

CALM NEWS

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DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

December 1993-January 1994



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Foxes out, writ out, gums in

CALM-ALCOA to collaborate in fox control

ONE of Australia's biggest native wildlife recovery programs begins next year with a concerted attack on the major predator of many native animals - the European fox.

CALM, with assistance from Alcoa of Australia, is extending CALM's predator control initiative, Operation Foxglove, to cover almost 500 000 hectares in the northern jarrah forest.

Ensuring survival

Environment Minister Kevin Minson, who launched the project recently at Dwellingup, said this would help ensure the survival of native fauna and enable other species that had become locally extinct to be reintroduced.

The project is regarded as a conservation coup of international significance.

Mr Minson said preservation of wildlife was not only crucial in terms of preserving the State's biodiversity, it was imperative for our social and economic development.

"Western Australia's wildlife is diverse and many species are unique to

by Nigel Higgs

this State which gives us a tremendous natural advantage - soon visitors will be able to see wildlife here that occurs nowhere else."

Starting in April, CALM, in association with the Agriculture Protection Board, will begin laying baits at the rate of one bait every 20 ha over 440 000 hectares of the northern and central jarrah forest from Mundaring to Collie.

Fox control programs also will be encouraged on neighbouring farmlands with the APB and local land conservation district committees.

1080 for safety

The baits will be treated with 1080 poison which occurs naturally in native plants belonging to the group *Gastrolobium*, the 'poison-peas'.

Fox control will mean the 1080-tolerant native animals can be reintroduced so that new, secure populations can be established and the survival of the species ensured.

Alcoa of Australia's involvement is particu-



Native animals will be monitored for any increase in numbers to indicate progress of the fox-baiting program. Here, Environment Minister Kevin Minson (right) looks on while forester Mike Tagliaferri (left) holds a 'bagged' possum and senior technical officer Mike Dillon prepares to record its measurements and weight. Photo by Nigel Higgs

larly welcome in this project.

Alcoa has implemented extensive rehabilitation programs in areas of the northern jarrah forest mined for bauxite.

Fox control and the re-introduction of native marsupials will add a further dimension to rehabilitation measures Alcoa

is carrying out as part of its bauxite mining operations.

Native forest

It also is part of the integrated approach that is essential to managing our native forests.

The fox control project will be part of an extensive research program on

integrated wildlife management initiated by CALM with further funding from the Australian Nature Conservation Authority and the Co-operative Research Centre.

This will allow fauna management to be integrated further into other uses and management strategies for the forest.

Multi-million dollar contract up and running

A NEW West Australian tree species, the western bluegum, was announced in November in a ceremony to mark the signing of a multi-million dollar contract for the Albany region.

The Oji Paper Company and Itochu Corporation have appointed CALM as its manager in a project to plant 25 million trees in the region.

Oji, Japan's largest pulp and paper manufacturer, and Itochu, Japan's biggest trading house, have formed a joint venture company for the Albany project.

CALM Executive Director Syd Shea said the Albany Plantation Forest Company of Australia Pty Ltd would invest \$60 million to establish 20 000 hectares of trees over 10 years.

A further \$200 million will be spent when harvesting begins in the year 2003.

"This is a major investment for the Albany region that will generate \$50 million export income per annum when the trees are harvested," Dr Shea said.

The project has been welcomed by Primary Industry Minister, Monty House, as both an economic and an environmental boon for the State.

by Caris Bailey

Albany MLA Kevin Prince has also praised the project, which he said would be of great benefit to the town's port facilities.

"Landowners joining the project can now look forward to even greater productivity as the result of a new, super tree bred by scientists for local conditions," Dr Shea said.

"Starting with the Tasmanian bluegum, CALM scientists have worked with private sector help to produce the western bluegum.

"This tree breeding program means that one of the most productive tree species in the world will be grown 40 per cent faster."

The selection of the new elite trees began in 1980 when CALM's tree breeder, Trevor Butcher, established trial plots of seed collected from native bluegums growing in Tasmania and Victoria.

The process of collecting native seeds and planting them in Western Australia to test their growth in local conditions continued until this year.

Western Australia now has more than

CALM cleared - but it's not over yet

APPLICATIONS for writs against the Environment Minister and the Lands and Forest Commission - those responsible for approving forest management plans prepared by CALM - were dismissed late last month in the Supreme Court.

The applications had been lodged by the South West Forests Defence Foundation, with supporting affidavits by Beth Schultz, Barry Carbon, the then Environmental Protection Authority chairman, and John Bailey, then EPA member.

by Caris Bailey

The application for writs was based on allegations that CALM had "failed to act fairly, honestly and conscientiously" by withholding information during the forest management planning process.

Executive Director Syd Shea said he was proud of the scientific standing and professionalism of CALM's forest management proposals.

"It is particularly noteworthy that Mr Justice White rejected the 'sinis-

ter' implications made by the Foundation about the management of CALM scientific papers," Dr Shea said.

"The Judge refused to find there was evidence of bad faith by CALM."

In his judgement after two days of argument, Mr Justice White wrote:

"I am of the opinion that the obligation of CALM to disclose information did not extend to the contents of papers prepared by its staff which papers at the relevant date were in draft form only and which had not yet been finalised."

Mr Justice White also found that while the Foundation did have the legal standing to take the Minister and LFC to court:

"...it might well not have standing sufficient to enable it to move for declaratory relief or for relief by way of injunction."

He found there appeared to have been "very substantial delay" by the Foundation in beginning legal proceedings and described Dr Schultz's explanation of this delay in her affidavits as:

"...quite inadequate to account for the whole of

the very lengthy delay which has occurred."

Dr Shea said CALM had probably the most open and comprehensive public consultation process in Australia.

"The Foundation claimed that CALM's public participation process wasn't good enough and then applied for a writ to stop the further public comment we are seeking," Dr Shea said.

"This application was also dismissed."

However, the Foundation has since lodged an



Left to right, Managing Director Itochu Australia Perth Office Mr Kosaka, CALM Executive Director Syd Shea and Project Manager Gary Inions, and Albany Plantation Forest Company of Australia Pty Limited's Managing Director Mr Kenji Kanda.

Continued on page 2



A Christmas message

In case nobody has noticed - this has been a very difficult year for CALM. Nonetheless, I think we have come through it in very good shape.

There have been some very major achievements - not the least of which were the ones that are discussed in this edition of CALM NEWS.

We have been able to deliver these projects because we are an integrated agency which has an enviable diversity of skills.

We have also achieved success because we are capable of applying these skills in appropriate ways to solve problems.

Our major challenge next year is to take up the thrust of the McCarrey Commission's recommendations and implement them.

I welcome the opportunity provided by the Government to change the public service in a way that will make it more efficient and also allow departments like CALM, and the people who work in them, to fulfill their potential.

I am conscious of the fact that other people have also had a heavy year. Please accept my apologies for any stress that I have induced and thank you for your support during the year.

Have a good Christmas and, hopefully a more peaceful New Year.

Dr Syd Shea, Executive Director

STAFF NEWS

Appointment

Andree Barley, Officer, Merredin.

Promotions confirmed

Jacqueline Pontre, to Planning Coordinator, Planning Branch; Morten Nilsson, Forester, Collie; Judy Flanagan, Administrative Assistant, Walpole; John Carter, Senior Reserves Officer, Mundaring.

Mobile Ranger Deployment

Geoff Passmore to Esperance District; Ian Hughes to Walpole; Ernie Fagan to Pemberton.

Latest family walks book launched

PICTURED is Environment Minister Kevin Minson pointing out some of the natural features around Star Swamp to children from Halidon Primary School, Kingsley, and the chairman of the City of Stirling's Advisory Committee on the bushland, George Strickland, MLA, at the launch of CALM's latest publication, *Family Walks in Perth Outdoors*.

At the launch, Mr Minson said Western Australia had an amazing natural treasure trove that could only be conserved if people truly appreciated its beauty.

"If we have a better understanding of our natural environment, then we have a much better chance of ensuring we pass it on to our children in as good a condition as we inherited it," he said.

Family Walks in Perth Outdoors is part of CALM's wider Perth Outdoors program.

The book is a companion volume to *Perth Outdoors* released last year and covers 52 walks, ranging from just a few hundred metres to around 18 km of varying grades of difficulty.

Mr Minson paid tribute to the enthusiasm for the book among the 35 staff, volunteers, friends and relatives who walked every step of the walks.

He said their notes along with 'mud-maps' and other information on the natural environment, had been compiled into a very readable and informative book that would give local people and visitors alike an insight into Perth from a new perspective.

The publication also was extremely timely as next year WA would celebrate the International Year of the Family.

"This walks book is therefore a wonderful contribution towards the family and activities that families can enjoy together," he said.



Endangered frog find boosts known numbers

by Carolyn Thomson

FIFTEEN new populations of the endangered white-bellied frog were discovered during a recent survey, almost doubling the number of known populations to 34.

Most of the new populations were discovered on private land by CALM research officer Ian Wheeler.

"The white-bellied frog (*Geocrinia alba*) and the orange-bellied frog (*Geocrinia vitellina*) are the only species of frogs on the threatened fauna list in Western Australia," CALM senior research scientist Grant Wardell-Johnson said.

"Both species are smaller than a ten-cent piece and are found only in a few damp sites near Witchcliffe and Karridale in the south-west."

A further seven populations have died out since they were first discovered in 1983.

"The white-bellied frog relies on undisturbed streamside vegetation and is threatened by stock trampling, grazing, clearing and weed invasion," Grant said.

"As a result, a recovery team plans to fence off areas of frog habitat, with the support of local farmers, to allow the vegetation to regenerate."

Reintroduction will be considered for areas from which the frogs have disappeared.

Ten-year plans

Grant said that ten-year recovery plans to bring two tiny frogs back from the brink of extinction received a \$57 400 grant under the Commonwealth's Endangered Species Program.

The recovery plan aims to stop both species from becoming extinct in the

next ten years by protecting existing populations from further loss of habitat and establishing new populations in suitable areas.

An extra population of the orange-bellied frog was also discovered by PhD student Don Driscoll, bringing the total number for this species to five.

This frog inhabits a total area of only 20 hectares.

Genetically distinct

"New studies by Don Driscoll have shown that different populations are genetically distinct," Grant said.

"This means that we need to look after lots of populations and not just a selected few."

The frogs are unusual in that they never enter water, preferring to lay their eggs in moist soil depressions.

When hatched, the tadpoles remain in the jelly surrounding the eggs, drawing on food reserves in the egg yolk.

The recovery team includes staff from CALM, the Shire of Augusta-Margaret River, and the local Land Conservation District.

CALM cleared - continued from page 1

appeal against Mr Justice White's decision.

Dr Shea said he was sorry the matter would be prolonged, but the Department would vigorously defend the case.

Paying its way

COMMERCIALISING wildlife conservation was the topic presented by world-renowned Zimbabwean ecologist Rowan Martin at a public forum in Perth recently.

Mr Martin was a prime motivator behind the initiatives to conserve elephant populations through the internationally-controversial CAMPFIRE Program in his home country.

CAMPFIRE - Communal Areas Management Program for Indigenous Resources - enables local people to earn money from wildlife in their area.

It is now a model for similar projects in other countries.

Executive Director Syd Shea said he was pleased

Mr Martin had come to Western Australia.

"He has been instrumental in gaining major policy shifts in the international conservation effort," Dr Shea said "His views may not be shared by everyone but they certainly stimulate public discussion."

"And creating more public awareness about the need to conserve our wildlife, especially our threatened species, is important to the overall conservation effort."

Mr Martin has been brought to Western Australia by the Gordon Reid Foundation for Conservation to stimulate discussion on the topic 'Should wildlife pay its way?'

More schoolchild howlers:

- Inside each ear we have a hammer, an anvil, and a stirrup. So the ears have a good excuse to ache sometimes.
- Light enters our eye through our coronas.

• Extracts from The newest biology - elementary school children elaborate on the standard texts by Matt Edwards *Bio Science Vol. 1 No 3 pp. 136-138.*

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Managing Editor: Ron Kawalilak

Editor: Verna Costello

Contributing editors: Caris Bailey, David Gough, Nigel Higgs, Carolyn Thomson

Design and Layout: Sandra Van Brugge and Stacey Strickland

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(cnr) Mounts Bay Road & Hackett Drive, CRAWLEY, Western Australia 6009

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CALM Classified

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The Editor, CALM NEWS, Corporate Relations Division

For Sale

30-yr-old caravan located at Dwellingup. Manufctr: Bolton's P/L.

Type: Main Roads workmen's mess. Length 5.6m body, 7.0m with hitch. Width 2.4m. Single axle. vacuum brakes. sun roof. 3

doors. Price \$300 ONO. Contact Barbara Giles or Robyn Bowles, Dwellingup Science and Information, (09) 538 1105.

Please Note

Would those advertising in CALM CLASSIFIEDS, please phone or fax CALM NEWS Editor if you wish your advertisement to be repeated. Otherwise it will be understood as no longer required and will not appear in the subsequent issue.

Multi-million dollar deal - continued from page 1

1 000 different bluegum families planted in 35 trials across the south-west - a total of about 110 000 trees.

"Only 300 of these trees have been judged to be good enough to be grown in the seed orchards established to produce western bluegums," Dr Shea said.

"All CALM seedlings

in 1996 will be from improved seed, although it will be 1997 before the western bluegum is available to growers in significant quantities.

"Western bluegum is a registered name and can only be used for trees produced from CALM's tree improvement program."

An Agreement Act, protecting the interests of

all parties in the project was recently passed by parliament.

Ceremony at Yerriminup

The ceremony launching Western bluegums was held at Yerriminup Bluegum Grove, on Albany Highway south of Mount Barker.

The 50-hectare site ad-

jacent to Yerriminup industrial park has been purchased by CALM for bluegum and other plantation field trials.

A five-hectare seed orchard has also been established.

Information panels at the orchard site explain the story of hardwood plantations and the new super tree.



Left to right, CALM scientists Grant Wardell-Johnson, Yvonne Winchcombe, Terry MacFarlane and Neville Marchant at the opening of the regional herbarium at Manjimup. Photo by Carolyn Thomson

CALM Manji's herbarium

SPECIMENS from towering tingle trees, the bizarre pitcher plant, a new species of eucalypt and rare orchids are among 2 000 plants in a herbarium officially opened at CALM's Manjimup office on November 26.

The regional herbarium is affiliated with CALM's Western Australian Herbarium, where all specimens are duplicated.

"This is a fantastic community resource," Acting Head of the WA Herbarium Neville Marchant said.

"It's not just for CALM officers-officers from other government departments and community members

can all use it to identify specimens and learn more about the region's unique flora."

The Manjimup regional herbarium features flora from the southern forest region, which is renowned for its high rainfall species.

"The herbarium aims to provide an identification and information resource for a botanically defined region from Cape Naturaliste almost to Albany," he said.

"There are about 2 500 species in this area, including some that grow nowhere else."

They include Gondwanan species, such as the rare tingle tailflower

(*Anthocercis* sp.) from Walpole, first collected in 1965 and rediscovered recently.

Neville said CALM scientists found the tail-flower when putting study plots in the tingle forest.

"There are only 30 to 40 plants growing in one location and so far no seeds have been found."

He said that collections made for the Herbarium had already turned up new species.

"The rare Jackson's sun orchid (*Thelymitra jacksonii*) was discovered in 1988 by Walpole resident Bill Jackson," Neville said.

"This species has striking gold and brown flowers and is found only in one swamp near Walpole.

"A completely new eucalypt, first collected in 1987, has been recently identified."

The new tree, which grows near the Sabina River, is known from only five plants. A new species of fringed leaf lily (*Chamaeoxeros* sp.) from near Walpole, which botanists waited years to see in flower, is currently being named.

Neville thanked the many volunteers who had been involved in collecting many of the specimens.

Protecting stromatolites

NEW boardwalk to protect Shark Bay's unique stromatolites is to be built at Hamelin Pool.

CALM Gascoyne district manager Ron Shepherd said increasing numbers of people were visiting the stromatolites, which were built by micro-organisms resembling the earliest forms of life on earth.

"The microscopic organisms use sediment and organic material to build stromatolites up to 1.5 metres high - up to 10 million times their size," he said.

"Their significance to science is inestimable, but they're very fragile and can be degraded by visitors walking over the site to view them," he said.

The boardwalk will in-

clude information boards and will enhance public appreciation of the sites as well as protecting the stromatolites.

"BHP Engineering has helped CALM to design a boardwalk that can be built without causing significant long-term impacts on the stromatolites," Ron said.

"Tenders for the construction of the boardwalk have been advertised and work should begin soon."

Ron said the boardwalk was just one of a number of developments that would cater for visitors to the Shark Bay World Heritage area.

"CALM is also upgrading facilities at Shell Beach and Francois Peron National Park," he said.

"A hot artesian pool,

recently built at Francois Peron National Park, has become a major tourist drawcard."

"A walk trail through the homestead and outbuildings of the former pastoral station has also been completed."

Once lawns are established, gas barbecues and a shade shelter will be added to the homestead area.

Shell beach improvements

CALM is also making improvements to Shell Beach, which has become degraded through uncontrolled vehicle access. As a result, the shells were crushed and the area lost its natural appearance.

NPNCA membership changed

ENVIRONMENT Minister Kevin Minson has announced changes to the membership of the National Parks and Nature Conservation Authority (NPNCA).

The Authority is the vesting body for our national parks, nature reserves, marine parks, marine nature reserves and conservation parks.

The changes follow the expiry of terms of appointment of existing members and a call from the Minister to the wider community for suitably qualified individuals interested in serving on the Authority.

The strong field of applicants confirms the growing interest and awareness

in conservation in Western Australia.

Three members have been reappointed. They are Professor of Environmental Science at Murdoch University Arthur McComb, Mrs Marion Blackwell and Mr Steve Wilke. Professor McComb has been appointed Chairman until October 31, 1995.

Outgoing members include Deputy Chair Dr Elizabeth Mattiske, Councillor Doug Bathgate, Mr Angus Horwood, Mr Malcolm Trudgon, Mrs Jill Reading, Mr Mike Hill, Mr Rory Neal and Cr Michael Greenup.

Mr Minson expressed his appreciation for their dedication and contribution

to the work of the Authority. CALM also extends to them its appreciation for their enthusiasm for the conservation of our natural environment.

Particular thanks are expressed to Dr Mattiske, one of the longest-serving members on the Authority, for her untiring efforts.

Under the chairmanship of Professor McComb, the new Authority will consist of Crs Tom Day and Don Paterson, representing local government; Mr Graeme Rundle and Mrs Marion Blackwell, representing voluntary conservation interests; Professor Brian Collins and Mr Steve Wilke, representing recreation

interests; Mr Kevin McMenemy, representing conservation professionals; Mr Terry Adams, representing fishing interests; and Ms Judy Murray, representing Aboriginal interests.

Kelly Gillen, CALM's South Coast regional operations officer, is CALM's employee representative on the Authority.

Cr Tom Day of Carnarvon also has been appointed deputy chair.

Ex officio members are CALM Executive Director, Syd Shea, Director of Nature Conservation Keiran McNamara, Director of Parks, Recreation, Planning and Tourism, Chris Haynes and Director of Forests Don Keene.

Rare orchid fenced

THE events in the following story by Ken Atkins happened a couple of years ago, but it may give timely food for thought to deskbound readers in 'the great indoors' who long to work in the open air. It can have its downside:

While reserves officer Ken Borland of Moora District Office has developed a great respect for the rare, crested spider orchid (*Caladenia cristata*), it is understood he is in no great hurry to make its acquaintance again for quite some time.

It is also rumoured that the words 'fence' and 'fencing' make him twitch nervously.

Temporarily unfriendly

The cause of his temporary lack of friendliness towards the plant and any fence in its vicinity began with a request for fencing to be constructed around a small population found on private property north-east of Moora.

The fencing (to keep stock from trampling the orchids) was considered a

high priority as there were, at that time, only four known populations in WA, with a total of less than 350 plants, only 10 being on a conservation reserve.

CALM's Wildlife Branch provided funds for the fencing materials and Ken set about erecting the fence.

Several difficulties hampered the operation, the first being that the orchids are small, scattered over sandy rises around salt lakes, and do not necessarily appear each year.

Determining just which part of the area needed to be fenced off was eventually undertaken with the assistance of Andrew Brown and Sue Patrick from CALM's Science and Information Division.

The next difficulty came with the winter rains. Being salt lake country, the rains soon made the area impossible to move over, thus aborting the attempt to construct the fence.

By the time Ken was able to get onto the land, however, the seasons had reversed and the tempera-

tures were rising rapidly.

Unwilling to delay this operation further, the fence was eventually constructed in late November during 40 degrees Celsius heat-wave conditions.

Such activity, in such weather, on such an exposed habitat is certainly guaranteed to raise a sweat.

To rub salt into Ken's wounds, after the fencing was erected (and as part of their survey work for the Moora District Rare Flora Management Program), Andrew and Sue located a large population of the species (several thousand plants) on Pinjarrega Nature Reserve.

However, Ken's efforts were further vindicated, as another rare species, the hinged dragon orchid, also grows in the fenced area, and the condition of the vegetation has improved considerably since it was fenced.

Thanks to determined staff like Ken, the fencing of private property populations and these new discoveries, conservation of the species has been greatly enhanced.



If you knew LOIS like they know LOIS - Well!

A solid core of 130 highly skilled operators has resulted from Logging Operation Information System (LOIS) computer courses, the most recent of which was conducted at Manjimup district late in November.

The courses are provided by CALM's Timber Supply Branch and are conducted by user-liaison officer Merrilyn Kearney, and myself.

Helping us were district forest staff with a proven track record in the use of LOIS.

They included Kevin Haylock, Neville Holland, Mark Read, Brian Moss, Greg Lange, Greg Hodgson, and Bryan Doust.

LOIS courses have been held in each district in the Swan, Central and Southern forest regions over the last two-and-a-half years.

They comprised: a two-and-a-half-day course for field officers, a one-day course for district administration staffs and a one-day course for regional staff.

by Bill Towie

Training also was provided for administration staff and forest officers at Albany and Esperance.

All the courses have been accredited, and clearly defined objectives, needs analysis, formal training and proper assessments are now a standard practice with any training under the Forest Resources umbrella.

Competency

Merrilyn said trainees had demonstrated their competency and their accreditation was recognised with the issue of the security password that's required to access LOIS.

"LOIS computes the movement of forest produce and enables us to have accurate, up-to-date information and statistics on our harvesting operation," she said.

"It's the basis on which districts pay their harvesting contractors for work

completed and for head office to invoice our many customers or mills for logs received."

Some districts are responsible for authorising payment to contractors for completed work worth up to half-a-million dollars per fortnight.

CALM is responsible for paying more than \$40 million a year to harvesting contractors and receiving more than double that amount from our customers.

Staff using LOIS, therefore, must be well trained and competent.

Merrilyn said LOIS was an excellent system that had attracted interest from the eastern states and was currently being updated.

"It's hoped that LOIS Mk II will be available in July, 1994.

"This won't necessarily mean another round of training courses. I believe that anyone who can master the present system, should find LOIS Mk II to be a breeze," she said.



CALM rare flora volunteer Rhoda Giles autographs copies of her poetry book, while Ross Ainsworth MLA, who launched it at the Kulin Flower and Art Exhibition, looks on. Photo courtesy The Narrogin Observer

Rhoda's poetry a sell-out

THE power of poetry as a means of conveying a message has been recognised down the ages and is as true today as ever.

This power is evident in the recently published poetry book, *Word Pictures of the Wheatbelt*, by CALM volunteer Rhoda Giles.

CALM Narrogin operations officer Greg Durell said that Rhoda, who was born in Kulin and lived there all her life, had a deep respect for, and appreciation of the bush.

"This is revealed in her poetry which conveys the outpourings of a sensitive woman who is obviously at one with the natural environment," said Greg.

by Verna Costello

"Rhoda is as fervently committed to the preservation of Wheatbelt flora and fauna as she is to the quality of life of its human inhabitants," said Greg.

"She has been, and still is, an active participant in community affairs and among the many tasks she's tackled are those of CALM rare flora volunteer; at present she's checking on populations of rare flora in the Kulin Shire.

"She's also found time to be a Sunday school teacher, a tutor in the art of pottery, leader of Kulin Girl Guides company, and local

news correspondent."

Rhoda's tireless efforts were recognised in 1982 when Kulin Shire expressed the community's gratitude by presenting her with the inaugural Citizen of the Year Award.

She has been fascinated by poetry from childhood, scribbling her own on any piece of paper that came to hand; she remembers starting to write poetry as early as 1942.

These scribbles eventually became a collection of poems and it was only seven months ago that Rhoda began thinking of having them published.

The rest, as the cliché goes, is history, but

Rhoda says it wouldn't have been possible had she not been encouraged by her family and many friends who include: Chantal Marceau of the Eastern Districts Local Enterprise Agency, her colleagues in the Kulin Art Group, CALM's Greg Durell, and the Kulin Shire.

Copies of *Word Pictures of the Wheatbelt* are available at \$8.50 each from Rhoda at PO Box 72, or 26 Day Street, Kulin WA 6365.

"You'll have to be quick though, 300 of the 500 copies printed have been sold already," said Greg.

"It looks as if Rhoda will need to seriously consider a reprint in the not-too-distant future."

Down memory lane at D'Entrecasteaux

MANY current and former CALM staff joined other members of the Institute of Foresters for a memorable weekend at the D'Entrecasteaux National Park in November.

They were celebrating the final creation of the park, (the original concept for which had been put forward by the Institute more than 20 years ago).

Present at the celebration were Jack Bradshaw, Roger Underwood, Steve Quain and Barney White, the authors of the original submission. A fifth member of the original team, Don Grace, could not make it.

Jack Bradshaw said that at the time most of the south coast was still vacant crown land, or cattle lease.

"We all worked in the southern forests and had spent a lot of time down on the coast, putting out fires, surveying roads, planting marram grass or fishing and beachcomb-

ing on the weekends, and we grew to love the place," Jack said.

"We decided we'd like to see this beautiful place survive for ever, and were concerned about talk at the time of throwing it open for farming and intensive beef production.

"Roger and Barney wrote some nice stories about the place, one thing led to another and we came up with the idea of a huge national park to cover the whole area.

"We used to meet in the evening in the old Inventory Building at Manjimup, with Roger driving up from Pemberton where he lived.

"The funny thing is that after we'd written our submission, dealing in some detail with tenure, vesting, history, flora and fauna, fire, management, leases, and so on, we didn't know what to do with it!

"In those days there was no mechanism like the current CALM regional plans which would consider a

complex land-use change in the South-West, involving several tenures."

Luckily for Jack and his colleagues, the Conservation Through Reserves Committee was formed about that time. They eagerly accepted the foresters' submission, and endorsed it. Good support also came from the local member Dave Evans, who was Minister for Lands at the time.

The recent weekend tour took in the beautiful peppermint savanna woodlands near Fish Creek, an overnight stay at Windy Harbour, the Yeagarup Dunes and a boat trip up the Donnelly River, from the mouth to the boat landing near the Vasse Highway.

"I did a lot of things in my working years, but being involved in the creation of the D'Entrecasteaux National Park is one of the things I feel most proud about," Steve Quain said.

These feelings were shared by all who took part.



Foresters at D'Entrecasteaux, Jack, Roger, Steve and Barney. Photo by Alan Lush

CALM publications - new and reprinted

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

Leaflets

- ◆ Dryandra Woodland Ecology - reprint
- ◆ John Forrest National Park - reprint
- ◆ Nambung National Park - reprint
- ◆ CALM Briefing Paper 2/

- 91 - Domestic Firewood, Craftwood and Other Minor Forest Products of the South West - reprint
- ◆ Carnac Island - A Guide For Visitors
- ◆ Enterprise Bargaining No 4
- ◆ Summer Firewood
- ◆ Fitzgerald River National Park - reprint

Booklets

- ◆ Proposals to Amend The 87 Forest Management Plans and Timber

- Strategy
- ◆ Management Strategies for the South West Forests of WA

Books

- ◆ Lookouts of The Karri Country - \$14.95
- ◆ CALM Annual Report 92/93
- ◆ Family Walks in Perth Outdoors \$14.95

Management Plan-Draft

- ◆ Yalgorup National Park Draft Management Plan

Cave Divers honour CALM's South Coast Region

CALM's South Coast Region is one of only six recipients of a Certificate of Appreciation issued by the Cave Divers' Association of Australia (CDA) in recognition of continuing support and liaison over the past two decades.

CALM has worked closely with the CDA, which is based in South Australia, to manage cave diving access to the various water-filled caverns of the Western Australian Nullarbor, most of which occur within the Nuytsland Nature Reserve.

Cave diving is a very carefully regulated activity, due to the obvious potential risks involved.

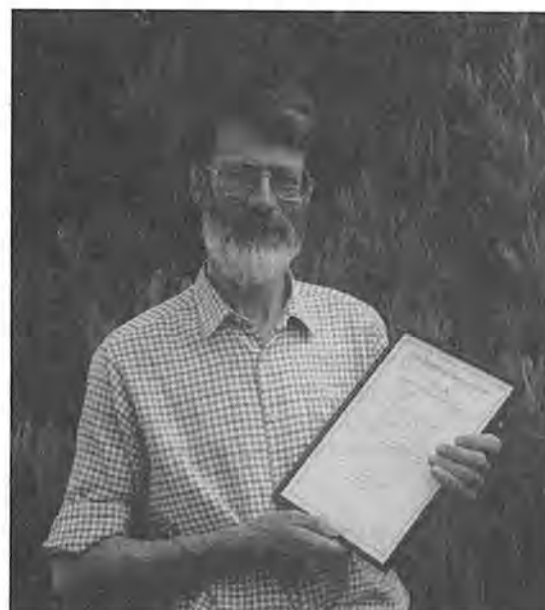
Hence, the CDA

by John Watson

sets stringent standards and accredits divers at a rating safely within their individual skill levels. For example, only certain classes of divers are permitted to undertake 'penetration' dives through sumps and constricted water-filled passages.

In addition to the exploration challenges involved, cave divers have also been instrumental in helping with hydrogeological research into the water movement and water chemistry of the subterranean Nullarbor, in collaboration with researchers such as Dr Julia James of Sydney University.

The other major area used by Australian cave



South Coast regional manager John Watson with the Certificate of Appreciation. Photo by Barbara Watson

divers is in the Mount Gambier area of South Australia. Cave diving activities on the WA

Nullarbor are administered through CALM's Esperance district office.

Gotcha!

Hands up all those who thought the couple pictured on page 7 of November CALM NEWS were really Keith and Sue Smith. Well, they weren't. Sue and Keith are pictured here and we're mortified that we misled you last month. We apologise to Sue and Keith (and photographer Carolyn Thomson).





CALM reserves officer Grant Pronk makes friends with the python. Photo courtesy Kalgoorlie Miner

Grant placates a python, but where is the owner?

CALM wildlife officers in the Goldfields have returned a rare carpet python to the wild, still wondering how it came to town in the first place.

The two-metre python was found by Kalgoorlie police on the roof of a car parked outside the regional hospital a couple of months ago.

The police had been called out by the wife of the car's owner to help when the vehicle broke down.

CALM's district wild-

life officer, Bob Fitzgerald, said the python had apparently been inside the car, but had crawled through a window and onto the roof.

The police officers arriving to help move the car thought they had their work cut out for them, but quick inquiries found the snake was not dangerous.

Neither CALM nor the police have been able to find out where the owner of the car got the python, or what he was planning to do with the snake.

Carpet pythons are

gazetted as rare and endangered and there is a maximum fine of \$10 000 for keeping them without a licence.

Only two wildlife licences have been issued to people in the Goldfields, although traditional Aboriginal people are permitted to hunt native animals for food.

It's believed the owner of the car where the python was found is a traditional Aboriginal, but he hasn't been seen since police made the discovery.

"We're investigating to see if there's been any breach of the Wildlife Conservation Act, but we don't have much to go on at the moment," Bob said.

"It may just be that the python was sick or injured and this man was looking after it until it healed."

The female snake was in good health by the time it came to be in CALM's care - so much so that it was taken to visit local schools as part of a community education program before being released.

Leeuwin-Naturaliste Park now stretches further

LEEWIN-Naturaliste National Park is to be extended following the acquisition of two key areas of private land by CALM's Land Administration Branch.

"These blocks are the most important acquisition made in the south of the State for years," said Director of Parks, Planning, Recreation and Tourism, Chris Haynes.

"One of them is Sussex Location 1044 - 230 hectares of prime, uncleared land at the Cape Naturaliste end of the park, near

Sugarloaf Rock," he said.

"It lies on the western slope of the Leeuwin-Naturaliste ridge and at its highest point provides magnificent panoramic views of the Indian Ocean from the west, right around the cape to Geographe Bay in the east."

Expansion

The block abuts a narrow foreshore section of the park and its addition will considerably expand the park holdings in this area.

The second block is a 40 hectare portion of Sus-

sex Location 1194, situated south of Cowaramup Bay Road, near Gracetown.

This land abuts another narrow section of the park on two sides and features a scenic section of the Cowaramup Brook Valley, which contains one of the most northerly occurrences of karri.

Leeuwin-Naturaliste stretches along the coastline from Bunker Bay, on the eastern side of Cape Naturaliste, to Cape Leeuwin, south of Augusta, and is made up of more than 20 separate reserves.

The new blocks will help consolidate and improve the boundaries of this narrow and highly fragmented park, and give a much greater representation of the important landforms next to it.

"A lot of the early work on these acquisitions - and others in the park - was done by Alex Errington before he left the department to join the Ombudsman's office," Chris said.

"Both Alex and those involved at Land Administration Branch can be proud of the outcome."

New tourist highway to take to the air

AN ambitious plan to promote the Kimberley as a nature-based tourism destination - with associated benefits for local businesses and residents - has been adopted for the 1994 visitor season.

CALM Executive Director, Syd Shea, said a recent meeting of tour operators had decided to market the 'Ibis Aerial Tourist Highway' for next year.

More than 30 tour operators from across the Kimberley attended the Broome meeting, which was organised by the Kimberley Tourism Association.

"The concept of the Ibis Aerial Tourist Highway originated from a meeting of tour operators organised by CALM at Mt Hart station only 12 months ago," Dr Shea said.

"CALM and the Tourism Commission have developed the concept since then and it's a credit to all concerned that we're now so close to making it happen.

"The idea of an aerial highway is to allow visitors and locals to enjoy a wide range of remote features across the Kimberley, with minimal impact on the environment.

"CALM already has a lot of the infrastructure tour operators need, with airstrips in key locations, and

has allocated \$106 000 for further capital works.

"The Kimberley is a magnificent area that offers so much to visitors and those who live there, but many people just don't have the time or the confidence to drive the huge distances involved.

"The answer is linking places such as Geikie Gorge, Mt Hart, the Bungle Bungles, Drysdale River Station, El Questro and Cape Leveque by air.

"Tour operators are now planning package deals which would allow visitors to choose where to go, where to stay and which pre-paid ground tours to join.

"If the venture is shown to be successful, Ansett may include a range of add-on tours to complement existing flights to Broome, Derby and Kununurra."

Kimberley Tourism Association President Ron Johnson said the possible combinations of air and ground tours, cruises and homestead accommodation was limited only by the imagination of the client.

"The Ibis Aerial Tourist Highway will provide a range of new opportunities for local businesses and solve a critical access problem to many of the Kimberley's spectacular features," he said.

Dr Shea said the Ibis Aerial Highway had been a catalyst to bring different groups together and had led to many innovative partnerships between the private sector, Aboriginal groups, State government agencies and local government.

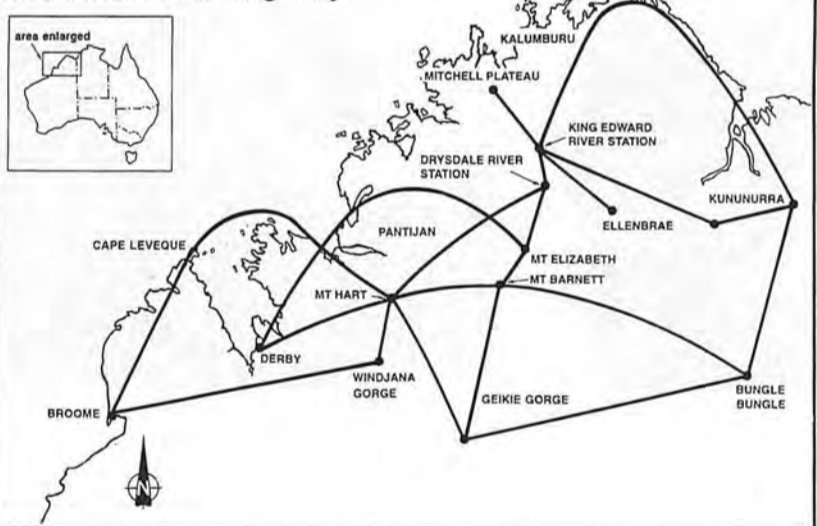
These partnerships included:

- ♦ an agreement between CALM and the DarIngunaya Aboriginal Corporation at Fitzroy Crossing to provide guided cultural tours at Geikie Gorge,
- ♦ joint management of visitor facilities, including the airstrip, by CALM and the Shire of Derby, West Kimberley,
- ♦ agreement by the lessee of Napier Downs Station for CALM to use land adjoining Windjana Gorge National Park for an airstrip.

"Nature-based tourism isn't a threat to conservation in this State, but a tremendous opportunity," Dr Shea said.

"Properly managed, nature-based tourism will help bring prosperity to the people of WA, increase awareness of the beauty and variety of our environment and emphasise the need to conserve our unique plants, animals and places."

Ibis Aerial Tourist Highway



Where can we get one?

WHO'S the spunky guy 'modelling' the sun hat? It's CALM Dwellingup forester Richard McAlinden and this style of hat came out tops for sun protection in a recent trial among

CALM district staff.

It seems the all-round, wide brim was the deciding factor. Other styles such as the legionnaire (favoured by tennis star Ivan Lendl), the peaked cap and floppy, cricket-fan style just didn't

perform as well. This new, CALM-approved sun hat is available for \$14.50 from JEB distributors at 42 Collingwood Road, Osborne Park, WA, 6017, telephone (09) 244 3050, fax (09) 244 3060.



WA's native plants a real class subject

PRIMARY school students in Western Australia will have an opportunity to learn about plants in their local bushland as a result of a new conservation education program launched recently in Perth.

The joint venture program involving Greening Western Australia, CALM and BHP Iron Ore is *Our Wild Plants*. It is a primary school curriculum package designed to raise public awareness about the importance of natural vegetation communities in Western Australia.

The completed first stage in the package is a set of full colour activity cards depicting 16 different plant communities in WA. An accompanying teacher's guide and workbook is nearing completion.

CALM's Executive Director Syd Shea said CALM was pleased to support the project as it showed what could be achieved when Government agencies, the corporate sector and organisations such as Greening

Western Australia work together towards a common goal.

"I also am delighted that a major Australian enterprise such as BHP Iron Ore is a key sponsor of the project," said Dr. Shea.

"The concept of the activity cards is an excellent one, especially as they cover such a wide range of plant community types.

"All too often the so-called environmental debate centres on just one or two of these ecosystems when there are others, particularly the numerous grasslands, woodlands and shrublands that are under enormous pressure compared with, say, the forests."

Shift in thinking

Greening WA's Chairman Frank Schaper added that the new materials would also help shift the thinking about the State's vegetation cover from just individual plants to a total ecosystem base for the management of our land on a sustainable basis.

According to CALM's Director of Corporate Relations Ron Kawalilak, *Our Wild Plants* is just one of several education programs the Department is involved with this year.

"A primary school forest education program entitled *Exploring the Hills Forest* was developed by CALM and released in June, another nature conservation program, entitled *Local Plants For Education*, is being prepared for the 1994 school year, and a high school program entitled *Where the Forest Meets the School* is in the early stages of development.

"Each of these four education programs has specific education and communication objectives and a well-defined method of integrating the materials produced with the school curriculum.

"They are an important part of our efforts to develop community understanding and support for the department's conservation and land management activities."



Left to right, volunteers Geoff Burrow, Jan Gray and Britt Angwin, CALM's David Mitchell and Brad Bourke, Dryandra's Stephanie Alcock, research scientist Graeme Smith, CALM's Paul Blechynden and Program coordinator Terri Lloyd.
Photo courtesy Wagin Argus

Way beyond the call of duty

WHETHER they are on duty or off, there is a number of CALM Katanning district staff who can be found actively involved in helping local volunteer groups with a variety of wildlife programs.

One of these activities is the Wildlife Monitoring Program at Dongolocking which is about 25 km north of Dumbleyung and 230 km south-east of Perth.

The program is expected to run over the next three years and has been organised by Greening Australia and coordinator Terri Lloyd, (ably assisted by her CALM colleagues

Dave Mitchell, Brad Bourke and Paul Blechynden). It also involves research scientist Graeme Smith of the CSIRO.

Recently, trap lines were placed throughout the wildlife corridors, nature reserves and remnant vegetation.

Hole digger

The provision of a post-hole digger for the 180 pit-fall traps by adjoining landowner Mr Britt Angwin was greatly appreciated.

The wildlife corridors are the remains of roadside reserves that were fenced and replanted two years

ago. These areas are intended to serve as fauna paths linking the various nature reserves of the area.

Monitoring will be undertaken during the summer months to determine the type and numbers of fauna using the corridors.

The information will be collected by local volunteers from both the pit traps and other fauna observations.

This will help determine the effectiveness of the corridors as well as providing useful information about the fauna of the area.

Katanning staff have also donated their own time to lead groups of volun-

teers on regular bird counts and advise on survey techniques and bird identification.

These trips are greatly appreciated by all who attend, and also provide useful biophysical data for fauna management in the district.

As well, staff have also cared for a selection of fauna, including the recovery and care of four injured wedge-tailed eagles, with much appreciated help from the Katanning and Mitchell Veterinary Hospitals, whose staff donated their time and expertise to the recovery of the eagles and other native fauna.



Left to right, Greening Western Australia Chairman Frank Schaper, BHP Iron Ore Public Affairs Director Judith Thomson, CALM Corporate Relations Director Ron Kawalilak, and Greening Western Australia Education Manager Annie Ilett.

Grant for threatened species

PLANS to protect 31 species of threatened flora in the Merredin district received \$84 100 in funding under the Commonwealth's Endangered Species Program.

It will allow CALM to implement the district's wildlife management program, published last year.

"The Merredin district

is renowned for its high number of rare species," CALM researcher Andrew Brown said.

"They include such showy species as the hinged dragon orchid, ironcap banksia, Barbalin boronia, Jingymia mallee and Hughan's featherflower."

The program involves fencing, control of feral

animals such as rabbits and goats, weed control and setting aside land for flora conservation.

CALM will also ask Kings Park to cultivate endangered species for replanting in the wild. Further monitoring and surveys will be undertaken and botanists will search for other rare flora

during their field work. CALM will employ a conservation officer for two years to carry out much of the work.

The Wheatbelt Aboriginal Corporation, which is working with CALM on threatened species conservation projects, will also be involved in weed control and fencing.

Foundling phascogales find friends, food, fostercare

A NEST of eight young phascogales was found recently by CALM Nannup district worker Chris Humble while inspecting waste material in the hollow of a fallen log during a road-widening project.

Chris said the tiny animals appeared to be in a reasonably healthy condition in spite of having been abandoned by their mother.

Good chance of survival

"The fact that they were furred indicated they were weaned and therefore had a good chance of survival, given the right conditions," said Chris.

"Notwithstanding their

by Carol O'Reilly

relatively good condition, I thought the sooner I found someone to adopt and care for them the better.

"To prevent their escape, I temporarily blocked the opening to their nest with rags, sawed off the log to a manageable length and blocked off the opening at the sawn-off end, then drove over to Deirdre and David Patterson's place."

Deirdre and David are local carers in the Fostering and Assistance for Wildlife Needing Aid (FAWNA) organisation and they quickly agreed to become foster parents.

They immediately began feeding the young by means of an eye-dropper with a special insect-based formula, and spent about three hours each day searching for bardie grubs and other delicacies to meet the demands of the youngsters which thrived on their slightly unorthodox diet.

The young phascogales are now the subject of a research project by Murdoch University postgraduate biologist Susan Rhind.

Susan, who was interviewed about the research on ABC News last month, explained that although phascogales are not a protected species, they are sufficiently rare to war-

rant having the young mammals found by Chris closely monitored.

Susan welcomed the opportunity to study the habits of these small mammals at close quarters and to document her findings, as so little data is available on them at present.

An article written by Susan on this subject will also appear in the next issue of *LANDSCOPE*.

The phascogales have since been reintroduced into their native environment. Using nest boxes made by CALM staff and placed at their original nest site, they are now feeding themselves in the wild.



With eye dropper in hand, Deirdre Patterson tries to feed an adventurous phascogale bent on exploring its novel environment. Photo by David Patterson

Dieback deterrent

A BOARDWALK and boot-cleaning station have been installed at the base of Mondurup Peak in the Stirling Range National Park to minimise the impact of 'visiting feet'.

Stirling Range National Park is well known for its outstanding displays of wildflowers, many of which are found nowhere else in the world.

The park also represents one of the three most species-rich areas in Western Australia for the Proteaceae family.

Dieback is a major threat to this species and is in much of the Stirling Range, therefore its management is of the utmost importance when drafting and implementing management strategies

by Martin Lloyd

and action for the area. Mondurup Peak provides an excellent example of CALM's dieback strategies and actions at work.

The upland area of Mondurup Peak appears not to be infected with dieback, unlike several sections of lowland.

Mondurup is also the most significant peak in the western end of the park where visitors can see fine views of the whole range.

If dieback were to be carried up the peak, all plants downslope would eventually be infected.

First thoughts were to close the path up Mondurup, but as it is visited by many people

and the closest ranger station is 40 km away, effective management was considered a problem.

It was, therefore, decided to keep 'visiting feet' away from dieback infections by constructing a boardwalk over the lower sections of the path.

Ranger Tony Smith and overseer Steve Cane built the boardwalk using jarrah boards fixed to half-round, treated pine logs.

This method of boardwalk construction blends well with the landscape and at \$18 a metre for materials is relatively low cost.

As a further safeguard, a boot-cleaning station was installed with signage explaining the importance of clean, dry footwear.



Left to right, Dwellingup forester Mike Tagliaferri, Perth district overseer Glynn Hughes and forest worker Simon Caunter with a truck load of picnic tables. Photo by Tammie Reid



CALM's General Manager Roger Underwood admires the new boardwalk at Mondurup. Photo by Martin Lloyd.

Dwellingup deal does well with its 'green' product

by Tammie Reid

THERE'S a saying displayed in the Dwellingup woodshed that sums up its staff philosophy - 'Do it once, do it well ... safely.'

The Dwellingup woodshed is open for business and supplies quality products made of wood to customers within CALM and outside.

Competitive

The prices are competitive and reflect the pride and teamwork that the woodshed crew bring to their work.

Ten pine picnic tables, all edge-sanded, bolts capped and made of treated pine, have been delivered to Penguin Island.

According to Swan Region's visitor services officer Alan Sands they are the best tables

he has ever seen.

"The attention to detail and the care put into constructing them is impressive and for \$700 a unit, who could beat the price?" said Alan.

Woodshed coordinator Peter Burton said that even with overheads they still came out \$300-400 cheaper than private constructions.

No rainforest timber

"We're also conserving our select jarrah and we avoid using rainforest timbers," he said.

"Ours is very much a 'green' product."

Peter attributes the low cost to efficient workshop design and good

teamwork. The team at Dwellingup comprises Keith Harris, John Hanel, Alf Allen, Kevin Ashcroft, Kevin Pratt, Alan Clarke and Gunnar Hornum.

Improved design

Improvements to the design and production line were identified, using the Quality Improvement process.

These improvements have been passed on to Alan Mounteney, a project training officer with Aboriginal Economic Development Organisation.

Alan is investigating the feasibility of setting up a sign workshop at Onslow to contract work for Karijini National Park.

Alan had heard about the high standard of work

at Dwellingup and was impressed with what he saw. He hopes to continue to use Dwellingup in an advisory capacity if the sign shop gets off the ground.

In the meantime, get your orders in for directional or interpretive signs, tables, information shelters, tea cosies (we're kidding), or anything else that can be made of wood.

Just telephone the new woodshed coordinator Mike Tagliaferri at Dwellingup now.

• The Karijini sign workshop has been awarded a federal grant and woodshed team members are vying with each other for the 'task' of going up to Onslow to train the new operators.

In the getting of gravel - see new ways with disused pits

SEVERE gravel shortages in Busselton and Augusta-Margaret River shires have provided the stimulus to CALM Busselton embarking on a pilot project that could yield thousands of tonnes of extra gravel from disused pits.

Several other benefits are expected to result from the project should its methods be adopted by the two shires.

They include: a decrease in the need for new pits in both shires, a lessening of demand for new pits in State forest and a lessening of the occurrence of dieback.

Better quality gravel

The new method carried out in disused pits sees the deeper-seated rock be-

by Verna Costello

ing quarried to make a better quality gravel.

The earlier quarrying produced gravel containing a large proportion of the more inferior clay.

A disused pit, on Slee Road, Busselton, was the site of the test project conducted by CALM and Quarry Park, a Perth-based company.

A rock-breaking machine reduced large boulders to half-metre blocks.

A rock-crushing machine then further reduced the blocks and tipped the resulting superior-grade, road-making material onto a conveyor belt, carrying it out to a stockpile.

Margaret River district officer Brad Commins said

local gravel pits, thought to have been 'quarried out,' are now believed to contain many thousands of tonnes more gravel that could be extracted using the new methods.

"The Slee Road pit was thought to be exhausted but already it's yielded about 25 000 tonnes of gravel with a potential for another 150 000 tonnes from the remainder of the pit," Brad said.

"In addition, the methods render the area easier to revegetate.

"Busselton Shire had revegetated Slee Road pit after its first quarrying, but the stony soil was inhospitable and trees battled to grow in it."

Easier to replant

"We expect much better results when the pilot project is finished, as the

big rocks and rock base will have been quarried, so we'll be able to rip up the area more easily and resurface and replant it.

"The impact of dieback is also expected to lessen because the ground will be more permeable, so water can't collect and provide an environment in which dieback fungus can flourish."

Both shires have suitable pits and have expressed interest in using the pilot project methods should they prove economically viable.

"We're keeping a gimlet eye on costs and so far our projections look promising," said Brad.

The gravel from the Slee Road pit is being used for building access roads to the the Dunsborough Lakes housing and golf course development.



CALM Margaret River district officer Brad Commins and Quarry Park site manager George Bem inspect outcome of the new quarrying method. Photo by Gabrielle Adams, courtesy Busselton-Margaret Times

\$30 000 for flora search

A major search for rare plants in the central and southern forest has been made possible by a \$30 000 grant over the next two years from the Commonwealth's Endangered Species Program.

CALM will prepare a threatened flora management plan for the area that ranges from Waroona to Denmark and covers big areas of jarrah and karri forests.

There are 11 endangered, 31 vulnerable and two plant species presumed extinct in the region.

More than 100 species are poorly known and need to be surveyed to clarify their conservation status.

The survey should also indicate areas of high botanical diversity and has great potential to discover more new species.



Left to right, construction and maintenance worker Peter Cully (right) helps forest rangers Leon Price and Fred Simmons mix a powerful 'cocktail' for the helitorch. Photo by Gerard van Didden

Helitorching forest debris

CREWS from CALM's Perth district were called to 120 fires last season - many of them the result of arson in pine plantations.

Each winter, the district protects its pine plantation and neighbours through controlled burning - strategically reducing the under-canopy debris so that wildfires in and around the plantation are easier to control.

This debris has become heavier with increased plantation logging operations in recent years, making it even more important for controlled burning to be carried out effectively.

The growing need to safeguard life and property puts greater pressure on the district's fire protection program and technology may provide the answer.

Perth staff used the 1993 winter burning season to carry out CALM's first operational use of a helicopter fitted with a helitorch for aerial ignition.

The helitorch is a 200-litre aluminium container holding a

drum of pressurised gelled petroleum, delivery pump, fuel ignition system and power and control systems.

A ground crew of three CALM employees mixes the petrol with the reactant powder to form the gel. This is a vital task because of the exact consistencies needed for correct ignition rates and the high safety measures required when mixing fuel.

The load-master, provided by the helicopter con-

tractors, is then responsible for hooking up the helitorch to the helicopter.

Once the helitorch is fitted, a CALM navigator controls the dispensing of droplets of ignited gel inside the burn boundary.

Forest officer Tim Bowra said the trial showed just how accurate the helitorch could be, as well as a big saving of time and money on traditional methods.

"Ignition time was cut from approximately 16

hours for a gang unit to only 3.36 hours," Tim said.

"This saving not only allowed our personnel to complete other district tasks, including other prescribed burning, but it also made maximum use of the limited 'window of opportunity' available for burning.

"Actual ignition cost was reduced from \$10.58 per hectare for hand burning to \$8.62 per hectare with the helitorch.

"This could be reduced further to \$6.25 per hectare if we used a second helitorch, saving on the ground time mixing fuel.

"The burns completed during the trial included 210 hectares of pine needlebed, 275 hectares of pine grey tops/needlebed and 300 hectares of banksia woodland," Tim said.

"With increased budget limitations, continuing reduction of personnel, tighter environmental constraints and more summer arsons, this successful trial couldn't have come at a better time.

"The benefits we've shown certainly mean we'll be using the helicopter and helitorch again."



Airborne 'chopper' with helitorch. Photo by Gerard van Didden



Award to Swan

CONGRATULATIONS to Swan Region which won a Highly Commended award for fitness in the workplace in the Best New Health Promotion Program for 1993 category.

The award was presented by the National Heart Foundation (WA Division) in November as part of its Heart at Work program.

KODS KO the rest

KIRUP KODS' back to back war against spirited opposition from 15 other CALM teams at the annual Big Brook Relay saw the team retain the title of Champions for the second year running.

The Relay was held in overcast weather on Saturday November 20.

At the KODS victory celebration on the evening of their historic win, it was agreed that 1994 may well see the same team members giving their all for 'three on the trot'.

The only change from

by Brian Fitzgerald

the 1992 team was Peter Bidwell on cross-cut saw, substituting for Luke Bowman who was troubled with elbow ligament problems. Tough luck, Luke. Hope you soon have a speedy recovery.

- Results:
- ◆ 1st - Kirup KODS, 1 hour 36.53 mins
 - ◆ 2nd - Blackbutts, 1 hour 37.22 mins
 - ◆ 3rd - Frankland River Farnarklers, 1 hour 38.30 mins
 - ◆ Last - Regional Bards,

2 hours 25 secs. All competitors were sorry to hear that the Harvey Freshmen team was disqualified when its cyclist Gary Davidson crashed and sustained a broken collar bone. We all wish Gary a speedy recovery.

Finally, this report would not be complete without a word of thanks to Dave Meehan and his support group for staging the relay and making it possible for competitors and their families to renew old friendships and spend a day in the karri forest.

Numbats can fly

FIVE numbats were flown from Perth to an Adelaide sanctuary recently where it is hoped to re-establish the animals which have been extinct in South Australia for 60 years.

The four males and one female were joined by another male and nine females in December.

CALM wildlife researcher Tony Friend travelled on the flight to oversee the release of the numbats into the Yookamurra Sanctuary north-east of Adelaide.

Yookamurra, an 1100-hectare mallee bushland, is Australia's biggest private conservation project.

CALM had inspected the sanctuary and prepared

an agreed protocol for the release and monitoring of the numbats to ensure there was minimal threat from foxes.

Also, the numbats are being released as wildlife under the protection of the SA National Parks and Wildlife Act.

Yookamurra sanctuary has contributed \$51 400 to the translocation which includes meeting the direct costs plus a \$30 000 grant to the Nature Conservation and National Parks Trust Account for further native fauna research in WA.

There are only two surviving numbat populations known in the wild.

Both are in Western Australia at Dryandra and Perup, east of Manjimup.

CALM has re-established a thriving colony at Boyagin Nature Reserve and other colonies are being established. There is one captive population at Perth Zoo.

Numbats are unique among marsupials as they are the only members of the order which eat solely termites.

They also are one of the very few marsupials active only in daylight.

The numbat project is the third translocation of threatened fauna populations between WA and SA.

Other species translocated include woylies from Western Australia and greater stick-nest rats from South Australia.



CALM senior research scientist Tony Friend and technical officer Neil Thomas with a numbat, crated and ready for air freighting to Adelaide. Photo by Nigel Higgs

A trail toffed up

by Ross McGill

THE Aboriginal Heritage Trail in Walyunga National Park has received a major upgrade over the past seven weeks in a joint project funded by the Australian Nature Conservation Agency (ANCA), CALM and the Department of Employment, Education and Training.

The Kuljak Aboriginal Employment and Cultural Centre in Midland was awarded the contract to carry out the work, employing local

Aboriginal people.

Under the watchful eye of job supervisor Gary Phillips, workers Keith Slater, Tinsley Haywood, Justin Taylor and Sandra Taylor have widened the trail, removing large rocks, putting in drainage, and spreading road base material along the trail to make a year-round safe walking surface.

On the job training is being carried out with the

workers learning how to operate a bobcat and getting their 'B' Class driver's licence.

They have also learned to recognise a number of native plants and animals found in the park.

Further funds now have been made available to upgrade the signs.

The trail which runs along the banks of the Swan River between Walyunga Pool and Boongarup Pool was first constructed in 1988 using bicentennial funds.

Big grant for a bird to ensure its survival

A BIG effort to save the endangered western bristlebird will get under way following a \$62 000 funding boost from the Commonwealth's Endangered Species Program.

"The western bristlebird is found only in the Two Peoples Bay to Mount Manypeaks area east of Albany, and the western end of Fitzgerald River National Park," CALM researcher Allan Burbidge said.

There are only about 250 pairs in Two Peoples Bay Nature Reserve and population sizes elsewhere are unknown. The bird was once found in coastal areas as far north as Perth and its decline since European settlement is thought to have been caused prima-

rily by the too frequent clearing and burning of heathlands. Predation by foxes or cats also may have been a key factor.

The grant was awarded after a research plan was written by Allan and CALM consultant Peter Cale.

Allan said recent assessments by CALM's Threatened Species and Communities Unit had shown that the western bristlebird was just as endangered as the noisy scrub-bird.

The secretive bristlebird has brownish plumage, a long tail and a loud call. It inhabits dense heaths, usually interspersed with thickets of mallees or banksias.

It feeds on insects and seeds, but very little is known of its feeding or

breeding behaviour.

Because of its wary nature, a census can only be carried out by listening for its calls and mapping their location.

With the grant, CALM researchers will do this mapping wherever the bird is found, estimate numbers in each population, determine habitat preferences and clarify the bird's response to fire. They will also investigate whether it will be possible to translocate western bristlebirds to other areas.

South Coast regional staff also will be heavily involved in helping with the research.

"The research will give us a better understanding of how we can manage areas where the bristlebird occurs," Allan said.



'Rateabators' team left to right: Geoff Hartnell (NPR), Leon Griffiths (officer), Clayton Sanders (officer), Tony Lloyd (workman), Tony Dehnel (workman), Marilyn Ramsay (clerical officer) and Gary Hartnell (officer).

Perth district addressing the real safety issues- Rate Abators report

IN late 1992 Perth District Manager, Alan Briggs declared: "Enough is enough! I need Quality Improvement to help us solve this increasing number of accidents causing severe injuries to my personnel!"

He appointed a representative team comprised mainly of the existing safety committee to tackle the problem. Clayton Sanders, who was at the time the local safety coordinator, was nominated to lead the team of Gary Harnett (Forest Officer), Tony Dehnel (Workman at Wanneroo), Tony Lloyd (Workman at Yanchep), Marilyn Ramsay (Clerical Officer) and Geoff Hartnett (National Park Ranger). Leon Griffiths was nominated to facilitate the team which called itself the Rate Abators.

Their mission was: "To analyse the cause of accidents over the past 5 years and recommend solutions to reduce the all-accident frequency rate by half in the

12 months after their implementation and to maintain improvement".

The team collected a lot of data including the results of a questionnaire of what personnel in Perth District thought of their accident prevention performance.

Kelmscott's Bruce Harvey joined the project to act as facilitator in early 1993, and Leon Griffiths joined his workmates on return from leave, as a team member.

The teamwork grew rapidly as the group developed the root causes to their problem. They concluded the five main causes in Perth District were: (1) communication, (2) attitude, (3) morale, (4) awareness and (5) fitness. The team analysed each of these issues in detail in order to develop potential solutions.

In their analysis the Rate Abators used flow charting to describe the current process involved in operations and to develop the 'ideal' flow-charted process.

A total of 20 recommendations were produced and accepted by the District management and are being implemented at present.

At the presentation to the Steering and Guidance Teams in early September at Como, the General Manager Roger Underwood responded to the team that not only had they worked on the real concerns to the accident problem at Perth, but they had also been particularly forward-thinking in their proposed solutions.

Swan Regional Manager, Alan Walker was so impressed by the rate abators work that he has since arranged presentations to other Forest Regional Managers and all District centres in the Swan Region.

The Rate Abators presentation of data and recommendations is relevant to all CALM centres and can be arranged through the District Manager Alan Briggs and Clayton Sanders at the Wanneroo office.

QI isn't just for project teams

by Pat Collins

IN August this year I spent more than two days facilitating the 4th Annual Southern Forest Region Strategic Planning Workshop. This wasn't a project team with a specific problem. It was a management team developing a plan for the Region - complete with vision, mission, strategies, and measurable objectives. My role was to help participants work efficiently as a team, to be comfortable with the workshop process, and to achieve workshop objectives.

The group had not had a

facilitator at the three previous workshops and admit to, on occasion 'losing their way'. I'm not suggesting it wasn't foggy at times at this workshop but believe the process is becoming clearer. While the workshop would have benefited from more preparation by all participants and myself in liaison with the group leader, many QI principles and techniques were applied with positive results. With this experience behind us next year's workshop should be a breeze.



QI Manual just in time!

IN November 1993 Alan Byrne from our Training and Development Section compiled the first draft copy of CALM's QI Manual.

The manual will facilitate 'just in time' QI education to project team members and project team leaders.

In designing the manual

we have kept CALM's needs in mind, so that any one of our trained facilitators will be able to deliver a high calibre QI education session.

The draft manual has been circulated for comment. We hope that the final format will be available for distribution in early 1994.



QI spells victory

- V ision and leadership
- I nvolvement of everyone and everything
- C ontinuous improvement of all systems and processes
- T raining and education
- O wnership, the authority to act
- R eward and recognition
- Y ears of commitment and support from management

Swan region business plan team uses QI tools

A Project team from Swan Region is developing the 'Mark I Business Plan' for the region. Although this is not a registered QI project, the team is employing QI principles in approaching the task.

Team leader and Swan Regional Manager Alan Walker said that it was very helpful to follow the logical stepwise process which QI advocates.

"While I am not a supporter of using the full blown QI process for all team projects, there are definite advantages in using key principles" Alan said.

"Our group has defined the problem, written a mis-

sion and adopted ground rules as recommended for QI teams. We find that meetings are more productive this way," he added.

"Having several experienced, trained QI facilitators in the group helps me to keep the process 'on track' too."

The Swan Region Business Plan team consists of Alan Walker, Bruce Harvey, Gavin Butcher, Denise Allen, Alan Sands and Paul Brown. Roger Underwood is guiding the teams deliberations. The team is aiming to complete the first draft of a business plan by March 1994.

by Alan Walker

Crashing the cost of accidents! Vehicle accident team

by Roger Banks

THE problem was the high cost of vehicle accident damage - 25c per kilometre compared to the target cost of 1.45c per kilometre.

Other issues were the loss of efficiency in operations, injuries to personnel, high on-site hire costs and inaccurate and inconsistent recording of accident damage.

The mission was to identify the cost of accident damage in the Kirup District and reduce this cost, without reducing operational efficiency, to the Departmental target by 31 December 1993.

The project team members were Roger Banks (leader), Alan Seymour (facilitator), Alan Jones, Bevan

Förster, Luke Bouwman, Bernie Richards, Neil Creer and Graham Giudici.

Solutions were many and varied so the group categorised them into four sections:

- solutions immediately



- implementable, eg. new vehicles to good drivers;
- solutions that require additional work, eg. local demerit system;
- solutions that require change to the present system, eg. review vehicle accident investigation form;
- unconventional solutions, eg. driver to pay for accident damage.

At the conclusion of the project Alan Jones presented the findings of the group to each Regional Management Group and the Plant Liaison Group.

Since the presentation, the Kirup District has been trialing some of the solutions and will report back to the Plant Liaison Group.

Report on 5th TQM National Conference Perth

by Bob Hagan

THE 5th National TQM conference was recently hosted by the Australian Quality Council and was held in Perth on August 22 and 24, 1993.

This conference was attended by several CALM staff, including CALM Quality Coordinator, Charlie Kelers, Southern Forest Regional Manager Kevin Year, and Southern Forest Regional Operations Officer Bob Hagan.

Quality practice

The focus of the conference was 'Achieving Organisational Balance' and this was addressed by a number of eminent quality professionals from all over the world who gave presentations on developments in quality theory and techniques as well as a wide range of business leaders who were able to speak authoritatively on quality practice.

Bob Hagan said, "This was one of the most impressive conferences that I have

attended. All aspects of the organisation and presentation were dealt with from a quality perspective, which resulted in an extremely smooth running and relevant conference, with one of the most important messages from successful organisations being that quality management is REAL work and should be an integral part of everything that we do".

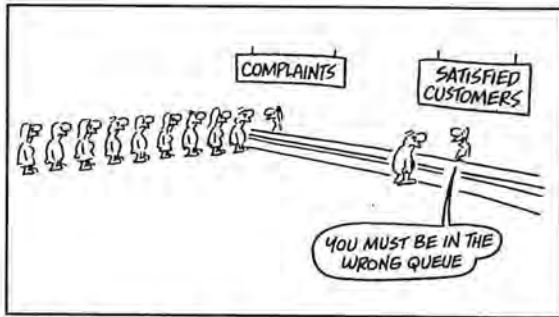
"It was especially heartening to hear the great depth of knowledge and experience about the implementation of quality available in Australia, and to understand that many of the very successful companies and organisations have persisted through the same introductory problems as CALM is experiencing, and are now world leaders", he said. "Hopefully we can use the information gathered at conferences such as this to smooth out the bumps along the way."

"It was also important to

hear how successful TQM can be in the public sector, with an excellent presentation from the CEO of the Fremantle Port Authority, and from Lee Cheaney who was closely associated with the successful introduction of quality practices into the public sector in Madison, Wisconsin in the United States."

Many issues covered

"Many of the issues covered were at the cutting edge of the development of quality, and my personal favourite session was that presented by Dr John Evans and Ms Jeanette Enright on 'Identifying the Cultural Barriers to Success'. This session was particularly interesting because it highlighted the effect that cultural values had on the ability of people to work in teams. This was widely recognised as a significant study and we expect to hear more about this as their research is documented."



Quality assured in the public sector

ON 6 October 1993, I represented CALM at a Quality Assurance seminar and workshop hosted jointly by the State Supply Commission, Department of Commerce and Trade and the Chamber of Commerce and Industry of WA.

Two of the seminar's keynote speakers, the Hon Hendy Cowan, Deputy Premier and Minister for Commerce and Trade and the Hon Graham Kierath, Minister for Services, both reaffirmed the Government's support for the State Supply Commission's Quality Assurance Policy.

The seminar provided an opportunity for representa-

by Greg Beange

tives from both private and public sector groups to raise issues of concern with the policy and its implementation.

Following the seminar a group of approximately 35 representatives from both the private and public sectors attended a workshop to develop recommendations to address the various issues raised.

Those recommendations are to be incorporated into a report by the State Supply Commission to Cabinet on the whole quality assurance issue within Western Australia.

Integrate quality the Madison Wisconsin way

MADISON CITY in USA seems to breed high calibre quality management experts that have visited Western Australia (Rob Stone, Lee Cheaney and now Tom Mosgaller).

Tom ran a one-day seminar for senior Public Service executives.

CALM was represented

by Chris Haynes, Ron Kawalilak and Bob Cooper.

Tom pointed out that in the City of Madison, with a population of about 300 000, half the people are involved in quality in some way or another.

'Neighbourhood teams' have been formed integrating police, social workers, teachers, rangers, etc.

This interfacing and integration is a powerful 'preventative' mechanism. Enforcement on its own is not a solution.

Tom pointed out that organisations without TQM are event driven.

With quality management they become adaptive and have generative capacity.

What is the difference?

IN CALM's draft strategy for negotiating an enterprise agreement there were three key productivity improvement initiatives proposed -

- flexibility in working time
- elimination of demarcation
- continuous improvement.

Continuous improvement means what it says - continuously improving the way we do things in our organisation. Once an enterprise agreement is struck it will involve every employee of CALM. A measurable productivity increase has to be realised at the or-

ganisational level to be able to fund a pay increase.

Quality improvement or QI, is voluntary. It is a management style. It provides 'tools' or a 'scientific approach

to problem solving and process improvement'.

Over the last two or three years, QI has involved voluntarily about 50 people per annum on various projects. Some projects are more significant than others. Many are concerned with preventing waste and error and cannot be readily converted into monetary savings in one budget year.

QI is needed to realise CI and enterprise agreements that will provide for pay increases into the future.



CURRENT IMPROVEMENT PROJECTS

Team Name	Owner of Process/Project	Mission	Team Leader	Team Facilitator	Project Completion Date
CHARTERER II	Finance Branch	Define, analyse and evaluate the user information of the financial management system, amend if necessary, and design a Chart of Accounts which most effectively meets the essential needs of the Department.	Denise Allen	Bruce Harvey	Stage 1 5/93
SAFSTATA	Mundaring District	To identify and analyse the causes of accidents within the workplace from 1 July 1987 to 30 June 1992.	Barry Hopper	Bruce Telfer	5/93
JSIQI	Dwellingup District	To carry out JSI safely and practically and make use of timber previously non-commercial.	Murray Love	Jacqueline O'Toole	3/93
VAT II	Kirup District	Implement recommendations made by the VAT project team, who looked at identifying the cost of accident damage in Kirup and reducing it to the Department.	Peter Bidwell	Dave Lathwell	2/93
OFF	Central Forest Region	Design a process which enables District Managers to plan vehicle replacement on a medium (3-5) basis.	Roger Banks	Bob Selkirk	12/93
GOOD NEWS HARVESTING	Central Forest Region	To develop measures to improve customer (adjoining landowners) satisfaction with neighbouring logging coups.	Brett Humble	Keith Low	3/94
ECONOFLEET	Swan Region	To analyse expenditure on plant hire and running charges in Swan Region and recommend ways of reducing these costs while meeting the operational needs of the Region.	Alan Hordacre	Keith Low	2/94
WORKFLEET	Swan Region	To analyse vehicle running costs and workshop expenditure and recommend how to reduce these while meeting operational needs.	Gary Hartnett	Peter Keppel	2/94
CRASH CONVERTERS	Swan Region	To reduce vehicle accident costs in Swan Region to Departmental average or less within 12 months of	Bruce Telfer	Rob Towers	2/94

Establishing a quality system

POLICIES

Describe what is desired

PROCEDURES

Describe Who, What, When, Where, Why.

WORK INSTRUCTIONS

Describe how to do the procedures.

EQUIPMENT OPERATING MANUALS

Describe how to use and repair equipment

QUALITY SYSTEM RECORDS

Document all of the above and the results obtained.

Certificate in quality management

THE Australian Organisation for Quality, in cooperation with Curtin University of Technology, now offers a structured program which covers all areas of quality management and provides a professional qualification.

Classes are held on Tuesdays and Thursdays between 5.30 pm and 8.30 pm. Anyone who is interested should contact Associate Professor W S Perriman on telephone (09)351 7672 or fax (09) 351 3197. The 1994 module schedule is as follows:

Module	Module Details	Number of Sessions	Commencement	Conclusion
1	TQM Perspective	2	22/2/94	24/2/94
2	Customers	11	1/3/94	7/4/94
3	Quality Management Systems	17	19/4/94	14/6/94
4	Variation	13	28/6/94	9/8/94
5	Quality Management	13	23/8/94	4/10/94
6	Management of Change	12	18/10/94	24/11/94

LATEST COMPLETED IMPROVEMENT PROJECTS

Team Name	Owners of Process/Project	Mission	Team Leader	Team Facilitator	Project Completion Date
DIEBACK INTERPRETATION EFFICIENCY REVIEW	Inventory Branch	To establish the most effective system which will supply customers' annual demands for dieback hygiene information.	Dave Meehan	Rob Towrns	8/92
QUIK HDA	Human Resources Branch	To achieve a substantial reduction in turn around time in processing higher duties applications.	Shane Knapp	Pat Collins	8/92
FLAP	Land Information Branch	To streamline the ordering of supplies, the processing of financial expenditure transactions and the recording and monitoring of committed and actual expenditure within the constraints of the FAAA.	Dave Holmes	Bill Advic	8/92
ROCKY ROAD	Jarrahdale District	To investigate how Jarrahdale District can successfully compete for CALM and other contracts.	Ralph Smith	Ron Shimmon	7/92
LEEUWIN-NATURALISTE ENTRY FEE COLLECTION SYSTEM	Central Forest Region	a) To develop a proposal to charge entry fees for visitors to the park.	Neil Taylor	John Skillen	6/92
		b) To prepare and implement a plan for charging entry fees to the park.	Kim Williams	John Skillen	6/92
PAYMENTS TO PINE HAULIERS	Timber Production Branch	To develop a system and transfer logging contract payments from District to Regional offices.	Ian Scott David Bottrill	John Skillen Bruce Harvey	5/92
SOFTWOOD SHAREFARMING MANAGEMENT	Forest Resources Division	To provide a more efficient and clearly understood sharefarming management process in Central Forest Region.	John Brealey	John Skillen	6/92
ERGO-WING	Busselton District	Ensure substantial decrease in injuries to the back and limbs during 1993 planting and fertilising operations.	Ian Rotheram	Dave Lathwell	6/93
B-TEAM	Harvey District	Identify the main cause of back injury in the Harvey District and recommend methods of reducing the occurrence.	Kevin Haylock	Bob Selkirk	2/93
VAT	Kirup and Nannup Districts	Identify cost of accident damage in Kirup and reduce it to the Department target by December 1993.	Roger Banks	Alan Seymour	5/93
07 BUDGET	Collie District	Develop a process which will ensure Departmental workshop budgets are not overspent.	Glyn Yates	Bob Selkirk	5/93
INTEGRATED FIRE MANAGEMENT	Fire Protection Branch	To develop a planning process that would ensure fire management plans integrate all management considerations.	David Rawet		6/93
CHARTERERS I	Finance Branch	Define, analyse and evaluate the user information of the financial management system, amend if necessary, and design a Chart of Accounts which most effectively meets the essential needs of the Department.	Denise Allen	Bruce Harvey	Stage 1 5/93
RATE ABATORS	Perth District	To reduce the all accident frequency rate in Perth District significantly and maintain the improvement (under review at present).	Clayton Sanders	Leon Griffiths	6/93