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25 JUL 1989

Sowing seeds for the future

SEA-LION COLONY FOUND ON ISLAND



Overseer John McDonald shows local children how to plant a tree as part of Northcliffe Primary School's Arbor Day celebrations. Photograph courtesy of the "Warren Blackwood Times".

CALM Celebrates 100 Arbor Days

For 100 years Arbor Day has been celebrated in Australia. This year is was bigger and greener than ever!

CALM organised talks and tree plantings in the community and schools everywhere.

CALM's Arbor Day poster "Care for the Land - More Trees Please" was widely distributed and displayed by local businesses.

An Arbor Day poetry competition, run by CALM in conjunction with 6WF, resulted in some excellent entries.

Acting Premier, David Parker, announced the winners from more than 200 entries on Ted Bull's breakfast programme.

First prize was a weekend at the Donnelly River Holiday Resort on the South-Coast. Four runner-ups received complimentary copies of CALM publications.

In the Hay Street Mall, some 3,000 eucalypt seedlings were given away by both CALM and The Eagle radio station staff. This proved a popular exercise, with crowds queuing five deep.

The Sunday Times also contributed to WA's Arbor Day celebrations, by distributing 25,000 eucalypt seedlings to its readers. All seedlings given away were suitable for planting in the metropolitan area.

CALM's Executive Director, Dr Syd Shea, played host to children from

the Kim Beazley School in White Gum Valley, and the Buckland Hill School in Mosman Park.

Billy tea and fire-side damper were served to the children and teachers, who

afterwards, gratefully accepted Arbor Day posters and a variety of native tree and plant seedlings.

Arbor Day's origins hark back to antiquity, and in many countries it is tradi-

tional to hold an annual tree or forest festival.

It is a day when our attention is drawn to the role trees play in our lives.

Something we should always remember.

By STEVE MURNANE



Ranger Charlie Salomon cooks damper for Craig Barry (11) from Buckland Hill School, Mosman Park, to celebrate Arbor Day.

A new sea-lion breeding colony was recently discovered on a remote island west of Esperance.

More surprisingly, the inhabitants were breeding at a different time to other sea-lion colonies.

Marine mammal expert Dr Nick Gales, technical officer Alistair Cheal and CALM's Greg Pobar and Bernie Haberley were surveying sea-lion populations near Cape Le Grand when they noticed several sea-lions laying on rocky outcrops of a large but unnamed island.

After landing to investigate, the party was intrigued when Greg found the lower jaw of a pup on the beach.

Behind a large boulder, they spotted a large male herding a female, then Bernie discovered a nursery area of cows and little black pups.

The men counted more than 60 sea-lions, including 30 pups.

"Many pups were unattended - we saw them playing in pools while their mothers were out feeding at sea - so the population is obviously much larger," said Greg.

The breeding season appeared to have only just finished.

Elated by their find, the party returned the next day to film and photograph the population.

Pups were caught, sexed, measured and weighed. These details will be used to compare them with pups in South Australia and the west coast of W.A.

By CAROLYN THOMSON

"This breeding colony deepens the mysteries of the biology and status of the Australian sea-lion," said Greg.

Even the vegetation the sea-lions were resting in was

different to the vegetation used in other parts of W.A.

Greg said that considering the sea-lion was a protected animal, it was heartening to find a breeding colony they didn't know of.

He said there were only about half a dozen known breeding colonies in W.A.

New News is good news!

The deadline for CALM News is the first Friday of each month.

Submit a CALM News story form or simply phone Kylie Byfield, Carolyn Thomson, Steve Murnane or John Hunter at Public Affairs Branch on 389 8644.

Story forms are available on request.

BLUEGUM BONANZA

CALM's 1989 tree planting program has been an unqualified success.

In the past month nearly 5000 ha of cleared agricultural land in the south-west has been planted with six million Tasmanian bluegums.

This follows a pilot program last year in which 2000 ha of farmland was planted.

The long-term benefits of the project include a reduction in salination and erosion, the creation of thousands of extra jobs, an alternative crop for farmers, and a reduction in the greenhouse effect.

• SEE PAGE 6

Training program looks at tourists

Rangers from Yanchep and John Forrest National Park, Marmion Marine Park and other park staff and Northern Forest Region officers attended a two day training program at Yanchep recently to look at CALM's role in tourism.

The program was developed by the Western Australian Tourist Industry Training Committee which is a body jointly funded by the Tourism Industry and the Commonwealth Department of Employment and Training.

CALM commissioned the Committee to develop a training program at the request of Yanchep Park staff.

The course aimed to heighten the awareness and appreciation of tourists who come from various cultures and backgrounds. The first day of the program looked at

such topics as visitors their expectations and the ways to communicate with them.

The second day looked at tourist problems and solutions and the cultural background differences and barriers to international tourists.

Video examples and exercises on the best approaches to makers focusing on those from Asia, Europe and the US were examined.

Acting Parks and Reserves Officer in the Northern Forest Region, Ron Waterhouse, said the program provided useful information that could be used by rangers and front counter staff.

Prior to the course leaders of the training program toured Yanchep national park without the knowledge of local staff and were impressed with the service provided to international and local visitors to the park.

FROM MY DESK



Bruce Beggs, the last Conservator of Forests in WA, was quoted as saying, "People are our business".

Such a sentiment is as relevant to CALM today as it was with the old Forests Department.

Few CALM regions, however, can claim to be in the business of managing deceased people!

The Metropolitan Region does.

East Perth Cemetery, possibly one of the strangest of all CALM's reserves, came under its control fol-

EAST PERTH EPITAPHS

lowing the 1984 amalgamation.

Metropolitan Region Manager, Drew Haswell, admits that although CALM may not be the most appropriate manager, the cemetery's important historic and cultural values are protected and promoted by the Royal Historical Society.

The cemetery is unique to Australia, in that all the Swan River Colony's earli-

est pioneers are buried there.

That's more than 10,000 people, including prominent pioneers, aboriginal guides and Chinese labourers.

1899 saw the cemetery reach capacity, and Karakatta opened the following year.

Sadly, the cemetery fell into disrepair during the early part of this century.

With the 1940s, came a

renewed interest in the cemetery, as Sir Paul Hasluck (former Governor-General of Australia) expressed his concern at the neglect of such an important historical site.

Help was sought, and restoration of several graves was arranged.

Although only 1,800 names survive on existing headstones, the Royal Historical Society of WA

have researched and discovered many more.

We will never know the names of all those buried, but each year, two of these pioneers are commemorated by a memorial service held on Foundation Day.

This year, Richard Wells, a prominent banker of the first days of settlement, and Lewis Hasluck, father of Sir Paul, were remembered in speeches given by their descendants.

CALM Ranger Jim Maher was on hand to ensure all ran smoothly.

Management scientists have identified what they term the "eunuch phenomenon".

These are the people who talk about problems, write about problems, criticise those trying to solve problems, and do just about everything except solve the problem.

There is a little bit of the "eunuch phenomenon" in all of us, but the trait is particularly pronounced in many of CALM's vociferous critics.

It is important to dream and it is important to criticise.

But the real shakers and movers in this world are the individuals or organisations who get on with the job.

In the community today there is a widespread understanding that we need to plant more trees.

While it is important that we maintain this enthusiasm and understanding of the need for tree planting, I believe it is more important to focus our resources on actually doing something about it.

Within the next few weeks, CALM in cooperation with farmers, contractors and community groups, will complete the planting of 13 million trees.

All told more than 1200 people have been involved in this massive exercise which is the largest in Western Australia's history.

Within a year these trees will be sucking 200,000 tonnes of carbon dioxide out of the atmosphere; they will be lowering water tables in salt prone areas and creating habitats for millions of birds and animals.

Within a few years, many of these trees will provide the basis for the creation of thousands of new jobs and hundreds of millions of dollars of export earnings.

Preparing and implementing a tree planting programme of this magnitude takes more than dreams.

It involves a massive effort, particularly by CALM staff, over the past several months.

To all those involved in this programme, congratulations.

Whatever people might say about us, they cannot accuse us of being "eunuchs".

SYD SHEA
Executive Director

CALM's Education Officer Carmel Staniland believes that environmental education is a serious task, too important to leave to a chance activity or lecture.

Carmel works in CALM's Community Education Section which aims to promote awareness, appreciation and understanding of the natural environment.

This, in turn, encourages attitudes and behaviour to complement the conservation of wildlife, forests, national parks and nature reserves.

Earth Education workshops have been sponsored by CALM for the past five years and Carmel insists that this type of course is the best for environmental education.

Earth Education programs are conceptual encounters or "adventures" in learning ecological principles.

The activities work by hooking or pulling participants in with "magical" experiences that promise discovery, adventure, rewards and provide hands-on and minds-on tasks.

The activities focus on the processes of

life and how those processes interact.

Workshops were held at Woodvale recently for those who will teach environmental appreciation to primary, lower secondary science and outdoor education students.

The courses focused on the theme "Learning to Live Lightly", which fostered curiosity and creative and critical thinking in caring for the environment.

The workshops attracted 120 participants from as far away as Karratha and Laverton.

Instructors Randy Brouillette and Marion Van Gameren, who came from the Institute of Earth Education in Victoria, conducted workshops.

So successful were the courses that the Earth Education programs are now being established by various camp schools, community educators and regional CALM staff, throughout the State.

Any staff interested in future workshops should contact their Regional Interpretation officers, or Gil Field and Carmel Staniland at Murdoch House.

Safety pants a success story

Chainsaw chaps are the protective trousers that form part of the compulsory protective gear worn when using a chainsaw.

As with most aspects of safety equipment and correct operating procedures, staff most at risk of accidents are those who only occasionally, have a need for their usage.

I am pleased to report that the gradual acceptance by staff in wearing protective chaps is a safety success story.

For further information on protective chainsaw chaps, contact the Safety Section, CALM, Como — TOM WOOD.



Carmel Staniland, CALM's Education Officer.

SEAL OF APPROVAL



ABOVE: Dr Nick Gales with an Australian sea-lion on Seal Island.

RIGHT: There is a yawning gap in information about the reproduction of Australian sea-lions.

Marine mammal expert Dr Nick Gales can find himself attending the birth of a dolphin calf or treating an injured seal-lion.

A few weeks ago he flew to Geraldton at a moment's notice to try and save a pygmy sperm whale that stranded on the beach.

Nick often doesn't know where he'll be from one day to the next, but he thrives on the variety and relishes the challenge of his work.

One daily newspaper even compared him to Crocodile Dundee — describing the way he soothed a distressed dolphin with his touch — but, judging by his embarrassment when asked about the report, Nick regards this as a bit of a joke.

Nick is CALM's consultant on marine mammals, providing advice and medical assistance during operations such as whale and dolphin rescues, or general advice about management. He is also the veterinarian at Atlantis Marine Park.

Nick has had considerable experience in the Antarctic wild, working with elephant seals.

And if that isn't enough, he's a PhD student at Murdoch University, researching the reproductive biology of the Australian sea-lion.

His responsibilities work in well together. His research on sea-lions benefits both Atlantis and CALM, and fortunately Atlantis doesn't mind his long absences and pays his salary during research trips.

In spite of the high degree of sea-lion and human interaction, the animal is largely unknown from a scientific point of view.

"To date, very little research has been done on the Australian sea-lion, which is the rarest in the world," said Nick.

Text and Photos by
CAROLYN THOMSON

He aims to establish accurate estimates of the sea-lion population in WA.

"The present estimate of 700 breeding animals is incorrect. It is probably more like 1200-2000," he said.

And the fact that some adult sea-lions are fishing at sea when surveys are done doesn't make this task easy. Population estimates have to be calculated from the number of pups.

Nick's research on sea-lions began after CALM's Marine Manager Greg Pobar noticed sea-lions on Perth's offshore islands disappeared every 18 months.

He began to record their sex and discovered they were all males. He put two and two together and speculated that they migrated to the breeding islands off Jurien during their five month absence.

Other studies at the time supported the theory that the Australian sea-lion had an 18 month breeding cycle — a finding which surprised many scientists, as it is the only seal in the world with such a cycle.

Nick aims to fathom how and why this unusual reproductive cycle occurs.

He believes that it could be related to the climate: "Because it is temperate there are less rigid restrictions on the breeding season than in other parts of the world."

"The 18-month cycle is probably the most efficient system, as it places less pressure on the mother to find food and produce milk," he said.

Nick is now trying to establish the mechanics of Australian sea-lion pregnancy, and whether there is a delayed implantation compared to other seals.

With this in mind, he has been taking sea-lion blood samples to examine the changes that occur in reproductive hormones.

Most sampling has been done on Kangaroo Island in South Australia, where there is a large population of marked sea-lions and Nick can determine the exact age of each animal.

Sea-lions don't take kindly to hypodermic syringes, and he has narrowly escaped being bitten many times.

He and Greg Pobar also make regular field trips to Jurien Bay and other areas to count and tag sea-lions to obtain data for these studies.

The two have been paint marking Perth's sea-lions before they head north, to evaluate Greg's theory that the males migrate to the Jurien Bay area to mate.

Their work will ultimately lead to better management of the sea-lion population.

Survival skills put to test

Five people can be thankful that Noel and Valerie English completed CALM's Bushcraft and Outback Safety course.

The five were badly injured in a rock fall while free-climbing and faced the prospect of a cold, painful sojourn in the bush with no food and little water.

Noel and Valerie, keen bushwalkers, decided to walk up Ellen Peak, in the Stirling Range National Park, during the Easter weekend.

When they reached the main outcrop at mid-afternoon, they found a man, Frank Lawton, and four boys in trouble.

Frank was the most severely injured. A large rock had fallen on his ankle and foot, and he could not walk.

One of the boys had been hit by rocks and had fallen some distance. He was suffering slight concussion and a painful leg. Frank's son had also fallen, and his back was very sore.

"When we found them, they were down to a litre of water and were unable to move. We attended to their wounds and had to form a plan of action," said Noel.

"The bushcraft course had covered just this sort of situation. The factors we had to take into account were clear. We could either go for help, leaving the injured in an overnight "bivvy", or at-

tempt to get the group out by improvising and using "carry" techniques," he said.

"The first option would have meant calling on CALM and SES personnel, and they probably wouldn't have had medical attention until the following day.

"The second option meant much more work on our part, but there was a chance to get them to medical help that night with the minimum of fuss," he said.

They decided on the latter. Using the knowledge gained during the course, they made a stretcher and a crutch and began to descend. Progress was slow.

Frank was in great pain and, as dark descended, the boys became frightened.

This was worsened by the fact that the Ellen Peak route is fairly long and the ground is hilly with a dense bush covering.

"We had worked out the compass bearings for the return journey and followed these using the night navigation techniques we had learnt during the practical section of the course at Dwellingup. The advice we had been given then on keeping the group together became vitally important under such trying conditions," said Noel.

By the time they reached the carpark at the end of the track it was midnight;

the return journey had taken nine hours.

Frank and the boys were all relieved to be "out". Frank was able to drive himself and the boys to Albany Hospital.

"We were able to effect a rescue quickly, without undue drama and without calling on CALM or SES resources. Everyone was safe and received medical attention sooner than if we had called for outside help.

"I would like to thank CALM and the course leader Bob Cooper for running the Bushcraft and Outback Safety course, on behalf of myself, my wife, and those we were able to help," he said.

Telling Tales on the job

New Pilbara Regional Manager Hugh Chevis has survived his first north-west summer — but it wasn't easy! Hugh says he quickly learnt two very important lessons: first, don't establish a vegetable garden before the end of the cyclone season and, second, bottles of port don't survive in 50 degrees celsius heat.

Public Affairs' Marg Wilke was on hand at the Public Service Expo to hand out balloons attached to tiny bluegum seedlings. One small girl, when asked if she would like a bluegum with her balloon, innocently inquired: "Will it grow into a tree?"

Modern technology can be confusing at times. A CALM officer from Busselton telephoned Public Affairs Branch recently claiming that he had faxed the only copy of his document to our office and could we please fax it back to him.

We hear that green beards are in vogue. Nick Gales, CALM's consultant on marine mammals, recently discovered that when you are dealing with wild animals, things don't always go according to plan. Nick was paintmarking sea-lions in the metropolitan area when he accidentally shot a capsule of thick green paint into his beard. Then he found out that the oil-based paint doesn't wash off in water...

Pilbara people are not parochial. The CALM publication "Rugged Mountains, Jewelled Sea" — which focuses on the South Coast Region — was in ninth spot on a list of 10 top books which appeared in the local Pilbara newspaper, the North-West Telegraph, on April 26.

Anybody who left a grey and navy jacket with a "Leader" badge at the Public Service Expo should contact Di Johns or June Ellis at Como on 367 0481.



The Chuditch or Western Native-cat, is the largest carnivorous marsupial found in WA.

SEARCH FOR THE RARE CHUDITCH

Woodvale Research Scientist Keith Morris is keen on cats. Not the musical breed, but the native species.

And he wants to know more about the Chuditch, as it is called.

To gather information Keith has compiled a "Chuditch Kit" which contains a colour photograph, biological information and a sighting/road kill data sheet.

All CALM offices in the southwest have received the kit, and Keith hopes it will encourage staff and the public to divulge any personal encounters. Information supplied will help future studies.

Since 1983, the Chuditch (*asyurus geoffroii*) or Western native-cat, has been gazetted as rare or endangered.

About the size of a small house cat, the Chuditch is the largest carnivorous marsupial found in the State with its brown fur strikingly marked by scattered white spots over the head and back.

Once occurring from the southwest coast, north to Derby, and east to the Great Dividing Range, most populations declined dramatically following European settlement.

Chuditch vanished from eastern Australia by about 1900, and central Australia by the 1940s. It was fairly common in the Perth metropolitan area until the 1930s.

Today, the species is seen occasionally in jarrah forests, southern wheatbelt and mallee woodland east of the wheatbelt.

Recent sightings have come from

Katanning, Dwellingup, Collie, and both the Frank Hann and John Forrest National Parks.

Road kill specimens have been retrieved in the last month from Lake Grace and Ghooli, 15km east of Southern Cross.

"I will survey John Forrest National Park this month in an attempt to establish how abundant and widespread the Chuditch is in the northern part of its present range," Keith said.

"I also hope to survey Avon Valley National Park."

Following a road kill and several sightings in Frank Hann National Park, it will also be surveyed early next year.

Almost half the deaths of 13 sample animals were caused by road kills and illegal shooting.

With a burrow or hollow log

usually its home, the Chuditch sleeps during the day and ventures out to forage at night.

A keen sense of smell, complemented by good hearing and eyesight, allow it to prey mostly on insects. It also eats small lizards, birds and rats.

Droppings collected near camping grounds have contained less healthy meals such as bubblegum, aluminium foil and used elastoplasts.

Chuditch are vulnerable to being run over, as they love nothing better than to forage near dirt tracks.

Forest visitors, who drive carefully at night, may be rewarded by the sight of a Chuditch staring back at them with genuine interest.

So if you catch sight of this rare little marsupial don't 'pussyfoot' around — contact Keith on (09) 405 5161.

Photographic plea

With a Landscape article on WA plants at home and overseas looming, it is hoped that staff may have photographs of the following topics.

- * Tree plantations for timber, pulp or firewood.

- * Native plants being used for fodder (Acacia species), and rehabilitative work to halt soil erosion or desert encroachment.

- * Horticultural uses such as red flowering gums (*Eucalyptus ficifolia*) being used as street trees, freeway plantings in the USA, Geraldton Wax in Israel, banksia

plantations, brown boronia in Victoria, etc.

- * Weeds like Acacias and paperbarks in Florida or *Acacia saligna* in South Africa.

- * Private garden flowers — both historical and current.

Any material including trip notes and anecdotes will be gratefully acknowledged and returned.

The article aims to cover both good and bad points of WA flora.

Now that you have all that, please swap Greg Keighery at the Wildlife Research Centre, PO Box 51, Wanneroo 6065, with all that you possess.

ILL WIND DUMPS BARGE ON ISLAND

By FRANK BATINI

At the height of cyclone "Orson", a pipe laying barge broke its anchor, and its six-man crew was sent on a wild ride by the wind and tide.

It bounced over a reef and ran aground on Eaglehawk Island Nature Reserve in the Dampier Archipelago.

As soon as it was safe, the crew were rescued by helicopter and the distillate in the main tanks were pumped out and recovered.

The barge, 130m long, is valued at about \$25 million and can carry 250 people.

The bottom was extensively damaged, most tanks were breached and the lower deck flooded.

The hull was fractured and the weight on the main deck had begun to crush down onto the hull.

Pieces of timber planking, emergency rations and other gear were washed onto the island.

On May 5, the owners' representatives, the insurers, the EPA, Marine and Harbours and CALM met on-site to discuss abandonment procedures.

Tenders for salvage will be called and the clean-up could take four to six months and cost millions of dollars.

It was eerie inspecting the hull below the decks, feeling the rush of wind and seeing the waves surge through the gaps in the hull.

The torch cast a feeble glow over cabins still containing their owner's gear, and the barge creaked as the massive weight ground onto the rocks.

It brought back thoughts of the Poseidon Adventure.

Some items may be dumped at sea, incinerated or disposed of in an approved landfill site on the mainland.

The hull will be stripped to bare metal and rendered safe.

Engines, pure lead ingots used as counterweight, 350 tonnes of seasoned oak decking and other items will be sold.

Perhaps some of the oak will be recycled as high quality furniture.

It's an ill wind.....



The 130m barge aground on Eaglehawk Island Nature Reserve.



ABOVE: What does a CALM Ranger's horse wear under his cloak?



CALM balloon giveaways prove a hit with the kids — though one young fellow has to tuck a bit about it!!

Bush delights capture city Expo audience

By STEVE MURNANE
Pictures:
CAROLYN THOMSON

A cup of billy tea, a slice of damper and thou...

Thou art savouring two of the delights CALM had to offer at the Public Service Expo last month. More than 6500 Tasmanian bluegum seedlings and 10,000 balloons were given away.

Designed to enhance the image of the public service, the Expo was a great success, as thousands of visitors will testify.

CALM's display included live animals, demonstrations of bushcraft skills, a fire spotter plane, a dieback awareness display, a wildlife boat complete with whale sling, audio-visual displays and much more.

Sales of CALM publications were high.

Assorted CALM staff worked tirelessly to make it one of, if not the, most popular stall at the Expo.

Front counter staff, wildlife officers, research officers (including those from the Harvey Wood Utilisation Research Centre), rangers and public affairs and human resources staff all helped out.

Executive Director Syd Shea made regular appearances and was obviously pleased with the play's popularity.

For sheer bravery, special thanks must go to ping Branch's Alan Clark, who entered the Service Cup under the pseudonym 'CALM R'.

Escorted by Public Affairs' Carmen Gorha John Hunter, wearing skimpy leopardskin garb Alan made a dramatic entrance, dressed in camouflage and mounted on a dashing steed (you hardly have guessed he'd never ridden a before).

After running mid-field for half the race finished second by a narrow margin, sustain injury during the obstacle course.



RIGHT: Public Affairs' Steve Murnane hands over balloons and seedlings to Expo visitors.

BELOW: "Over and out!" Wildlife Officer Brad Daw instructs a budding ranger on correct communications procedure.



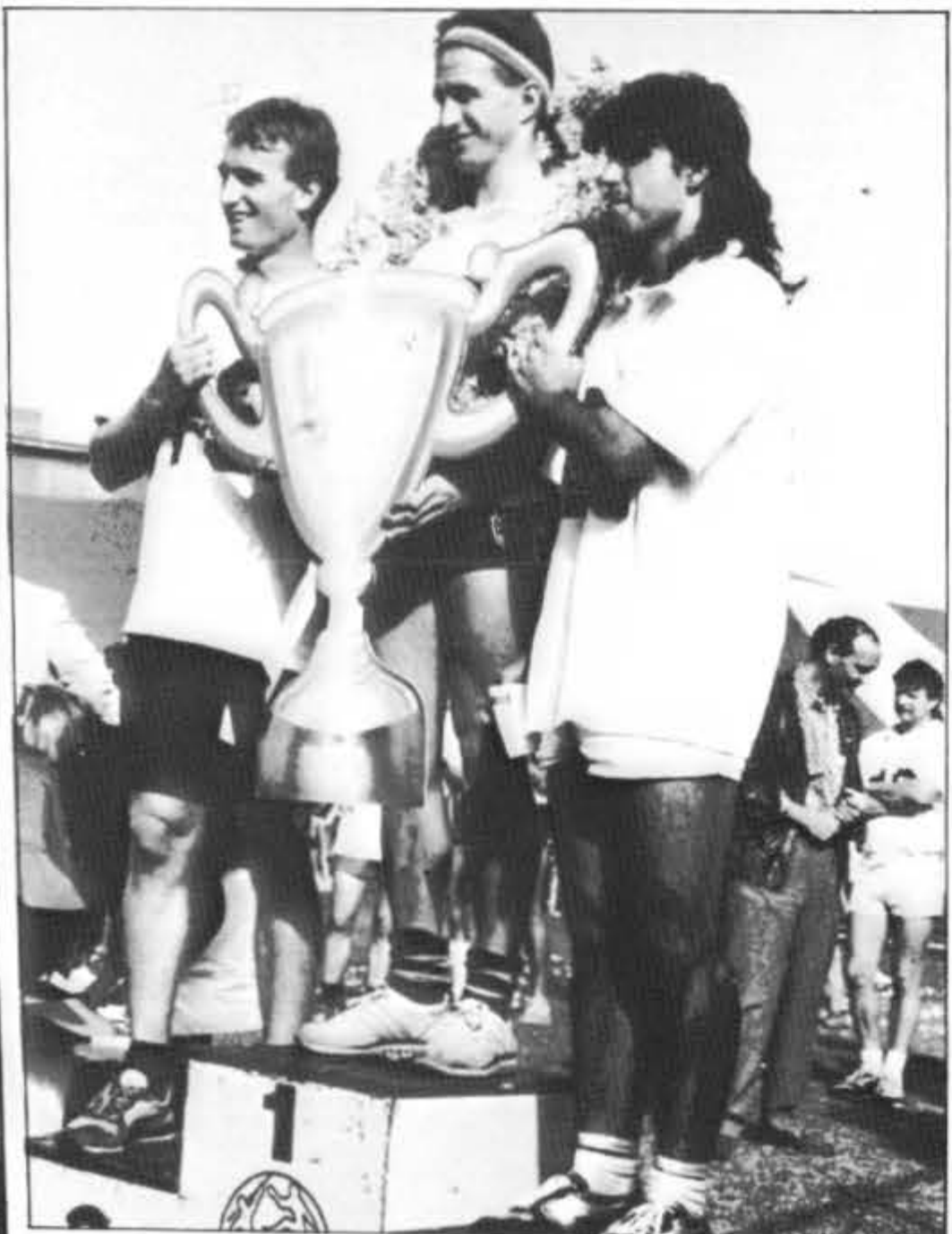
George Duxbury, Ranger-in-charge at John Forrest National Park, pours one of the many teas that accompanied the fireside damper.



Ranger Jim Maher with joey and an interested onlooker.



Bob Cooper fired the imagination of spectators with his demonstration of bush skills.



First, second and third — Department of Regional Development's "Bushwhacker" (alias John Berry), "CALM Ranger" (Alan Clark from Mapping), and Mines Department's "Rock Solid" (alias Pablo Roig).

More Trees Please ...

Narrogin Nursery produces top crop...

CALM is providing cheap trees for farmers.

The Narrogin nursery has produced a crop of 400,000 seedlings this season and forester in charge, Greg Durell is very happy.

To cut labour costs, which would otherwise be passed onto farmers, the trees are reared for only six months by four staff, including three labourers and Greg.

Some 100 local eucalypt species, including York gums, river gums and

sheoaks, are grown and sold, with orders for unusual eucalypt varieties taken.

Seedlings, which are sold between May 1 and August 31 on a first in first served basis, are despatched to shires where farmers can pick them up.

Raised seed beds keep the seedlings away from ground fungus, like die-back, and they are hardened before they are sold.

CALM also provides advice to

farmers on how best to grow the seedlings.

Greg recommends initial ripping of the soil with a tractor or bulldozer, to create half metre furrows. Mounded soil gives the trees a chance to establish themselves above the salt level.

Covering nearly three-quarters of a hectare, the nursery has been producing since 1967.

Between 1967 and 1988 it was located at Dryandra, where forester Bob McAlinden supervised the growing of more than 2.5 million trees.



Domenic Deluca (left) and Alan Walker (right).

IMPRESSIVE BLUEGUMS

This month marked the start of CALM's tree planting season.

Eight and a half million seedlings, mainly Tasmanian bluegums, made an impressive sight at the newly extended Manjimup nursery, where they were grown from seed.

Here, Nursery Overseer, Domenic Debuch, and Manjimup Regional manager, Alan Walker, inspected some of the seedlings before they were taken to the field for use in commercial plantations on cleared farmland, reforestation work on CALM land and replanting of the Wellington catchment.

South coast park paths in spotlight

An inventory on footpath conditions in the South Coast Region has begun.

Footpath management is a major issue in the Draft South Coast Regional Plan.

Regional Manager John Watson said that WA's National Parks Improvement Programme funds this year are being used to build an information base ready for the start of reconstruction work in the near future.

Already Tasmanian Greg Leamon has spent eight days here providing advice on footpaths in the Stirling Range National Park.

Temporary Footpath Research Officer, Catherine Vasiliu, has collected information on visitor use of footpaths and maintenance frequency by park rangers.

Catherine has also prepared an inventory of footpaths, section by section in the Stirling Range, writing job prescriptions where possible for ongoing maintenance and reconstruction work.



Catherine Vasiliu, Footpath Research Officer, South Coast Region. Photo: John Watson.

Possum 'tail' has a happy ending

Pull the other one! When a woman phoned Wildlife Officer Sean Hazelden last month to complain that a possum was hanging by his tail from a tree, he thought it was just another crank call.

Sean patiently explained that this was quite normal behaviour for a possum.

However, the woman, who had already called the RSPCA and received the same response, was clearly worried; the possum had been there for over an hour.

Besides, it was the middle of the day and possums were nocturnal, so he and Andrew Horan decided to go out to the park at Carine Glades to have a look.

They found a young possum in a big old marri tree in a most unusual predicament.

"It was the weirdest thing I've ever seen. The possum had his tail caught in a small hollow six inches wide and was prevented

by his own weight from lifting himself back up," said Andrew.

"A big crowd of children and their mothers had gathered beneath the tree and were gaping up at him," he said.

Sean climbed up, put his hand in the hollow and soon untangled the possum's tail.

The animal fell and Andrew and the children caught him in a blanket and bundled him into a cage.

When they took him home that evening and examined him it appeared that he had previously broken his tail, leaving it with a permanent bend. They believe that this somehow caught in the hollow.

The next day, they released the accident-prone possum in a nature reserve north of Wanneroo.

Let's hope that he keeps his tail free from obstructions in the future: not many organisations would respond to an SOS for a possum hanging from a tree!

MANAGERS MEET AT GERALDTON

The Department's regional managers travelled to Geraldton in mid-May for their annual meeting to discuss issues of common interest.

Genial host Geoff Mercer provided an enjoyable trip to Kalbarri National Park, where managers inspected recent development works providing access, parking and facilities at the coastal and Murchison River gorges.

A descent to the Murchison River at the Z-Bend, while exhilarating, brought home the problems of the duty of care the Department faces in ensuring the safety of the public who make the gorge descents.

A one-day formal meeting was scheduled for Friday 19th and was attended by the Executive Director.

Held in the Bill Sewell Complex, with no telephones available (well chosen, Geoff), business was brisk, statements short and succinct, and the meeting was a paragon of efficiency.

More issues were raised than were resolved, but at least they were given an airing and noted for follow-up.

With rain forecast on the Saturday, the less intrepid of the party returned to Perth on Friday evening.

The stayers were treated to an air trip to the Abrolhos Islands landing on Rat and Wallaby Islands, followed by a visit to Nambung National Park on the Sunday.

Regional managers' thanks go to Geoff Mercer and his staff for their organisation of trips, meetings and the provision of creature comforts.

General Manager, Roger Underwood, recently left for six week's study leave in the USA.

Roger will be presenting one of the lead papers at a world conference on wild-fires in Boston.

He will also be studying forestry and park management as a guest of both the United States Forest Service and National Parks Service.

Roger will be focusing on the way these agencies are handling organisational, training and staffing issues in times of increasing demands and static resources.

A problem dear to the heart of all CALM staff.

George Peet Retires

Northern Forest Regional Manager, George Peet, retired last month after 28 years with both the Forests Department and CALM.

George made an outstanding contribution to forest fire management in Western Australia during his career in research and management.

Nearly one hundred people attended a dinner at Armadale to share memories with George on his day of retirement.

George was presented with an axe in memory of his prowess with that instrument before he took up modern technology like the chainsaw, with various memorabilia in recognition of his time in fire research, with his final foil coil from Alcoa, and with a beer brewing kit to enable him to maintain in his retirement one of his lifetime habits.

Eric Jenkins and Gerard van Didden recalled incidents from the past which George claimed to have forgotten, from the time in which he was in charge of ferrets at Muresk in 1951 until the time when he transferred from fire control superintendent to become superintendent of the Northern Region of the Forests Department in 1983.

Roger Underwood, on behalf of the Executive Director, complimented George on his performance as Manager of the Northern Forest Region of CALM and presented him with certificates for 28 years accident free and 28 years meritorious service.



Regional Managers take time off to enjoy an outing in the Geraldton Region.

Start made to pine seed lift

Twelve months of management by Wanneroo Districts Gnanagara nursery staff came to a climax at the beginning of June when the first pine seedlings were lifted by teams of trained casual workers.

For Forest Ranger Tim Bowra, overseer Sam Greer and nursery assistant Brian Carling, in particular, it was satisfying to see the first of their healthy crop of pine seedlings being prepared for despatch to CALM Districts for planting in the 1989 planting season.

This year about 3.6 million seedlings are available from Gnanagara for despatch to the South Coast, Southern Forest, Central Forest and Northern Forest Regions for planting.

Wanneroo District also supply some pines for private orders across the state. Species raised include *Pinus radiata* 2.6 million one year old, and 500,000 million two year old; *P. taeda* 100,000; *p. pinaster*

400,000; *P. radiata* cuttings 140,000; *P. pinea* 8,500 and *P. halepensis* 8,000.

Pine seedling quality in carefully monitored by District and Silvicultural Branch staff and plants prepared to tight specifications to ensure maximum chance of survival in the field.

Lifting is carried out using a team of casual workers employed over a period of 10 to 12 weeks who lift about 115,000 seedlings a day.

Sorted

The plants are transported by tractor in bags to a sorting shed where they are carefully sorted for quality and long lateral roots pruned.

They are then stacked in wax covered cardboard boxes which are loaded onto a pallet which is loaded onto a truck for transport to a cold storage facility at Osborne Park.

Regions requiring plants can then obtain them readi-

ly at the cool rooms and transport then directly to their planting areas in good condition.

The care and dedication displayed by the Gnanagara

nursery staff for their 1989 crop of pine seedlings has ensured the best possible quality of plant available providing an excellent start to our future pine forests in the south west.



Pine seedlings are lifted at the Gnanagara Nursery.

LANE POOLE AWARD 1989

Applications are now called for the 1989 Lane Poole Award.

All officers of CALM employed under the Forest Act Field Staff Agreement and Public Service Act staff engaged in forestry management activities are eligible to apply for the award.

The award provides financial assistance for travel in Australia and New Zealand to attend conferences or provides study opportunities in forestry related fields.

Applications should be submitted to

Chairman of Trustees
Lane Poole Memorial Trust
State Operations Headquarters
Department of Conservation and Land Management
Como WA 6152

By 5pm on Friday, September 1, 1989.

For further information contact Paul Jones at CALM's Crawley office on 386 8811.

Phd on rare eucalyptus honoured

by STEVE HOPPER

Recently, the Ph.D. Committee of the University of Western Australia wrote to CALM's consultant botanist Jane Sampson to convey special congratulations to her on her Ph.D. thesis being passed.

The thesis, titled "The population genetic structure of *Eucalyptus rhodantha* and its allies *Eucalyptus crucis* and *Eucalyptus lanepolei*", was considered to be one of "outstanding distinction" by the Ph.D. Committee.

The Committee took the rare step of formal recording in the Minutes of its May 23, 1989, meeting "its special congratulations".

Jane undertook her project between 1986-88 in the Department of Botany under the co-supervision of Dr Sid James and myself.

CALM provided a small annual grant for three years through the Flora Conservation Research Program to cover costs for travel and laboratory expenses.

The technique of starch gel electrophoresis was used by Jane to study genetic variation and the mating system of the three eucalyptus.

Eucalyptus rhodantha was in special need of such research, being one of the State's rarest eucalypts and confined to remnant stands on farm and road verges.

Were these populations still viable? Should CALM actively manage them to enhance numbers by replanting? If so, what prescription should apply?

Jane's studies established that the outcrossing rate was between 59-67 percent in an undisturbed population of *E. rhodantha*.

This rate was at the low end of the range reported for other eucalypts.

Moreover, outcrossing declined to 26 percent in a remnant clump in a sheep paddock, suggesting little prospect of a long-term future for this clump as the effects of inbreeding became apparent.

Restoration to a viable population will require fencing from stock, replanting more *E. rhodantha*, and establishment of other plants as an understory that will enhance numbers of honeyeaters that pollinate *E. rhodantha*.

Such strategies are proposed in a draft Wildlife Management Program prepared by Jane and others for the species.

Recruitment of seedling *E. rhodantha* did not occur following a small experimental burn in part of one population, despite seed release from capsules.

Predation of seeds may have been the cause of this problem.

Consequently, caution in the use of experimental burns on rare eucalypts was advocated.

The granite rock species *E. crucis* was found to have a similar pattern of genetic variation to that found in *E. caesia* by Dr Gavin Moran and myself.

Relatively low variation occurred within populations, while unusually large differences occurred between populations.

This finding highlights the importance of acquiring many reserves evenly distributed across the landscape to conserve granite rock plants.

In both *E. rhodantha* and *E. lanepolei*, gene flow between populations appeared to be an important component of their structure.

Isolated reserves would need to be complemented by corridors for these species.

A copy of Dr Sampson's Ph.D. thesis has been donated to the CALM library.

Her work exemplifies the benefit to CALM and the Department maintaining a close liaison with researchers in tertiary institutions, and of the provision of a small amount of seed money to facilitate relevant research.



ABOVE: The John Deere five wheeler is rough riding for Technical Officer, Don Bennett, who is spraying a strip line in readiness for planting at Manjimup.

RIGHT: Research scientist Gary Inions of Como Headquarters admires a bluegum seedling in its jiffy pot. Gary is involved in full time study of site quality and yields.



A D7 dozer rips to a depth of 60 cms, the marker chains on the sides determine the distance a part of the line and its return run.

SEWING SEEDS FOR OUR FUTURE

CALM staff have made a great contribution to the department's bluegum reforestation project.

By JOHN HUNTER

Bluegum Project Forest Manager Jon Murch from Como is full of praise for regional staff who handle the enormity of on-site tasks.

"It is a real team effort and a pleasure to work with enthusiastic people," he said.

As the venture is a sharefarming project between landowners and the Government, CALM staff are responsible for procuring lands, propagating seedlings (millions of them), economic planning, establishing and tending plantations, inventory and on-going research.

John Brealey at Manjimup is in charge of CALM's Manjimup Propagation Centre, which has grown a staggering 5.4 million blue gums for the program since last year.

Directly responsible for the development of the Manjimup nursery is Duncan Brown, with Domenic De Luca, the expert nursery man and his assistant, Jeff Cook, giving support.

At one time 35 temporary workers were employed to look after stock,

while six other nurseries took care of 580,000 plants.

Gavin Ellis controls growth trials and potting research.

The scheme works as follows. CALM gets the offers of land from a farmer who then meets Senior Liaison Officer Ross Young.

Ross advises how the scheme works and what the farmer should expect both financially and in regard to the plantation.

After the initial investigation Forest Field Manager Ian Scott of CALM's Bunbury office arranges a detailed inspection and site assessment.

Ian needs to know soil types to allow for site preparation involving estimates of drainage, clearing, mounding, furrowing and ripping.

Assessments are needed for future weed control, fertilising, whether the land is currently pasture or bush and what spacing of trees will be required for that plot.

The farmer must decide whether he will do the site preparation or leave it to CALM.

After discussion and inspection, Ian sends his report to George Malajczuk at Crawley who works out what it's going to cost to set up and grow the plantation to harvest size, and what CALM will get on sale on the timber.

A yield figure is determined at Crawley, then Ross Young goes back to the farmer and makes an offer.

After rents and annuities are agreed Ian Scott is back in action again ably backed up by his assistant Peter Grime and Russell Walter and overseers Charlie House and Brian Baker.

According to Jon Murch this is the part of the project where the real action is.

Quickly, contracts have to be let for various functions. These include distributing plants, boundary surveys, carting and operating of machinery, water supply, grass control, planting and an overall supervision of contractors.

Machinery works 24 hours a day, CALM officers give much needed support service while the AWU provides contract field workers.

An endless stream of action and co-operation.

"So much so," says Jon, with a smile on his face, that "Ian works 18 hours a day, seven days a week, resigns four times a week and the system is starting to bloom".

At present there are 35 properties in the program, with more than 50 contracts signed, involving 4500 ha of the anticipated 5000 ha to be planted this season.



Tym Duncanson, Technical Officer with the NAP team in Manjimup, targeting a prickly weed with spray on a proposed trial area.



Sledge hammer wielding Tym Duncanson, pegs a rip line in preparation for fertiliser and planting.



Technical assistant Ted Dunne inspects an advanced bluegum plantation along the South-West Highway at Serpentine.



South West College's 1988 Best Student of the Year, CALM cadet Luke Coney.

Top award to CALM cadet

The 1988 South West College, Best Student of the Year Award, has been won by 2nd Year CALM Cadet, Luke Coney.

Luke, awarded the best full-time student for 1988, was chosen from 3500 students.

Greyhound Coaches provided the travel prize to anywhere in

mainland Australia plus \$200 spending money.

Luke has chosen to visit Kakadu National Park, viewing it as a perfect opportunity to gain knowledge relevant to his career.

He is also interested in the politics of Aboriginal ownership and

mining leases associated with the Park.

Luke has also won the Institute of Foresters of Australia (WA division) Award, which is for the best full-time student completing stage one of the Certificate of Conservation and Land Management.

Congratulations, Luke.

SW Expo creates interest

There is no shortage of people wanting to work for CALM, judging by the response to Central Forest Region's stand at the recent South-West Careers' Expo in Bunbury.

Hundreds of school leavers and mature age people wishing to change careers visited the CALM display and collected a careers booklet.

They showed keen interest in the range of jobs offered by CALM, particularly the field officer cadetships and trainee park ranger scheme.

There were also many enquiries regarding work experience.

CALM cadet Luke Coney, South-West College's student of the year for 1988, told official guests and local high school stu-

dents of the need for perseverance and dedication when trying to enter a chosen career.

CALM was one of about 60 organisations which took part in the Expo.

The others included large industrial companies, academic institutions, private businesses and the armed services.

It was the third successive year that CALM had a display at the Expo.

WHEATBELT WORK UNDERWAY

CALM planning officer, Peter Sandell was in Narrogin last month commencing work on the management plans for both the Dryandra and Highbury State Forests, and the Boyagin and Tutanning nature reserves.

Peter held discussions with regional ecologist, Ken Atkins, and spoke to a meeting of the Central South Naturalists Club.

As the CALM Act prescribes public participation in management plan preparation, meetings with groups like the Naturalists are vital.

"With limited resources, and other high priority projects, the fact that we are starting now shows that while they may be regarded as a local picnic spot, their conservation value is high," Peter stated.

"Organisations like the Naturalists Club, commercial forest users, tourist and recreation interests, and the Lions Club, will be consulted in devising a draft plan.

"Guidelines for fire management, rare and endangered species, control of exotic species, recreation opportunities and the wise use of timber resources will be considered."

Peter enjoyed his meeting with the Naturalists Club and was delighted the club was helping by collecting biological information.

Draft plans must be available for public comment for at least two months.



Planning officer, Peter Sandell (left), with the wheatbelt regional ecologist, Ken Atkins who is based in Narrogin. (Photograph courtesy of "The Observer", Narrogin)

COMINGS AND GOINGS

Appointments

New to the permanent staff are Paula Deegan, Planning Officer, Narrogin; Ian Faed, Forest Ranger, Colliie; and Peter Kendrick, Ecologist, Karratha.

Promotions

Tim Mitchell to Forester Grade II, Manjimup; Jacques Rene, Assistant Financial Systems Officer, Como; Ma Rutherford, Forester Grade I, Bunbury; Yvonne Woods, Research Com-

puter Systems Officer, Manjimup; and Martin Lloyd, Senior Ranger, Albany.

Transfers

Dr Stuart Crombie, Research Scientist to Dwellingup; Owen Donovan, Forest Ranger, Wanneroo; and Sue Moore, Senior Planning Officer, to Kelmscott.

Retirements

Frank Quicke, Senior Forester, Bunbury after 38 years in forestry.

Piped music, dance duo for Mirima

Mirima (Hidden Valley) National Park recently played host to visiting band AC/PVC, and dance duo, Still Moves.

About 200 guests enjoyed the acts with a magnificent backdrop of sandstone cliffs and stark eucalypts — all under a star studded Kimberley sky peppered with the odd shooting star.

As haunting sounds captivated the audience, one could easily imagine that similar performances had taken place here long ago.

Secluded

Just a stone's throw from Kununurra, Mirima is a valley with rugged cliffs forming amphitheatres, gullies and ridges. In this secluded spot Aboriginal people have lived for thousands of years.

The Aboriginal Miri-uwung people have held corroborees here in recent times, reflecting a much longer tradition.

AC/PVC featured an extensive orchestra of PVC and plastic instruments resembling drums, piccolos, flutes, xylophones, saxo-

phones, and organs. Their music sounded a combination of Aboriginal, African and Caribbean melodies.

Still Moves aim on performing innovative, contemporary dance in creative

settings, which is precisely what Mirima provided.

Kununurra-ites so liked the show, that planned modification of road access and parking should encourage similar events. — CHRIS DONE.

FIRE THEME OF WORKSHOP

FIRE MANAGEMENT ON NATURE CONSERVATION LANDS, Proceedings of a National Workshop, Busselton, October 1989. Edited by Rae Burrows, Lachlan McCaw and Tony Friend. Occasional Paper 1/89. Published May, 1989.

Fire is a hot issue that often flares up among managers of nature conservation areas.

It has a role to play in the management of most terrestrial ecosystems in Australia, from the grasslands of the arid interior, to the tall eucalypt forests of the South Coast.

With nature conservation areas expanding rapidly, there is an urgent need for adequate planning, so that the scarce resources available for fire management and

research are employed effectively.

Fire management on conservation lands was the theme of a five-day workshop hosted by the Western Australian Department of Conservation and Land Management in October 1987.

Representatives of land management agencies, rural fire authorities, and the voluntary conservation groups attended the workshop in Busselton.

Speakers addressed important topics relevant to fire management including objective setting, critical information requirements, management strategies, operational considerations and public participation.

The workshop also provided opportunities for planning procedures to be applied during a syndicate exercise based around one of the four case studies involving WA conservation reserves.

Papers presented to the workshop, together with a review of the outcomes of the syndicate exercise, have been edited and published as a set of proceedings.

These should serve as a benchmark in the development of fire management planning, and provide a valuable reference for land managers, students and the informed public.

(Copies of the proceedings are available from CALM Como).

