CALM Dwellingup. Ph: (09) 538 1078.

For Sale

Photocopier/Printer - Xerox 4045 - basic functions. Working condition. All reasonable offers considered.

Contact Joanne Curriem, Como (09) 367 0257.

Cafe Bar - Series 6A. Very good condition. New hot water element. Coin operated. Facilities for tea, coffee, chocolate, milk, sugar, soup. Make an offer! Contact Lynne Oakes, Dwellingup 538 1078.

Bormac Heavy duty drill press. 3/4 HP motor. 5/8" - 16 mm capacity. 2 yrs old. \$200 ono. Contact Steve Toole, Katanning (098) 211 296.

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Environment national biennial conference

MORE than 200 papers were presented at The National Biennial Conference of the Australian Association for Environmental Education held in Perth from September 28 to October 2.

The papers covered a broad range of environmental issues including Aboriginal perspectives, the Rio Summit, landcare, climate, water resources, wetlands, marine, forests, bushland, waste, design, eco-tourism, energy, schools curricula, learning, law, theatre and many more.

The conference theme was "Linking the Community", and CALM played a major role along with other government agencies and industry.

Fiona Marr, community education officer, Corporate Relations Division, Stev Slavin, manager, Hills Forest, and I were active members of the conference organisation committee, leading field excursions to Whiteman Park, Walyunga National Park, Dwellingup and the Hills Forest.

The Perup Field Ecology course was also offered as a post-conference trip.

Lotte Lent (Interpreta-

by Gil Field

tion) and Rod Annear (Swan Region Interpretation) presented papers on evaluating education programs, while Greg Pobar (Coastal Waters District) spoke on marine park and oil spill management.

CALM's Director of Corporate Relations Ron Kawalilak presented a paper on environmental literacy and another on nature conservation communication.

Other CALM staff attending the conference were Andrew Tatnall and Marie MacDonald from Swan Region and community involvement coordinator Colin Ingram.

Opportunities for professional development like this national conference do not come around often enough, particularly in tough economic times, so the best was made of the chance to appraise critically environmental education activities and programs in Western Australia and to share perceptions and practices across the nation.

Western Australia is special in its well-informed integration of environmental education programs

across government agencies, industry and the community.

The landcare program is a case in point.

The WA branch of the Australian Association for Environmental Education plays a key role in this integration of programs as it is the professional forum for educational officers from the Ministry of Education, and most other government agencies and consultants.

Key notes of the conference were:

- ◆ the emphasis on the importance of participation and the field experience;

- ◆ the provocative perspectives of Danny Kennedy (representing young people), eco-tourism, and his perceptions of 5th Rio Summit Conference;

- ◆ the global perspectives of well-known conservationist and television personality David Bellamy.

Those wishing to see the program and abstracts, hear tapes of keynote addresses or read the proceedings, should contact Fiona Marr or me at Pinnacle House or phone one of us on 364 0777.



Personal secretary Sharon Fast (left) and planning officer Jacqueline Pontre admire young joey held by CALM volunteer Helen Forrester at John Forrest National Park. Photo by John Hunter

New plans for an oldie

by John Hunter

JOHN FORREST National Park is about to receive some extra attention after nearly 100 years of its existence.

On Monday November 2, Environment Minister Jim McGinty announced the launch of the John Forrest National Park draft management plan at a gathering in the park.

It was a beautiful day to be in the second oldest national park in Australia, and as the warm spring sunshine filtered through the surrounding jarrahs, a

chorus of forest birds and the babbling Jane Brook provided a worthy backdrop for the occasion.

As it was the day before the Melbourne Cup race, one could have been forgiven for thinking that we were at Flemington, as those gathered at the park looked resplendent in their spring gear and wide-brimmed hats.

Syd Shea introduced the National Parks and Nature

Conservation Authority Chairman Professor Arthur McComb, who described the Authority's charter and some of the areas that the draft management plan would address.

Professor McComb was followed by Mr McGinty who described the history of the park, pointing out the cultural and natural assets of the area and the daily challenges of park management.

He said that a management plan combining pub-

lic input and sound environmental management practice would further protect the needs of the park and its visitors.

The Minister went on to thank those who had contributed to the production of the plan, in particular Jacqueline Pontre, and invited interested members of the public to make submissions to the Department, expressing opinions and suggesting alternatives to help manage the park over the next 10 years.

Kirup wins Big Brook

by Brian Fitzgerald

A FIERCELY competitive and totally dedicated assembly of 19 teams gathered among the tall timbers at Big Brook Dam one Saturday morning in November to do battle for CALM's blue ribbon event, the Big Brook Relay.

The weather looked as threatening as some of the team members, but forest ranger 'Doc' Meahan, in the privacy of a karri wattle thicket, performed his now famous sun dance and the gods, recognising we were mad, took pity and decreed no rain should fall upon such a fanatical mob.

As the moment of truth drew near, spectators were highly entertained by the nervous twitchings, heavy breathing, prancing and general impersonations of athletes preparing to penetrate their personal pain barriers.

When my sundial

showed it was close to 1100 hours, the razor-sharp saws ripped into the first of five 300mm diameter logs.

From then on, the 19 teams grunted, groaned, puffed and panted, giving their all in the five events that made up the relay, to snatch the richest prize in CALM athleticism.

But when district forest officer Mike Buckton stepped from the water leaving behind a valiant but hopelessly outclassed 120-odd losers, Kirup Operations District Staff (KODS) had achieved what others believed impossible - the Karri Country All Sports Shield.

Team members were: Neville (Puller) Holland and Luke (Pusher) Bouwman - cross cut saw-

ing; Nick (Wheels) Woolfrey - cycling; Alan (Deek) Seymour - running; Peter (Paddles) Bamess and Matthew (Crabs) Lloyd - canoeing; Mike (Kipper) Buckton - swimming. Coach, manager and mentor was yours truly.

Runners-up were Swan Cobs, with Funky 'K' Bears - Yanchepe coming third.

The booby prize of a 'dunny seat' for the team coming last went to Swan Pens.

Congratulations are due to Pemberton District for staging a thoroughly worthwhile and enjoyable event.

Staff who took part in the event may like to contact me on (097) 316 232 for a copy of the highly entertaining ode to the winners: How KODS became Kings, cleverly penned by forest ranger Nick Woolfrey.



Old boots wanted

DO YOU have a pair of worn out, much-loved and much-used walking boots? Please don't throw them out! I'm looking for a pair (preferably small) as a component of the Forest Education Program. Phone me on (09) 364 0716.

Note: Fiona's plea also appears under the CALM Classified section at the foot of page 2. We have run it here, too, to draw your attention to CALM Classified and to give you a nudge in its direction should you have something you want to get rid of, hire, swap, etcetera.



Fiona Marr reaches tentatively to test the authenticity of Mike Mitchie's beard while Karen Majer (rear) provides moral support at the Environment Conference dinner. Fiona and Karen were two of the chief organisers of the Conference. Mike is education officer Channel Island (NT).

Recreation on right track

DURING Grand Final weekend Western Australia not only surpassed the VFL but played host to an interstate event of a different kind.

Wayne Schmidt, the manager of Recreation and Landscape Branch opened the Annual General Meeting of the Australian National Four Wheel Drive Council (ANFWDC) held at Woodman Point.

The ANFWDC has 380 affiliated clubs throughout each State and over 45 000 members.

Wayne set the atmos-

by Marg Wilke

phere for a friendly and valuable working weekend with some breathtaking slides of Western Australia that had many interstate visitors keen to see and hear more of our management philosophies.

The healthy rapport between CALM and the WA Four Wheel Drive Association is the envy of all States throughout Australia.

Delegates learned of examples of management

practices, where CALM officers worked alongside land users and put management plans into practice after public consultation.

Most clubs have appointed an environmental officer who has some qualifications or experience in this area.

Four Wheel Drive Club members are keen to preserve the remote areas they love to travel in and believe that education and a policy of "tread lightly!" is the right approach.

Serpentine planning in place

AT a recent workshop held at Jarrahdale CALM displayed the advantages of public consultation with potential and existing park users.

Fifty-five people from the local community and interested organisations attended the workshop which was held to gauge public interest and identify concerns to be addressed in the Serpentine National Park draft management plan.

The workshop was organised in three parts with

Swan regional manager Alan Walker introducing the planning team.

Members of the planning team all work in the area and are well known to many of the participants.

District manager Denise Allen spoke on the history of the park and gave a valuable slide presentation and planning officer Paul Brown outlined CALM's planning process and the time schedule for preparation of the management plan.

The issues of greatest

concern were identified through a brainstorming session in which everyone took part. It was in this session where it was most apparent that users and interested organisations enjoyed a good rapport with CALM staff in the Serpentine-Jarrahdale area.

Once the six top issues of concern were identified participants formed groups of five to ten people. Each group addressed a specific issue and came up with recommendations.

It was a bitterly cold night so the evening concluded with hot drinks and supper for the hard working participants.

Paul Brown collated comprehensive notes and statistics from the meeting and copies can be acquired by contacting him on (09) 390 5977.

Congratulations to the Swan regional planning team and organisers for an informative workshop which promises to benefit all park users in the long term.



Move over Sir Edmund Hillary! CALM's mountaineers line up for a CALM News pic, more daunting than any mountain, some would say. Photo by Carolyn Thomson

CALM mug mountaineers a close second in WA

'EVEREST the Easy Way' or 'Conquering Kosciusko Step by Step' could have been the title of a recent competition in which CALM came second in the State out of 225 other organisations taking part.

The competition was organised by the National Heart Foundation and supported by the CALMfit program.

The goal for each of a ten-member team was to climb 10 flights (22 steps to a flight) of stairs a day. This could be done cumulatively or all at once.

If each team member did this for each of the 23 working days in August, the team was deemed to have climbed, cumulatively, to the top of 'Mount Everest.'

Within this team chal-

by Carol Messenger

lenge an additional personal goal was available for the truly competitive.

If an individual climbed 23 flights per day for the 23 days, he or she was deemed to have climbed to the top of 'Mount Kosciusko'.

Seven teams participated - two from Pinnacle House (Social Climbers and Pinnacle Heights) and five from Como (CALM Achievers, Human Dynamos, Stairway to Heaven, Forest Sherpas, and Misfits).

All seven teams made it to the top of Everest with the CALM Achievers, scaling the peak an incredible ten times.

Special mention should be made of Dave Greenhill,

Alex Errington, Peter Ryan, Ian Old, Shane Knapp, Tom Wood and Graeme Siemon, who each climbed more than 2212 flights of stairs to make it to the top of Everest - all by themselves!

Sixteen people made it to the top of Mount Kosciusko.

Together, CALM teams climbed 22 879 flights of stairs, only 115 flights less than the winners, Wesfarmers LPG.

While the competition gave it purpose, the chief aim of the program was to increase the fitness levels of each participant rather than 'beating the stuffing out of the other guys'.

Competitors became quite friendly when they met for their daily 'assault on the mountains', and charts placed at the top of

each flight of stairs were marked with each 'mountaineer's' daily efforts.

These were collected every morning and transferred to a large chart showing progress made up the 'mountain' by each competitor and each team.

Those taking part reported the competition as 'carrying definite health benefits, with less stress experienced at work and a lower incidence of headaches and boredom.'

There were other rewards - for each participant a certificate and a commemorative coffee mug.

Presentations were made on Friday November 20 by CALM's General Manager Roger Underwood and National Heart Foundation's Education Officer - Worksite, Linda Jackson.

FERAL date palm trees have been running riotously out of control at Millstream-Chichester National Park.

While it may be hard to imagine a plant species causing as many problems as feral animals, the date palms, like other feral species, were competing with and crowding out natives, most notably Millstream palm (*Livistona alfredii*) and cajeput.

Introduced in the late 1800s as a food crop, the date palms quickly adapted to the area. There, without any natural enemies, the trees spread from the Millstream Homestead down the delta streams and into the river, choking out and replacing the natural riverine forests.

They also present a problem to native trees because the date palms pro-

by Helenka Johnson

duce huge quantities of dead fronds which burn intensely. These fires kill the native trees but not the date palms.

A 20-year plan to eradicate the palms was drawn up, but four experienced fellers from Dwellingup changed the plan and the timetable.

Keith Low the District Manager at Dwellingup, arranged for the transfer of fellers Brian Smith, Rob Maranta, Bill Plenderlith and Kevin Ashcroft to the Pilbara for a period of three weeks.

During that time the four felled some 5000 to 7000 palms greater than two metres in height. This was three to four times the expected rate and means

the timetable for the eradication of the palms has been cut drastically: perhaps to as little as five years.

Cooperation between the Dwellingup and Pilbara offices has led to an important step in controlling the exotic infestation.

Future plans for the area include further removal of the feral trees. However not all will be eradicated, some will be kept in recognition of their historical value, but under the control of a management plan that prevents the trees from invading and destroying native areas.

"The operation was a outstanding success. It has taken the Millstream wetland a step closer to a normal ecological balance, and importantly, it has reduced the capacity for serious wildfires," said operations officer Stephan Fritz.

Conserving the past - a vision for the future

AS PAST and present users of the Dryandra area, local Nyoongar people have much to contribute to the management of the area.

With this valuable input in mind, a number of Nyoongars have become involved in the preparation of the Dryandra draft management plan.

In a joint effort between CALM and Technical and Further Education (TAFE), Nyoongar students attending the Narrogin TAFE Centre have identified management problems in Dryandra and have recommended how CALM and the wider community could deal with these issues.

Although most Nyoongar concerns centre around the preservation of sites within the Dryandra complex, other examples of topics which the Nyoongar students believe should be addressed in the plan include:

- ◆ use of Dryandra for cultural activities;

by Anthony Sutton

- ◆ Aboriginal knowledge of Dryandra's plants and animals;

- ◆ public toilets standards; and

- ◆ guided tourist walks and spotlighting activities.

A recent field trip to Dryandra allowed the Nyoongar students to determine if their recommendations to CALM were practical.

For example, with the topic of guided tourist walks and spotlighting activities the students, following classroom discussions and on-site inspections, recommended that:

- ◆ several well-defined and safe walk tracks be constructed;

- ◆ all walk tracks be well sign-posted;

- ◆ during walks, information be provided on Nyoongar activities;

- ◆ spotlighting activities in Dryandra be conducted; and

◆ the best method be investigated of spotlighting animals, for example, by car, walking or bus.

A topic of further interest was the Ochre Pit - an area quarried for the red clay used in Aboriginal ceremonies and artwork.

At this site the students together with CALM Aboriginal Liaison Officer Noel Nannup, demonstrated how, by using a Yandi dish, the fine powdery ochre was separated from the larger gravel stones.

Later it was discussed how this site could be protected while still providing the public with an opportunity to appreciate Aboriginal culture.

In summary the Nyoongar students agreed that "a greater understanding of the 'Nyoongar way' of land management, would enable the broader community to better conserve the Dryandra woodlands for future generations".

The Australian sea lion - no friendly neighbourhood pup

WITH the onset of summer, a familiar visitor to our shores will be the Australian sea lion.

Australian sea lions are often seen lazing in the sun on islands off the coast of WA and also on the mainland beaches around Geraldton.

One of world's rarer species

They are one of the world's rarer species of sea lion with males growing up to 2.3 metres long and weighing up to 300 kilograms.

Females grow to 1.5 metres and weigh about 80 kilograms.

The male is blackish-brown or chocolate brown, with light cream colour hair at the crown and nape of his neck.

The female is silvery-grey above and yellow to cream below.

Because of their size, they can overheat so they often lie in cool mounds of

by Phil Roberts

seaweed or on cooler sand.

The marks and scars on their bodies are from fighting each other for territories or females or as a result of battles with other large animals such as sharks.

Sea lions use their quick powerful swimming and sharp teeth to catch food - fish, squid, octopus, cuttlefish and rock lobster forming the basis of their diet.

They need their rest

Adults will swim for several days searching for food, coming to beaches to digest it and to rest - and when they do come ashore they need all the rest they can get!

Sea lions breed on several islands around the coast of WA, choosing islands with low, dense vegetation and good

sheltered training pools for their pups.

Breeding seasons are about 18 months apart so pupping occurs during different seasons from year to year.

The cow and her pup develop a strong bond and the pup continues to take milk from its mother some 15 to 18 months after birth.

It is not advisable to approach young sea lions, as their mothers have been known to attack people who move too close to their pups.

Males, too, are aggressive during the breeding season.

Living with sea lions

Please do not feed sea lions. It is dangerous for you and unhealthy for the sea lions.

Dependence on hand-outs will result in injuries to people and a decline in sea lion numbers as their natural instincts are eroded.

Although sea lions look

docile and friendly, especially when snoozing on the beach in the sun, they are wild animals and should be treated with respect.

Touching a sea lion is like touching a large unknown dog - it is very likely to bite.

When landing from a boat, choose a place away from sea lions.

Do not get between them and the water, or between a bull and his harem - and never walk into a colony that has small pups.

To ensure your own safety, please do not swim near sea lion breeding islands.

Do not splash and do not throw balls or other items at sea lions.

Respect their territory

Whether on islands or in the water, you are in their territory. Respect this privilege and enjoy their company - from a safe distance!



Left, Noel Nannup with Rodrick (Salty) Penny using yandi dish to separate ochre from larger gravel. Photo by Anthony Sutton



Young leopard seal released off Rotto

A YOUNG leopard seal found beached near Geraldton recently had good reason to be exhausted.

by Peter Lambert

The 2.2 metre yearling male is the fifth such recorded animal to find its way onto the West Australian coast in the last 12 months and, according to CALM records, the most northerly occurrence of the species - a long-distance swimming effort by any standards.

The leopard seal is a solitary animal, found throughout the Antarctic pack ice and south to the edge of the continent.

They occur year-round on sub-Antarctic islands of South Georgia and Heard Island but appear to be the greatest wanderers of the

Antarctic seals with some, like the adventurous specimen pictured, travelling north along the Australian coast.

Nose to tale, adult females can reach 3.6 metres and weigh up to 450 kg while adult males grow up to three metres and weigh up to 270 kg.

The rather sinister and reptilian appearance of the head, and carnivorous habits of the leopard seal have earned it a reputation, mostly unjust, of an extremely fierce disposition.

As well as fish, squid and krill, leopard seals will eat giant petrels, many

species of penguins and juvenile seals and will feed on carcasses of seals and whales.

The animal pictured was taken by CALM wildlife officer Kevin Marshall to a Geraldton veterinarian clinic who took blood samples and administered vitamins and antibiotics.

It was then transported to Fremantle, taken out to sea on the CALM vessel *Pseudorca* and returned to the ocean off Rottneest Island.

The blood analysis report showed no signs of disease or infection and although the seal was underweight it was in good health and should be able to forage for food in the waters off the coast.



The young leopard seal, fully recovered, smiles for the camera. Photo by courtesy the "The West Australian"

Numbats return to Batalling

NUMBATS will be released in jarrah forest near Collie following their successful reintroduction to other parts of the south-west.

Environment Minister Jim McGinty said that officers from the Department of Conservation and Land Management released 15 numbats near Collie in early December, following intensive fox control in the area.

Threatened species

"The numbats will join threatened species such as woylies, bandicoots and chuditch in Collie's Batalling Forest," said Mr McGinty.

"The released numbats were taken from a thriving population at Dryandra Forest in the Wheatbelt -

by Carolyn Thomson

numbers there have increased more than 20-fold since 1979."

Last strongholds

"As well as protecting the animals' last strongholds at Dryandra and Perup Nature Reserve near Manjimup, CALM researchers are establishing populations at Karron Hill Nature Reserve, north of Merredin, and Tutaning Nature Reserve, north-east of Narrogin."

Mr McGinty said CALM researchers were now surveying the jarrah forest east of metropolitan Perth and as far south as Manjimup, including Collie and Bunbury, for

remnant populations of numbats.

Numbats have also been successfully reintroduced to Boyagin Nature Reserve near Brookton, where they became extinct in the late 1970s.

"Thirty-five numbats were released at Boyagin by CALM following fox control measures there and were radiotracked and monitored to see how they survived," Mr McGinty said.

Females carrying young

"Today the population is over 80, and surveys at the end of recent breeding seasons have shown that most female numbats were carrying young."

"However, despite these successes, there is still a long way to go before numbats can be taken

off the threatened species list. Numbats have proved difficult to breed in captivity, and their overall numbers in the wild are still fairly low.

Attractive marsupials

"These attractive marsupials were once common in parts of the south-west and day-trippers used to be able to see them feeding besides bushland tracks."

"Intervention by CALM scientists may one day make it possible for bush visitors to see wild numbats regularly once again."

"Public sightings of numbats and other threatened species such as bandicoots and chuditch are vital for CALM to be able to gather knowledge on where these animals still exist," he said.

Action planned on seagulls

FINDING ways to reduce problems caused by seagulls was the urgent matter addressed by representatives from CALM, local authorities, Rottneest Island Authority, Perth Zoo, Murdoch University and the RSPCA at a specially called workshop recently.

"Seagulls can affect the well-being of other native fauna by destroying eggs and chicks or displacing adults from traditional breeding sites," said CALM Executive Director Dr Shea.

Fouling fountains

"Large numbers of gulls are noisy and foul fountains, public swimming pools, lakes and sometimes cars and houses."

"On Rottneest Island seagulls often fly at and attack children and even adults to obtain food," he said.

"In Sydney, where there

by Carolyn Thomson

are more than 200 000 gulls including huge flocks at rubbish disposal sites, contamination of the water supply by seagulls is a real health threat."

Many complaints

Although Dr Shea said seagull numbers were not as high in Western Australia, with estimates of 20 000 birds in the Perth area, CALM receives many complaints about the nuisance they cause.

"Seagulls are native birds. However, there's been a dramatic rise in their numbers because of human activities. The gulls thrive on our rubbish and food supplied directly by people," he said.

"Handfeeding of gulls is a serious problem in some places, because it encourages the birds to

become aggressive and attracts them to those areas."

Chicken scraps and sausages

The gulls dependence on handouts was demonstrated in a local study by Dr Catherine Meathrel of Murdoch University. By weight, the largest parts of the seagull diet in one sample were fried chicken scraps, sausages and bread. Only five per cent came from natural food sources.

"The most effective way of controlling gulls is to reduce the amount of food at artificial feeding sites such as tips," said Dr Shea.

Deterrent needed

"Measures should also be taken to deter displaced gulls from alternative potential sources of food and to prevent new breeding colonies from being established."

"Experience has shown that you can't solve the

problem at one site. That is why it is essential that all councils and other organisations work together to control seagulls and prevent a future population explosion," he said.

As a result of the workshop, CALM will prepare a set of guidelines on seagull control for implementation by the councils, CALM and the general community.

Effective waste disposal

Among the many suggestions to improve seagull control were sound waste management techniques (including recycling), placing lids on bins in recreation areas, asking fast food outlets to dispose of waste effectively and producing a brochure discouraging the public from feeding seagulls.

For further information telephone CALM's acting wildlife manager Gordon Wyre on (09) 367 0421.

A CALM-KYANA collaboration

THE second KYANA Aboriginal Cultural Festival, known as the KYANA Corroboree, will be held on February 5 and 6, 1993 at the Perth Esplanade and will again have a strong CALM presence.

CALM is making a significant contribution to the Corroboree with two marquees containing a wetlands exhibit, a habitat tree house, a simulated bush walk (with plants, live animals and artefacts), and a corner for children's activities.

As many Aboriginal staff as can be spared from their normal duties will be in attendance to talk about their work with CALM to urban Aboriginal and non-Aboriginal people.

CALM wildlife officer Trevor Walley, who is a member of the KYANA Working Party, said there were many urban Aboriginal people who did not know a great deal about the bush.

by Verna Costello

"Our aim is to acquaint people with the bush, its plants and animals and the close links our people have had with them for many thousands of years."

"One aim of the Corroboree is to show how (born out of the necessity to survive) Aboriginal people became the first conservationists, and how they have something of value to contribute to conservation philosophy."

KYANA organiser Mr Robert Eggington of the Dumbartung Aboriginal Corporation said that Aboriginal culture, lore and spiritual teachings had been passed on down the years by means of song, dance, music and other artforms.

"Kyana is a Nyoongar word meaning 'to go back to something of value' and the KYANA Corroboree was developed, and is managed, entirely by Aboriginal people,"

Robert said.

"KYANA's commitment to revive our cultural links is a part of a history of challenges to our traditional values and way of life over the past 200 years."

"The 1991 Festival achieved its two chief aims: to create a cultural initiative for Aboriginal people to work toward unity and strength; and to create a platform for better race relations between Aboriginal and non-Aboriginal people."

"The Festival also gave Aboriginal artists the chance to promote and sell their work directly to buyers with almost \$2 million worth of art and craft on display under three large marquees."

"The work ranged from that of dozens of local painters, potters, carvers and clothing designers, to an impressive exhibition of traditional craft by Ngaanyatjarra women, and a rare display of trochus shell art from the Broome area."

Perth Outdoors book launch

AFTER eight months of trekking, checking, writing and designing, *Perth Outdoors* is on the bookshelves and selling well.

Matilda Bay was the site chosen for the book launch, so on November 15, a pleasant Sunday in the park was held for the general public.

The weather forecast was a bit dodgy on Saturday, but Executive Director Syd Shea, placed an order for fine weather and, naturally, a beautiful spring day ensued.

First on the scene, were national park rangers Ron Shimmon and John Arkey followed by Jamie Smith, Caris Bailey, John Hunter and Carolyn Thomson from Corporate Relations Division, to set up marquees, chairs, trestle tables and displays.

The aroma of breakfast toast wafting from

by John Hunter

nearby Nedlands had hardly subsided when the sounds of rollicking Aussie songs from the Pioneer Bush Band flowed through the reserve and out across the tranquil Swan River. Soon, CALM'S marine park patrol boat *Gandara* arrived. Obviously pampered by her crew Greg Pobar and Mike Osmond, she literally sparkled as she floated gracefully in the shallows next to a visiting dragon boat.

By 10.30am people began arriving and were soon enjoying the music, a close-up view of live birds of prey, and wildlife officer Trevor Walley's talks on Aboriginal bush tucker.

Regional manager Alan Walker called the

gathering together and introduced Dr Shea who explained the concept behind the book and thanked those who contributed to its publication, particularly designer Stacy Strickland, John Hunter and David Gough.

Minister for the Environment Jim McGinty then followed, explaining the Department's role in increasing public awareness of the natural recreation spots on their doorstep and their value to eco-tourism - a vital component in the future of Western Australia.

"The wealth of information in *Perth Outdoors*, is a major advance toward that end," Mr McGinty said.

After the official launch, visitors enjoyed the delicious johnnycakes and billy tea, tirelessly prepared and cooked on site by Chas Casotti,

Verna Costello and Max Bending.

Ron Shimmon and John Arkey joined Caris Bailey in conducting swimming races, a sand castle competition and other activities for the children, while Kevin Kenneally and Peter Lambert conducted walks to Pelican Point bird sanctuary with volunteers from the WA Naturalists' Club and the Gould League.

Estelle de San Miguel, ably assisted by David Gough, staffed the book stall where many visitors took the opportunity to buy copies of *Perth Outdoors* which sold out well before 'closing time'.

Many thanks go to those people from the WA Naturalists' Club, the Gould League as well as the CALM volunteers who helped make it a highly successful day.



A levitating banksia and Wildlife officer Trevor Walley's hand plunged deep into a stranger's pocket? Either could be cause for the bemused expression on the stranger's face and mirth for Environment Minister Jim McGinty (right). Not true. Trevor wears only one watch at a time and that on his left wrist, and he is holding the banksia. These events took place at the Perth Outdoors book launch. Photo by James Smith

Health and Fitness Seminar an outstanding success

WITH breathtaking views over Albany Harbour and the Southern Ocean, and located appropriately near Tornirrup National Park, the Ministry of Sport and Recreation's Camp Quararup, was an ideal setting for CALM's most recent Health and Fitness Seminar.

The seminar was run by Nick Randall of the University of WA's Department of Human Movement.

Nick was ably assisted by five willing UWA students and a doctor who was introduced as 'Dr Death'!

Thirty-one staff attended. Twenty-nine were from the South Coast Region and were joined by Steve Toole from Katanning District and Ian Old from the Safety

by Ian Herford

Branch in Como.

The two-day session began with cholesterol testing of all participants, who were obliged to fast for the previous 12 hours, so it was fitting that the testing be followed by a hearty breakfast - muesli, of course.

The results of the tests were available on the second day and the meaning of the results explained.

In addition, all participants received a thorough fitness assessment, results of which were made available to each person and were completely confidential.

Everyone reported having learnt a great deal about their particular health strengths and weaknesses.

The material presented by Nick - a dynamic personality - covered four main areas: exercise and fitness, diet, stress management, and team building.

One of the impressive outcomes of the seminar was the observation that the participants worked extremely well in team exercises.

This is clearly vital in CALM with its frequent involvement in emergency situations.

Each work group within the South Coast Region has developed a program with the combined aim of improving the four main areas covered by Nick.

Regional office staff have already held their first combined exercise session and it was thoroughly enjoyable.

In addition to the combined exercise program, individuals are pursuing their own programs to ensure the minimum requirement of three 20-minute sessions per week.

We have all taken a close look at our diets as well and there is already an observable difference around the lunchroom table - more fruit and less cream buns!

The spinoffs for the participants are clear but CALM will certainly gain as well from such programs.

In addition to gaining a fitter fire-fighting force, the staff on the south coast will be better able to handle the daily pressures of their work.

As for the course participants, they believe they are now "The top team".



Recreation officer, Tracy Churchill gives an insight into recreation planning at Marrinup POW camp, Dwellingup, as Anthony Sutton, left, and Keith Low look on. Photo by Allan Padgett

Planning's annual workshop tackles complex issues

by Aminya Koch

FOREST management issues and how they could be accommodated at the conservation reserve planning stage were major themes of the Planning Branch's recent annual workshop held at the former cadet school at Dwellingup.

Twenty-four staff comprising branch and regional planners, and district and specialist staff attended the workshop, the seventh since CALM's inception in 1985.

In his introduction, Director of Parks, Planning, Recreation and Tourism Chris Haynes outlined CALM's vision for planning in the future.

Twenty plans in seven years

Chris said that CALM had produced 20 management plans in seven years and in so doing had learned and achieved a great deal along the way.

"While making these plans we've established recreation and conservation policies, a planning system and a culture and while doing so we've listened to all sides of the community and used technical information to reach decisions," Chris said.

"We've now reached a point where we've been able to refine the process to the extent that, in order

to respond quickly and appropriately to change, we produce plans in two years instead of five.

Broader vision necessary

"We should have a broader vision when thinking about planning because whatever's going on in the rest of the world is relevant to what we do.

"To achieve maximum efficiency, it's important that we're adaptable to change.

"The emphasis now is on drawing up plans that'll resolve complex recreational and conservation problems and find ways of assisting our finances through user pays provisions."

Brief history

Planning Branch manager Jim Williamson then opened the proceedings with a brief history of past workshops.

Jim said that the ownership of management plans by CALM staff, controlling bodies such as National Parks and Nature Conservation Authority, Lands and Forest Commission, the government, stakeholders and the community at large was an essential part of the planning process.

"It takes time for people to feel comfortable about changes proposed in a plan, and workshops, submissions and meetings are among several effective ways of achieving ownership of a plan," Jim said.

Participants were also addressed by planners, forest managers, district and specialist staff.

Valuable feedback

Planners, in particular, gained valuable feedback from operational staff.

A clear message was that operational staff wanted more effective management plans with less operational details.

A field trip covered recreational planning in Dwellingup and Lane Poole Reserve, where, at a grass roots level, participants were able to address issues raised during the workshop.

The venue provided a touch of nostalgia for several participants who had attended the cadet school.

Jim and Jock pegged site

Jim Williamson recalled that he and the late Jock Smart had pegged the position of the school building in 1959 and that they and the school had survived the Dwellingup fire in January, 1961.

Photography course votes all positives, no negatives

A FIRST! Jiri and Marie Lochman recently found time in their hectic schedule to conduct a photography course for members of the Science and Information Division at the Manjimup Centre.

With the Lochmans' reputation as top class photographers, whose work has been published internationally and is frequently seen in CALM's *LANDSCOPE* magazine, it was to be expected that an eager group of participants signed on and fronted up on October 15 and 16.

From all accounts the course was a huge success. The Lochmans had clearly anticipated what would have been the most common difficulties faced by amateurs when they prepared their course outline.

The hand-outs given to those taking part were well

by Pam Burgoyne

thought out and presented, with every opportunity given to the class to grasp the basic components of composition and technique.

Examples were displayed to emphasise these components, making it clear to everyone why some photographs 'work' and others do not.

The class was taken on a field trip for a practice session, and everyone found the experience most valuable.

They were subjected to typical Manjimup spring weather - changeable!

This was probably ideal for emphasising the sorts of difficulties experienced in the field by budding photo-hounds - in rain, overcast conditions, with

only occasional bursts of sunlight to provide the much needed contrast required in outdoor work - and often while having to dodge logging trucks!

Jiri and Marie dashed from one to another eager student, checking and offering constructive criticism, so that as many aspects of the classroom demonstration as possible were covered in practice.

Participants had been asked to bring along for evaluation their own photos - those that didn't work as well as the ones that did - and on the second day everyone was given a chance to explain what they had tried to achieve in each photo, with Jiri and Marie offering suggestions on how the photos could have been improved.

The Lochmans brought

along a large display of camera lenses, tripods and other equipment of their own, to show how they had been able to overcome some highly awkward circumstances and still take beautiful and effective photos.

For the 'bug people' and the 'flower people' it was especially interesting to find out how best to shoot both in the labs and in the field.

Valuable help was also given to those keen on extreme close-up work.

I found the advice on landscape and animal photography enormously rewarding, and we all concluded with grateful appreciation that the course was top class.

We are all hoping there will be a follow up at a later date so we can see how much improvement we have made.



Barnacles cling to the tusk-like teeth that have met over the top of the whale's upper jaw. Photo by David Algaba

Straptooth beaked whale at Cable Beach

by Verna Costello

AN unusual sighting has been made at Broome - a straptooth beaked whale, (*Mesoplodon layardii*) not commonly found north of Karratha, which Stranded recently at Cable Beach.

Unfortunately, the whale was dead. To determine the cause of its death, samples were taken from the animal's internal organs, but it is believed it died of natural causes.

Wildlife officers Peter Trembath and David Algaba easily identified the specimen by its distinct lower jaw teeth, similar to tusks, which grow

up and over the top jaw (in males only).

These whales occur in the southern oceans and do not usually inhabit the tropical waters of the far north.

Adult straptooth beaked whales measure up to six metres in length and have a dolphin-shaped head.

Only males grow the strap-shaped teeth which measure up to 35 cm long, are four or five cm wide, covered with enamel and taper exactly like a rib toward the tip.

The flat teeth grow up

and out, then tilt backwards at an angle of about 45 degrees, (looking rather like inverted ribs) until they almost meet outside the mouth above the upper jaw.

With age, the whale ends up with a strap like a muzzle across its beak which makes it impossible to open the mouth more than a centimetre or two.

It is likely the animal starves to death - much like the long-extinct sabretoothed tiger which suffered from similar dental problems, except that its teeth, growing from the upper jaw, overshot the lower one.



Manjimup's Science and Information Division staff grin broadly for the 'birdie.' Photo by Jiri Lochman

CALM releases book on Kimberley flora

by Carolyn Thomson

A NEW book released by CALM, *Flora of the Kimberley Region*, has cast light on one of the last frontiers of botanical studies.

For many years the plants of the Kimberley have been one of the unexplored treasures of Western Australia's flora, with botanists travelling from all over the world to uncover their secrets.

The plants featured in the book include those growing in pockets of lush rainforest, in remote coastal locations, in crocodile-infested billabongs and mangroves

and even those clinging precariously to the top of the Bungle Bungle.

CALM's Executive Director Dr Syd Shea said it was the first time the flora of the Kimberley had been written up and it was the second regional flora published for Western Australia.

"This major work describes all of the 2 085 native and introduced flowering plant species and ferns known to occur in the

Kimberley region," Dr Shea said.

"*Flora of the Kimberley Region* represents a huge increase in our knowledge, making it an essential tool for the conservation of this remote area."

A six-year project, the 1 327-page *Flora of the Kimberley Region* is beautifully illustrated with 356 line drawings to help readers identify plants easily and accurately.

It is available for \$89.95 from major bookshops and CALM offices at Como and in the Kimberley.

Central Landscape Management

by Grant Revell

REVIEWING the Visual Resource Management Program, recreation developments at Wellington Dam and Honeymoon Pool and developing an eco-tourism program were three of the concerns claiming the attention of several CALM officers during a field trip to the Central Forest Region recently.

These included Director of Parks, Recreation, Planning and Tourism Chris Haynes and other CALM officers - Wayne Schmidt, Tracy Churchill, Alan Hordacre, Peter

Moore, Glyn Yates, Rob Brazell, Tom Kenneally, Peter Henderson and myself.

Other matters on which the group focused their attention were:

- a review of new draft landscape management guidelines for tree plantation planning and design;

- a visit to Mungilup Plantation, Collie, to inspect a mechanical device that crushes and rolls vegetation debris left on the

forest floor after timber harvesting;

- forest post-harvest rehabilitation areas - a review of new draft specifications and trials at Harvey District; A highlight of the trip was admiring Chris Haynes' expertise in assessing eco-tourism potential - sporting ski beanie and denims and perched on the back of a ute, while spotlighting for late night beasties.

Early next morning Rob Brazell proudly showed off a 98 per cent success rate in wildlife trappings at Maxon Farm,

Collie - impressive stuff!

The purpose of the trappings was to assess the range of wildlife present, with a view to its eco-tourism potential.

Having the Director and staff face-to-face with the District realities of the landscape management and associated programs is an important part of CALM communications.

All in all, the Central Forest Region trip was a great chance to share some common rewards and to contemplate the new and challenging times ahead for integrated forest resource management.

Summer activities at Yanchep NP

A SWAMP safari to explore the Yanchep wetlands, adventure caving or searching for lost ruins during a Ghost House camp are all part of the summer activities at Yanchep National Park, guided by experts from CALM and the WA Museum.

CALM is offering the activities for both adults and children on a full-time

basis during December, January and February and up to 6 000 people are expected to take part.

Participants have 20 different activities to choose from, and have the rare opportunity to explore Yonderup Cave for the first time in eight years.

Other activities include bushcrafts, a nature photography workshop offered by professional instructors,

star gazing through high-powered telescopes with experts from the Perth Observatory, and horseback riding along the Heritage Stock Route.

Some people may prefer to join the Mucky Duck Bush Band for a free family bush dance.

For more information about the Yanchep activities program telephone the park office on (09) 561 1004.



Course graduates, Maitland Parker and John Parker carrying out survey work. Photo by Brad Barton

Five Pilbara staff succeed in engineering course

FIVE staff members from CALM's Pilbara Region have successfully completed a three-day course in field engineering, conducted recently in Karratha and Millstream.

The course is Part B of the Certificate in National Park Management.

The successful five were Karijini National Park rangers Maitland and John Parker, Millstream ranger-in-charge Geoff

by Alan Byrne

Kregor, Exmouth ranger-in-charge Steve Strachan and Karratha horticulturalist Michael Hughes.

Special congratulations must go to Steve Strachan who has successfully completed all unit requirements of the certificate and is now eligible to apply to TAFE for the Certificate in National Park Management.

The course was

conducted by the Recreation and Landscape Branch manager Wayne Schmidt, forest ranger Brad Barton and myself.

Topics included map reading and scaling, survey instruments, road planning and design, and calculating and pegging simple curves.

The last day of the course was devoted to reinforcing theory with a practical exercise in road alignment at Millstream.

All five graduates were

required to select and peg the alignment, including curves, for the Snappy Gum Road re-route around CALM's Millstream facility.

In temperatures above 36 degrees, strong northeasterly winds and the spinifex drawing blood, the group managed to select and peg the new alignment before the roading crew from Ashburton Shire arrived to begin clearing operations later that day.

WA 'covered in forests of pinnacles and jarrah'

NORMALLY I work for the Australian Capital Territory Parks and Conservation Service in Canberra as an interpretation officer but for this year I have had the opportunity to work for CALM on a job-swap with Rae Burrows of the Swan Region.

How was it done

During the year, I have often been asked how we arranged the swap and what did I think of Western Australia.

Arranging the exchange was reasonably straightforward. Once Rae and I had made contact and decided we both wished to exchange, we had no trouble in sorting out the necessary administrative and personal arrangements.

No complications

As Rae and I are employed on a comparable level in very similar jobs, there were no complications with pay or responsibilities.

The existence of a formal CALM policy helped greatly.

Importantly, this policy specified that we would continue to be paid by our 'home' organisations.

by Andrew Tatnell

Once we had formal approval from the directors of both organisations we were on our way.

Rae and I agreed to swap houses and many household items for the year.

We got the swimming pool

This meant that we could swap quickly without worrying about renting out our houses or finding accommodation. It also meant that we got the swimming pool!

So, what do I think of the West? It is even more diverse and interesting than I had expected - and I had high expectations.

A few things were a real surprise.

From the tourist brochures, I thought most of WA was covered in forests of pinnacles and jarrah!

And the abundance of small bush birds, especially honeyeaters, in the urban area of Perth is a very refreshing change from the starlings, blackbirds and sparrows found in other Australian capital cities.

Speaking of birds, another surprise for me was the number of wetlands

within the urban area of Perth.

They'd kill

Managers of bird sanctuaries in other parts of Australia would kill for the diversity and quantity of birdlife that can be seen in Perth - even by casual visitors.

The wetlands make Perth a city of world significance.

Potentially, they could make Perth a major destination for eco-tourists.

Threats such as draining and spraying for insect control, increased nutrients, weeds and threats to native animals from cats, dogs and foxes present difficult and immediate challenges for CALM and other organisations to maintain the values of the wetlands.

Minimal impact ethics

Another challenge for CALM and environmental managers in WA is to encourage people to practice an ethic of minimal impact.

I believe this is just as relevant in State forest as it is in national parks and marine areas.

Minimising impact does not mean 'no impact'. It means developing a

sense of care and communicating ideas and skills to everyone be they visitors, staff, loggers or fishers.

Minimal impact ethics is well-established in Tasmanian national parks, and a few other State agencies make attempts.

But these attempts often come about after large impacts have been made.

CALM well-placed

The West is well placed to lead the way in this type of social change and CALM is particularly well placed as it has a wide diversity of responsibilities.

So, I will soon return to the ACT with many new ideas and a much greater understanding of the continent.

There will be many things I will miss.

Most of all, the many people who have helped me get along in CALM especially the team at Swan Region who have made great strides since last year's amalgamation.

I have enjoyed the company and support of Rod Anear and Gil Field who have let me in on the secrets of WA and some great perspectives on the art of interpretation.

Dragon Rocks give up rare flora secrets

by Greg Durell

ON the first weekend in November 19 rare flora volunteers, family and friends spent a camping weekend at Dragon Rocks Nature Reserve with officers from the Katanning and Narrogin CALM Districts.

This reserve comprises 32 000 ha lying between Hyden and Newdegate in the central eastern wheatbelt.

It has a complex natural system containing outstanding flora, fauna and landforms.

The reserve is managed jointly by the Katanning and Narrogin districts.

Due to the success of this campout, consideration is being given to making it an annual event at Dragon Rocks or at some other large, local nature reserves.

Twenty-eight vegetation associations occur at Dragon Rocks, including woodlands, mallee, kwongan heath and lithic complexes with granite rocks and breakaways.

A total of 576 plant species were identified for the reserve, including two species of fern, three gymnosperms and 571 angiosperms.

Of these species eight

gazetted rare plants occur along with 13 priority species while 61 are undescribed.

A rare mammal

The western mouse (*Pseudomys occidentalis*) is one of several rare mammals present on the reserve.

The chief aim of the weekend was to complete surveys on declared rare and priority flora species discovered during a recent survey on the Dragon Rocks Reserve.

Surveys were completed on populations of pink bract grevillea (*Grevillea involucreata*), Wittwer's grevillea (*Grevillea wittweri*), tinsel lily (*Calectasia arnoldii*), and twisted sheoak (*Allocasuarina tortiramula*).

As well as the work component, the weekend provided an opportunity to meet new people and stay with Geoff and Dianne McDonald who farm land near the Dragon Rocks.

The barbecue on the Saturday night at the McDonald's farm was a good opportunity to talk about recent discoveries.

It was great, too, to be able to 'rough' it on their property and eat all their koonacs (fresh-water crustaceans introduced into farm dams).

A spot of bird watching

As well as looking at plants, those interested in birds observed 32 bird species early on Sunday morning in salmon gum woodland on the reserve.

Forest ranger Darre. Graham from the Narrogin District provided expert identification.

Expert display

In addition to gaining knowledge of reserve species, one anonymous group was also treated to an expert display of driving skills and the retrieving of a vehicle from the bog.

The interest was such that the womenfolk jumped nimbly out of the vehicle and took off for the bush - to look for plants, of course, which was why they were there, anyway.

The men were left to get themselves and the vehicle out of the mud.

The winch *did* come in handy.



Volunteers Rhoda Giles from Kulin (front) and Bob and Jan Smith from Darkan indulge in a spot of bird watching at Dragon Rocks. Photo by Greg Durell