

CALM NEWS

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AND LAND MANAGEMENT
WESTERN AUSTRALIA

DEPARTMENT OF
Conservation
AND LAND MANAGEMENT

Traveller's joy reaches 500,000

THE number of plants in the State's native plant collection has hit the 500,000 mark.

If all the pressed specimens from CALM's WA Herbarium were laid out they would cover an area the size of Perth's central city precinct—more than seven square kilometres!

The Herbarium's half-millionth specimen is an undescribed species of clematis, or Traveller's Joy, to be named *Clematis delicata*.

The attractive climbing shrub with cream and purple flowers grows in the Wheatbelt between Wubin and Ravensthorpe and is often mistaken for another species of Traveller's Joy, *Clematis linearifolia*, that grows in coastal sandy districts.

State Environment and Heritage Minister, Dr Judy Edwards, said the State collection had a flora specimen for every five square kilometres of WA's 2.5 mil-

by Sue McKenna

lion square kilometres.

"Seventy new specimens and 1000 edits to our specimen database are added each week," she said.

"In the past three years 14 new WA species have been named—and there are many more species to be found."

Dr Edwards said there was an ever-growing demand for information about plants and the environment, a demand acknowledged by the fact that the Herbarium was Australia's most technologically advanced.

"Because of the Herbarium's technological prowess, WA leads Australian herbaria in being able to match field observations about flora with images and other descriptive information," she said.

"We have a picture of what plants are found where, and from this we

can begin to assess what areas need to be protected."

The 500,000th specimen was collected by a CALM Regional Herbarium Network President and volunteer, farmer and wildflower enthusiast Dave Quicke, on the Kulin-Lake Grace Road.

"The contribution from the community, from farmers, from scholars and students underpins conservation and reinforces our commitment to the environment," Dr Edwards said.

"In the past three years volunteers from CALM's regional herbaria have contributed more than 10,000 specimens to the WA Herbarium's collection."

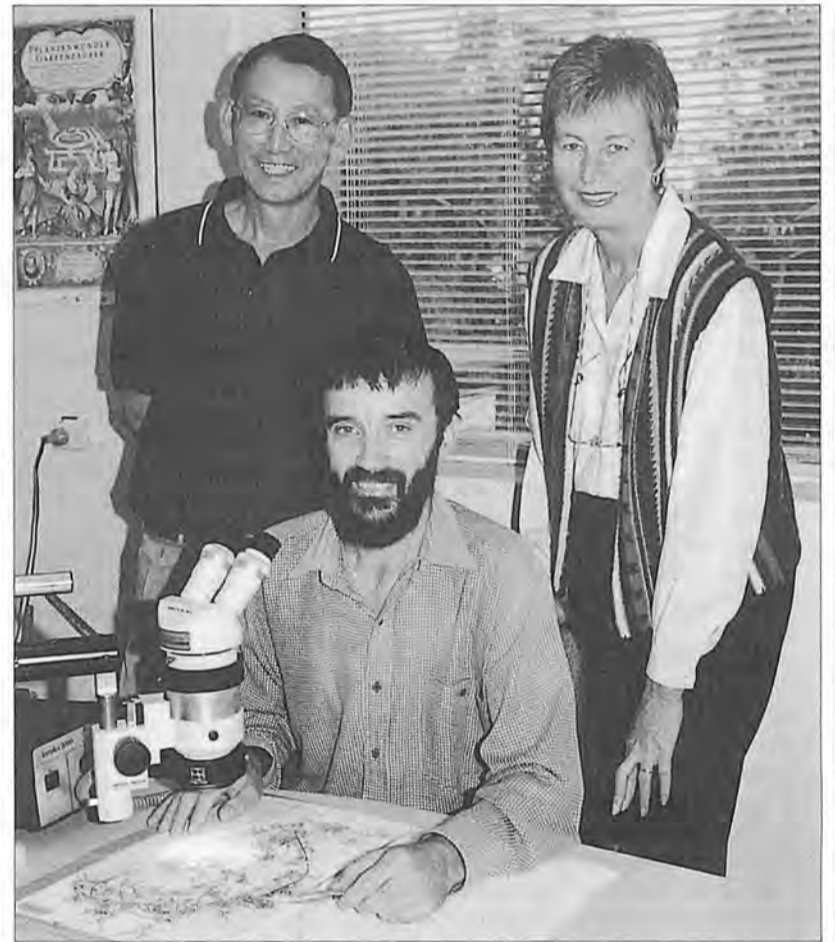
She said the initial collection of WA plants was carried out first by buccaneers such as William Dampier, followed by scientists accompanying explorers such as Baudin and Peron, D'Entrecasteaux and Flinders.

"In the early days of settlement it was carried out by residents such as Georgiana Molloy and James Drummond, and by scientific visitors such as Freiherr von Hugel, and Ludwig Preiss.

"Their work was followed later by that of the Victorian botanist Ferdinand von Mueller and his correspondents who included explorers such as Giles, Forrest and Helms; and later still by visiting scientists such as Spencer Moore, Diels and Pritzel," she said.

"Many of WA's national parks bear the names of these scientists. From the outset, plant collections were made by people of many backgrounds for a wide range of purposes—economic, horticultural and scientific.

"Botany has always held a vital place in our society, and that knowledge of plants, ecosystems and the environment is something of which to be proud," Dr Edwards said.



Botanist Mike Hislop (seated) verifies *Clematis delicata*, as plant collections manager Chang Sha Fang and database manager Sue Carroll look on.
Photo by Verna Costello

Women reflect on achievements

A DIVERSE group of about 50 women gathered in Kings Park late in the afternoon of March 8 to celebrate International Women's Day at a function organised by Annie Keating and Maxine

Chi from CALM Kensington.

They listened to tales of survival of shootings, racism in schools and many other hardships, followed by quietly achieved triumphs against almost impossible odds.

All were told, with not a trace of rancour, but with the quiet dignity of Nyoongah Elder of the Ballardong and Bibbulmun tribes and member of the Council of Elders Doolann-Leisha Eatts.

Participants also heard of vastly different hardships, experienced in the bleakest of places by Marilyn Boydell, a school deputy principal who took on the challenging role of Station Leader at Casey in Antarctica.

She told of the gradual, but continuing increase in the number of women working in Australian Antarctic Territory, and of her belief in the positive contribution women can bring to such places and in such circumstances.

And finally, the newly appointed Environment and Heritage Minister, Dr Judy Edwards, acknowledged the achievements of the previous speakers and highlighted the many achievements gained since International Women's Day was first held. She also spoke of her wish to see more women take part in all levels of public life.

Left to right: Doolann-Leisha Eatts, Environment and Heritage Minister Dr Judy Edwards MLA, CALM Acting Project Coordinator Annie Keating, Marilyn Boydell, CALM Aboriginal Employment and Training Officer Maxine Chi, and Aboriginal Member for the Kimberley Carol Martin MLA. Carol has earned the distinction of being the first Aboriginal woman member of parliament in Australia.
Photo by Verna Costello



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CALM supports the
**International Year of the
Volunteer**



2001
International Year
of Volunteers



All CALM employees by now would have seen or heard reference to MOG. Machinery of Government is the term for a comprehensive review of how Government proposes to deliver services to the community (outcomes).

A Taskforce chaired by Stuart Hicks with John Langoulant (Under Treasurer), Mal Wauchope (Chief Executive Officer, Ministry of Premier and Cabinet) and Ruth Sheen (Chief Executive Officer of the Disability Service Commission) is providing advice on how agencies could be structured in each portfolio area.

No decisions have been made as of 26 April on arrangements in the Environment and Heritage and Water Resources portfolios. Options undoubtedly under consideration could include the status quo and full or partial integration with other agencies in this portfolio. This should be seen as an opportunity for CALM employees as our core roles have been clarified following the establishment of the Forest Products Commission and the implementation of our conservation role will be enhanced through improved integration of service delivery with other areas of expertise within other agencies.

A communication strategy is in preparation to ensure all employees can be kept informed as decisions unfold.

The other challenge currently being addressed is the prioritisation of services to enable resources to be freed up and reallocated to areas of high priority. The establishment of new national parks is one such priority and additional resources will be required to undertake planning and provide the necessary infrastructure and support for visitors.

I recently read a report that amongst other things highlighted the aging of the public sector. CALM is no different with a significant number of people over 55. This emphasises the need for CALM to develop our next generation of leaders. Unlike many agencies, we have a significant number of people under 25 who have been recruited in recent years.

I'm pleased to advise that the Leadership Development Program will continue in 2001/02 with two programs in June and a further two later in 2001. This will enable some 80 CALM and FPC employees to acquire new insights into management and the role of teams and team leaders in delivering on outcomes while creating a climate that enables us to enjoy our work and achieve our career aspirations.

The program this year will be facilitated by Murdoch University staff with the assistance of Alan Byrne. Directors will act as sponsors of projects and will be involved in a number of presentations to reinforce the message 'This is how CALM does business'. I look forward to meeting participants in June and working with you to position our organisation as a leading conservation agency.

Dr Wally Cox, Executive Director

Friends boost Taryn's "I'll survive" fund

ON Saturday, March 31, a massive effort by the people of Dwellingup, together with many of Taryn Linning's CALM colleagues and other friends staged a memorable fundraising event at the Dwellingup Town Hall.

The fundraiser was in aid of Taryn's 'I'll Survive Cancer Fund', and needless to say, it was a resounding success, with people from all over the State attending.

Predictably, CALM was well represented, and a few well-known heads were shaved as part of the fund-raising activities. (It's rumoured that photos will appear in the next issue of CALM News.)

For those who have

not had the pleasure and privilege of knowing this courageous, feisty young woman, Taryn is something of a CALM legend. As anyone who has spent time in Dwellingup will tell you, she's a friendly, smiling face, always quick with a joke.

For many years, Taryn has generously helped numerous individuals through their various traumatic experiences, so it is no surprise that so many people have seized the opportunity to show their compassion and support for Taryn in hers.

"To everyone who attended and those who donated to the fundraising, I'd like to personally thank you for your generosity," said forester Grant Lamb.

"It's both humbling and enormously gratifying to see such a fine display of support and unity.

"Congratulations—you've all helped to bring the fundraising total to a staggering \$8,948.82.

Donations needn't stop at this figure, and anyone who missed attending the fundraiser or, for whatever reason, didn't get their donation in earlier, can still do so. Just make out your money order to The Taryn Linning Trust Fund, and send it to Grant Lamb c/- CALM Dwellingup, WA, 6213.

"The Trust Fund will be used to help Taryn pay for her medical and, should it become necessary, her living expenses," Grant said.



Taryn Linning.

CALM-Coastcare program a success

AN action-packed summer activities program—Coastcare Summer 2001—in the south-west saw 960 people taking part.

The program was organised by CALM and Coastcare to raise awareness of local marine and coastal environments by providing a diverse range of exciting educational activities.

The focus was on encouraging people to learn more about the areas where they live or holiday, and to take action to protect the coast.

Activities included snorkelling, beach walks, night-time spotlighting, rock pool rambles, bush tucker walks, fishing lessons, coastal art classes and much more.

The program's success was largely due to the calibre of the activity leaders and their intimate knowledge of the local environment.

The leaders team included staff from CALM, Water and Rivers Commission, Capel Wetlands and the Dolphin Discovery Centre, as well as dive instructors, surf coaches, local Noongar people, local artists, pho-



Mine's bigger than yours! CALM Bunbury District receptionist Marion Barnard, right and Coastcare facilitator, Nicci Tsernjavski at the Bunbury basaltic rocks. Marion co-ordinated the program bookings, while Nicci facilitated the Coastcare Summer 2001 program. Photo by Tammie Reid

tographers, naturalists, Sea Search and Rescue, and Voluntary Fisheries Liaison Officers. Strangers in the Night, a spotlighting activity at Contos field, was led by Glenn Willmott and Rob Klok from CALM's

Margaret River District, and was a huge success.

"We were amazed by the high level of interest in the spotlight walks, and we found that leading the walks gave us an opportunity to chat informally about Leeuwin-

Naturaliste National Park and its issues," Glenn said.

"The adults in the group simply enjoyed being in the bush with their children. It's rewarding to see that interaction."

Another highlight of the program was the snorkel activities at Busselton jetty and other areas around the Capes district, led by Kelli Roderick from Cape Dive.

Kelli said she was able to introduce people to an underwater world, where they were continually astonished by the variety and brilliance of marine life in the area.

"Viewing such a colourful and diverse, never-seen-before spectacle led newcomers to want to learn more about the animals as well as marine conservation in general," Kelli said.

"Leading the snorkel activities is always a great joy, and was even more so when many people remarked that they were keen to come back again and bring friends or relatives."

This is the second summer CALM and Coast Care has organised a south-west program, with next year's events expected to build on this season's success.

(Story by Nicci Tsernjavski, Coast Care Co-ordinator based at CALM's Bunbury office.)

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Managing Editor: Caris Bailey

Editor: Verna Costello

Contributing Editors: Nigel Higgs, Sue McKenna

Design and Production: Tiffany Aberin

Telephone: (08) 9389 8644

Facsimile: (08) 9389 8296

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Misleading headline

The headline "Sandalwood—a lucrative solution to salinity problem" on page 6 of the January-February issue of CALM NEWS is misleading.

Jon Brand (who wasn't the person responsible for creating the headline) says that sandalwood is not a particularly effective solution to salinity.

Sandalwood and host species can be included in tree planting on high ground to reduce recharge to saline areas, but should not be planted in saline-affected sites. There are other plants that are saline-tolerant such as *Eucalyptus occidentalis*, *Melaleuca* and *Casuarina*.

Herbarium, will appear in the May-June issue of CALM NEWS.

Meanwhile, the heartfelt sympathy of John's colleagues and friends at CALM are extended to his loved ones.

John's death mourned

THE sad news of the sudden death of John Dorlandt was received with shock and disbelief by all who knew him.

A tribute to John, who was CALM Science administrative and finance manager at the WA

LETTERS . . . LETTERS . . . LETTERS . . . LETTERS

Expertise promised

The following letter of appreciation was emailed to Greg Mair, Donna Green and Carl Beck, and refers to the Walpole-Nornalup National Park post-fire presentation to the local community (See article on page 3):

Your presentation on Thursday night was fantastic. It was obviously thoroughly researched and presented, with a professional polish. I particularly liked the posters, the Power Point View presentation, the video footage, and question time format.

Fancy living here all these years and not knowing what planning and expertise goes into this type of action. The support that you got from the community in accessing the resources needed to cover such a huge operation just shows how much this community respects and values the presence of CALM.

I'm sure the timely presentation will assist you greatly with local voluntary assistance in the ongoing monitoring and reclamation work.

What about showing this in the same format at the Easter markets where

you will get a greater exposure to CALM's operations? Many absentee owners are here at Easter plus a broader visitor population who often "bag" CALM without knowing exactly what they do. After the work you have put into it, it seems a waste not to show it all again.

I'm sorry I don't have time to put this to the "powers that be" by letter, so I hope that you can forward my comments to them. Well done. Great PR exercise!

Regards
Chris Bellanger.

Meet the new Environment Minister

THE Hon. Judy Edwards MLA, was appointed Minister for the Environment and Heritage; Water Resources in February.

Born in 1955, Judy Edwards grew up in the Wheatbelt town of Beverley.

After completing her schooling Dr Edwards went on to graduate from the University of Western Australia in 1979, attaining degrees in Medicine and Surgery and later a Masters Degree in Public Health.

She is married to Alan Philp and has a young son.

Between 1984 and 1990 Dr Edwards was employed in

General Practice at a Mt Lawley surgery.

During this period, she also worked part-time for the Aboriginal Medical Service and part-time for the Sexual Assault Referral Centre.

From 1987 to 1989 she was National President of the Doctors' Reform Society.

In 1984-85, she served as a part-time project officer on a study of prostitution for the WA Council for Civil Liberties. She served on the Social Security Appeals Tribunal from 1986-1990.

She was elected to the State Parliament for the Labor-held seat of Maylands in a by-election

held in 1990, following the resignation of Peter Dowding.

In 1990, she joined the Board of Management for the WA Royal Institute for the Blind located in Maylands and continues in this position today.

For 1991-92 Dr Edwards served as Deputy Chairman of Committees before serving on various Select Committees.

Extra Parliamentary activities have included being Chairperson of the Bayswater Integrated Catchment Management Group (Perth's first urban catchment group) from 1991-94 as well as instigating and chairing the

Maylands Interagency Group from 1992-94. Later in 1996 when her electorate came to include a large area of Dianella, she established the Dianella Interagency Group.

At various times between 1993 and 2001, Dr Edwards was Labor spokesperson for the Environment, Water Resources, Heritage, Planning and Urban Affairs, Housing, Youth, Sport and Recreation.

Dr Edwards is a member of the Australian Republican Movement and was a member of the WA Advisory Committee to the Council for Aboriginal Reconciliation from 1995 to 1999.



Raising ironstone plants

CALM volunteers from Bunbury, Busselton and Augusta, alongside the Department's Central Forest staff, have been translocating rare and endangered plants raised in Kings Park to two newly purchased properties, representative of the critically endangered southern ironstone community.

About 300 *Grevillea maccutcheonii* and 200 *Lambertia echinata* ssp *occidentalis*, both critically endangered, were planted last season and another three ironstone species are targeted for translocation this winter.

The southern ironstone plant community is a critically endangered ecological plant community,

by Tammie Reid

97 per cent of which has been cleared. A tough site for plants, it is inundated in winter and devoid of water in summer, with shallow to no soil on an ironstone capping.

It is also highly susceptible to *Phytophthora*. A number of rare and endangered plant species grows within this community type.

CALM recently purchased the two properties in the Ruabon area, near Busselton, and has embarked on a translocation planting program over the next five years to restore the plant community and enhance the survival of individual species, many of which are known

from only one population.

CALM's Capes conservation officer, Meredith Soutar, said funding for the project had come from a number of sources. They included, National Heritage Trust, Salinity Strategy and CALM.

"We've also had significant volunteer support from the Ruabon Tutunup Rail Reserve Preservation Group, the Bunbury Naturalist Club and individual volunteers," Meredith said.

"The survival rate is good this year, and we're looking forward to another planting day, despite the wet and muddy conditions. There's strong optimism that we can restore the southern ironstone communities at these locations."



Volunteers weeding and monitoring the survival rate from last year's planting of the 300 critically endangered *Grevillea maccutcheonii* on one of the two newly purchased properties, representative of the southern ironstone community. Photo by Meredith Soutar



Dr Cox congratulates and presents a thoroughly well-earned Certificate of Appreciation to CALM volunteer and WA Wildflower Society Board member Eileen Croxford. Story and photo by John Watson

Special award for Eileen

ILL health prevented 88-year-old CALM volunteer Mrs Eileen Croxford from attending the Department's Volunteer of the Year Ceremony last December, but CALM Executive Director Dr Wally Cox took a special award to Albany recently to present it to her personally.

The award was in recognition of her outstanding contribution to the Albany Regional Herbarium and the Albany Branch of the WA Wildflower Society.

It was Mrs Croxford who became the driving force behind the establishment of the Albany Branch of the Society, and she is still the Branch representative on the State Board of the Wildflower Society.

She has personally collected some 8,000 of the 16,000 plant specimens in the Albany Regional Herbarium.

Dr Cox took the opportunity also to present the South Coast Region's Albany-based staff with a one-year accident-free award.



Discussing tactics at the forward control point are, from left, Kylie Britza, John Neal and George Doust.

Bulletins help in fire fight

THE call came through around lunchtime—there was smoke in the Nuyts Wilderness area of the Walpole Nornalup National Park near Sealers Cove, on the peninsula that forms the south-western shore of Nornalup Inlet.

CALM Walpole District's version of Murphy's Law may well be 'if lightning starts a fire, it will be in the most inaccessible spot in the District'. Inaccessible is an understatement. There was only one way in—by boat.

CALM Walpole District Manager and incident controller Greg Mair had led an information unit while part of the CALM team assisting in the United States' fires last year. Here, the fire was in wilderness with poor accessibility, so Greg had another challenge—ensuring the community was kept up to date with what was happening and the reasons an all-out assault with 'dozers and pumps' wasn't under way.

Tim Foley from CALM

Manjimup headed up the information team that included up to three staff. Working with CALM media relations staff in Perth, bulletins were prepared and circulated to 14 sites around the Walpole community—both by fax and 'runners'—as well as issued to media in Perth, Manjimup and Albany. Key community representatives were briefed personally on the situation.

After the fire was out, Greg and his team planned a community meeting where CALM could outline what they did and why, and community members could ask questions.

"We had around 60 people, including representatives from the Walpole-Nornalup National Parks Association, South Coast Environment Group and the William Bay National Park Association," Greg said.

"The presentation started with an outline of the philosophy of the management plan for the park and

an overview of how we develop fire suppression strategies, the options, what we did, how the fire developed, the impacts on the environment as best we know to date, and the post-fire programs such as monitoring and rehabilitation.

"The feedback was very positive, with most people amazed at the processes we undertake in fire suppression, particularly the strategic approach and taking conservation values into account."

CALMfire Manager Rick Sneeuwagt said one of the major aspects the CALM officers who went to the United States noticed was the high emphasis fire managers over there placed on the information unit within the Incident Management Team structure.

"This experience is now being adopted within CALMfire," Rick said.

"The overall feedback is that the local community appreciates the efforts of our fire crews if they know what's going on."

Protecting karri regrowth

by Jeff Bennett

CREWS from Pemberton, Manjimup and Walpole districts have successfully completed only the second prescribed burn in Treenbrook forest block, five kilometres west of Pemberton.

A number of staff was involved in developing a burn prescription over the past five years—hollow butt trees were identified along the edges, rare flora and dieback surveys were carried out along the upgraded fire breaks, and private property owners were notified of the intention to burn.

However, the burn wasn't able to proceed until this January due to restrictions on burning and unfavourable weather conditions.

The karri forest at

Treenbrook, also known as P45, was clearfelled from 1931 to 1940. Regeneration burns by the then Forests Department promoted magnificent karri regrowth.

The block was prescribed burned for the first time in the summer of 1982-83, and records indicate that the area contained huge amounts of leaf litter and trash fuel that had been built up over several decades from the fast growing karri pole stand.

The block was thinned between 1986 and 1989, but there was a dense understorey and heavy fuel levels when crews arrived to start edge burning in January.

Weather conditions and

fuel moisture were ideal and the edging result was good. The helicopter was brought in to assist in strengthening the edges before the evening.

Hollow butt trees were checked and mopped up prior to the crews going home.

The next day the helicopter ignited the remainder of the burn area. Hollow butts and other dangerous trees were checked again.

Several days of mopping up proceeded and large unburnt pockets ignited to ensure the security of the burn.

The whole operation was carried out safely, and the objectives and standards of the burn were all met. Thanks to all who were involved on the job. Well done!



Ken Ninyette at Warndani Aboriginal Cultural Centre. Photo by Chantal Laval

Two share scholarship

CONGRATULATIONS to Ken Ninyette and Gary Treeby, joint winners of the Year 2001 Executive Director's Scholarship.

The Executive Director's Scholarship is made available to all Australian Workers Union people in CALM, to help them financially in their post-secondary studies to enter field officer positions throughout the State.

The scholarship also provides recipients with study time to ease the burden of combining work and study.

Ken Ninyette

Making the move from Busselton to Karratha in 1986, Ken was passing through Collie to visit his sister when he was informed of a 12-month Aboriginal Training Scheme that the newly-formed CALM was running.

A successful application saw what was initially planned as a short holiday, turn into a three-year stay in Collie. A transfer to the South West Capes District in 1989 allowed Ken to move back to his original location of Busselton.

Ken's current position allows him to be involved in most aspects of district work, including tree marking and planting, fire duties, fauna management and recreation work.

by Chantal Laval

He was, as he said, "stunned—then over the moon" by his scholarship award.

"This scholarship has given me a career path and shown to me that CALM is a committed employer."

Ken can see a mirror image in what CALM is trying to pursue in natural resource management and what his Nyoongar culture pursues.

Already an active member of the local community, Ken provides talks on Aboriginal heritage and culture at schools, TAFE and community groups.

Ken is an artist and the vice president of the Warndani Corporation, which is a representative group of the local Nyoongar community.

His main aspiration is to be able to use the knowledge he acquires to its full potential in his career.

Gary Treeby

Almost 15 years of farming in Wellstead, and a committee member of the Stirling Land Conservation District gave Gary the experience he needed to start with CALM's Sharefarms group in Albany.

Since 1998, he has been an overseer involved in supervis-

ing contractors, liaising with farmers, planting, pest control and fire duties.

However his connection with CALM started previously with Mike Powers when they worked together on farm forestry demonstrations.

Gary feels fulfilled in his current position because he can see the benefits from his job—direct action helping to solve the salinity problem.

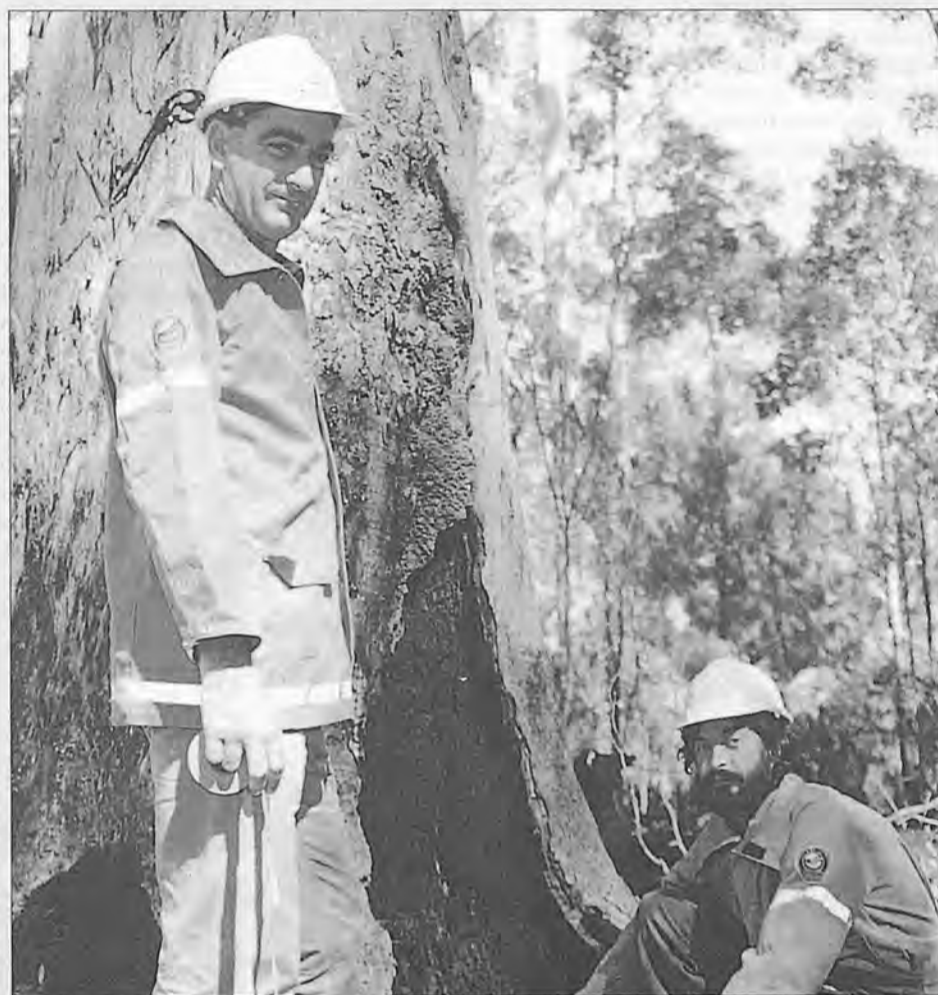
Given that his farming involved a large amount of management in all areas, crops, budgets and employees, a long-term goal of Gary's is to be involved in a management role within national parks.

With the structural changes in CALM late last year, Gary has now been transferred to the Forest Products Commission, working from the Albany office.

Both Ken and Gary are enrolled in the Certificate IV of Land Management at Bunbury TAFE and are completing their course via external study.

Combined with study workshops held at the Dwellingup Training Centre, they aim to finish their course within the next two years.

On behalf of all CALM people we congratulate Ken and Gary and wish them every success in their studies.



Steve Collings (left) and Peter Beebe re-checking hollow butts. Photo by Jeff Bennett

CALM staff movements

Contract staff

Ellen Hickman, to CALMScience, Kensington, as Technical Officer, Level 3; Michelle Roche, to Corporate Services, Forest Products Commission, Manjimup Nursery, as Records Officer, Level 1; Volker Mischker, to Land For Wildlife, Esperance, as Land For Wildlife Officer, Level 3; Janet Sanderson, to Forest Products Commission, Esperance, as Clerical Officer, Level 1; Peter Hutchings, to Corporate Services, Forest Products Commission, as Accountant, Level 6; Kate Roy-Chowdhury, to Recovery Catchment, Narrogin, as Technical Assistant, Level 2; David Holley, to Wildlife Branch, Kensington, as Marine Zoologist, Level 2/4; Kate Macgregor, to Narrogin District, as Reserves Officer, Level 1/2; Michael Meffert, to Wildlife Branch, Kensington, as Technical Officer, Level 2; Claire Macdonald, to Mundaring District, as Clerical Officer, Level 1.

Permanent staff

Geoff Banks, at GIS Section, Information Management Branch, as Operational Mapping Officer, Level 3.

Promoted

Rick France, to Ranger-In-Charge, Grade 2 at Moora District; Robert Round-Turner, to Operations Officer, Level 3, Dwellingup, Swan Region, from Kirup, Blackwood District; Anne Woodhams, to Indexing Team Leader, Level 3, Corporate Information Section, Kensington.

Reclassified

Terri Ann Garrity, as Administrative Assistant, Level 2, Katanning District; Stefan Dumitro, as Accounting Operations Manager, Level 5, Financial Services Branch.

Seconded

Mike Meinema, to Marine Conservation Branch, Fremantle as District Manager, Level 6 from Geraldton; Bradly H Daw, to Rottnest Island Authority, as Ranger, Level 3, from Marine & Coastal District.

On temporary deployment

Mark Read, to Southern Forests Branch, Forest Products Commission, as Acting Senior Forester (Planning), Level 5; Brad Barton, to Kalgoorlie, as Regional Leader, Nature Conservation, Level 6, from Denham; Therese Jones, to Parks & Recreation, Kensington as Assistant Trails Officer, Level 4, from Perth District; Chaz Newman, to Forest Products Commission, Harvey, as Senior Forester, Level 5, from Collie; Barry Hooper, to Kalgoorlie, as Regional Leader, Level 5, from Mundaring.

Transferred

Ray Lawrie, to Marine Conservation Branch, as Marine Information Officer, Level 5, from GIS, Information Management Branch; Heddy King, to Swan Region, as Administrative Assistant, Level 2, from Manjimup;

Continued page 6



Gary Treeby. Photo by Chantal Laval

Fishy tale of a volunteer

MANY first-time visitors to Penguin Island are surprised to find how richly diverse and truly remarkable the island is, whether they come to snorkel its waters, relax on the beach, to fish or discover its wildlife.

Helping to provide visitors with memorable experiences of the island's wildlife are volunteers like myself, who derive satisfaction from the strong sense of achievement that comes from learning about, and helping to protect this wildlife.

The island is situated 70 metres offshore from Shoalwater Bay, about 45 minutes' drive south of Perth, and is easily accessible by ferry. It was named after the little penguins (*Eudyptula minor*),

by **Bobbie Mackay**

the smallest of the 17 species of penguins that colonise the island.

This colony of little penguins is the largest in Western Australia and contains about 500 breeding pairs.

The volunteer program at Penguin Island started in 1989, and in 1992 the first official training program for volunteers began.

The program encourages volunteers to work as a team towards the common goal of protecting and conserving the natural environment.

We develop a wide range of skills and assist in a variety of activities. These include patrolling the island and surrounding Shoalwater Islands

Marine Park, assisting in research and monitoring of the island's plants and animals, their care, maintenance and rehabilitation.

As a volunteer, one of my regular tasks is to count the small bait fish each penguin consumes during their three daily feeding times in The Penguin Island Discovery Centre. This helps staff to see that the penguins are fed an appropriate diet in order to maintain their general wellbeing.

Working close to the wildlife alongside CALM's Shoalwater Islands staff is a highly satisfying experience for volunteers. Knowing, too, that we can help make a positive difference to the island's vital conservation values, keeps CALM volunteers keeping on.



Barry Hooper (left) and Allan Thomson discuss fire-fighting tactics. Photo by Jeff Bennett



Volunteer Bobbie Mackay records the number of fish that Penguin Island management assistant Jodi Mayes feeds the penguins at the The Penguin Island Discovery Centre.

Friends under fire

by **Alex Bowlay**

WHEN a bushfire is out of control, and human resources are stretched to the limit, a call goes out to other CALM regions and districts for help.

Four of CALM's staff recently answered such a call to take part in fire control operations in the East Kimberley. They were: Barry Hooper (Kalgoorlie), Peter Burton (Jarrahdale), Doug Giles (Jarrahdale) and Warwick Trew (Mundaring).

The four arrived in Kunurra on the earliest possible Ansett flight to bolster fire containment efforts after a large fire front advanced on Purnululu National Park during a late-running dry season.

They barely had time to collect their bags before being briefed at the ranger station then deployed to Purnululu.

There, they relieved local crews who had worked relentlessly on the fire for several days.

The fire began in rugged ranges

north west of the park, in bushland inhabited only by cattle and the occasional station worker.

Its rate of advance had been checked by the extremely rugged terrain and sparse covering of vegetation until it swept down the flanks of the Osmand Range on the north-western boundary of the park.

Kimberley Regional Manager Chris Done was full of praise for the visitors and their efforts.

"The fire was successfully contained over the ensuing 36 hours, with minimal damage to infrastructure," Chris said.

"The visitors were also a godsend in helping with mop-up and fire patrol activities.

"Once the fire had been declared safe, the team went straight into action on projects around the park that had been

delayed by the fire-fighting effort," Chris said.

"This allowed them to get a better idea of the scale and nature of issues at Purnululu."

The crew also took the opportunity to see well-known places of interest, and all agreed that the area was very impressive.

Peter Burton said that fire-fighting in the East Kimberley under very different conditions to those they were accustomed to presented them with a steep learning curve.

"Which is one very good reason why we're all pretty interested in returning should the need arise," Peter said.

"Apart from this, the opportunity to gain some understanding of the land and the issues peculiar to the region is an attractive proposition.

"The easy-to-take 'Kimberley quality care' we received throughout our stay was a welcome bonus, too," Peter said.

New species found in the wheatbelt; others found again

A PLANT believed to have been extinct since 1847 when State botanist James Drummond collected it near Kellerberrin has been rediscovered in the Wheatbelt by a CALM botanist.

It was during field work last spring that Drummond's frankenia (*Frankenia parvula*) and another plant of the same genus, silky frankenia (*Frankenia conferta*), were rediscovered. They had been presumed extinct for 110 years.

On private property

More than 150 years after James Drummond collected and pressed the first specimen of Drummond's frankenia in the Mt Caroline-Mt Stirling area south of Kellerberrin, botanist Mike Lyons rediscovered the plant while collecting botanical samples on private land near Cunderdin.

"We didn't know what it was at the time. I've probably collected several thousand samples from the Wheatbelt in

the past three years, and it was while poring over these that we sought a match with our new discoveries," Mike said.

"We were surveying a series of wetlands and I approached the owners of the property near Cunderdin because it was land that we needed to survey but it wasn't part of the CALM reserves."

The field work—a biological survey of the south west agricultural zone and part of the State's Salinity Strategy—also discovered two new species of frankenia that have yet to be officially named.

"Frankenia plants are particularly difficult to identify," Mike said.

However, it wasn't until CALM principal research scientist Greg Keighery took them to the Melbourne Herbarium to compare with type collections that Drummond's frankenia could be listed as 'rediscovered'.

The number of plants presumed to be extinct and listed in the Government Gazette's

Wildlife Conservation (Rare Flora) Notice 2001 is now listed at 18, but will drop to 16 following these latest rediscoveries. Ten years ago there were 53 plants on the threatened species list.

Mike rediscovered the silky frankenia at several sites around Dambouring Lake near Wongan Hills. The last recorded specimens were from two 1890 collections made in the Avon District and east of York by Nellie Heal.

The frankenia species is a genus of plants that grows in saline habitats in coastal areas and around inland salt lakes across much of Australia, particularly in the Wheatbelt.

"The botanical values of plant communities fringing naturally saline wetlands in the WA Wheatbelt are proving to be much greater than previously thought," Mike said.

More survey work will be required to determine whether they are threatened species.



From left: Neil Gibson, Grant Pearson, and (seated) Mike Lyons on location. Photo by Greg Keighery

Former CALM staff now with FPC



THE following staff have moved from CALM to the FPC:

B Carmel Baggetta, L2, Administrative Assistant, Harvey, Northern Forests Branch; Peter Bames, L4, Forester Roding, Manjimup, Southern Forests Branch; Peter Banyard, AWU L3, Overseer, Albany, Sharefarming Southcoast Branch; Liz Barbour, L6, Technical Advisor, Kensington, Plant Propagation Branch; Lisa Barile, L1, Clerical Officer, Rivervale, Business Operations Branch; David Bastiani, L1, Clerical Officer, Albany, Sharefarming Southcoast Branch; Peter Beatty, L5, Planning Officer, Manjimup, Plant Propagation Branch; Martin Beel, L5, Senior Research Scientist, Harvey, Timber Technology Centre; Paul Biggs L7, Scientific Adviser, Rivervale; Liz Blee, L2, Administrative Assistant, Manjimup, Southern Forests Branch; Joy Bomatici, L1/2, Assistant Operations Officer, Pemberton, Southern Forests Branch; Bev Boyer, L1, Technical Assistant, Wanneroo, Plant Propagation Branch; Jeff Boulton, L1/2, Assistant Operations Officer, Pemberton, Southern Forests Branch; John Brealey, L5, Nursery Manager, Manjimup, Plant Propagation Branch; Alan Briggs, L7, Maritime Projects Officer, Guildford, Sharefarming Midwest Branch; Todd Britain, L3, Operations Officer Silviculture, Harvey, Northern Forests Branch; Kylie Britza, L2, Administrative Assistant, Manjimup, Plant Propagation Branch; Natalie Broadbent, L2, Technical Officer, Kensington; Mike Buckton, L8, Manager, Rivervale; Debbie Burke, L1, Officer, Rivervale; Deanne Burton, L4, Conveyancing Officer, Albany, Sharefarming Southcoast Branch; Gavin Butcher, L7, Manager, Rivervale; Trevor Butcher, L7, Senior Research Scientist, Kensington, Plant Propagation Branch.

C Judith Chequer, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; Serena Chew, L4, Analyst/Programmer, Rivervale, Business Operations Branch; Sandro Ciccone, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; John Clarke, L7, Manager, Bunbury/Rivervale, Business Operations Branch; Michelle Cocks, L2, Senior LOIS Officer, Bunbury, Business Operations Branch; Jeff Cook, AWU L5, Softwood Nursery Supervisor, Manjimup, Plant Propagation Branch; Lisa Cottier, L2, Administrative Assistant, Rivervale; Terry Court, L5, Senior Forester, Manjimup, Southern Forests Branch; Jarron Creasey, L4, Forester Harvesting, Pemberton, Southern Forests Branch; Mike Cully, L3, Technical Officer, Manjimup, Plant Propagation Branch.

D Mark Dalton, L4, Manager, Seed Centre, Manjimup, Plant Propagation Branch; Monica Dalton, L2, Seed Distribution and Sales Officer, Manjimup, Plant Propagation Branch; Steve Davis, L3, Utilisation Officer, Harvey, Timber Technology Centre; Domenico Deluca, AWU L5, Hardwood Nursery Supervisor, Manjimup, Plant Propagation Branch; Owen Donovan, L4, Plantation Forester, Guildford, Sharefarming, Midwest Branch; Angela Doust, L1, Clerical Officer, Harvey, Northern Forests Branch; Ben Drouyn, L3, Operations Officer Silviculture, Nannup, Northern Forests Branch; Wendy Dudley, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; Neville Dye, AWU L2, Mill Worker, Harvey, Timber Technology Centre; Carol Dymond, L5, Project Officer, Bunbury.

E Sharon Eccleston, L3, Administrative Assistant, Rivervale, Executive Branch; Bob Edwards, L3, Area Coordinator, Albany, Sharefarming Southcoast Branch; John Edwards, L5, Senior Forester, Albany, Sharefarming Southcoast Branch; Brad Ellis, L4, Forester Roding, Manjimup, Southern Forests Branch; Dave Evans, L1/2, Operations Officer, Kalgoorlie Arid Forests Branch; Greg Evans, L3, Operations Officer Planning, Manjimup, Southern Forests Branch.

F Angelo Femia, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; John Fishwick, L3, Operations Officer Silviculture, Manjimup, Southern Forests Branch; Ray Fremlin, L7, Manager, Busselton.

G Dolly Gallagher, L3, Administration Officer, Guildford, Sharefarming Midwest Branch; Craig Gardiner, L3, Operations Officer Harvesting, Harvey, Northern Forests Branch; Graeme Gardner, L4, Forester Harvesting, Nannup, Northern Forests Branch; Ben Giovanetti, L1/2, Field Officer, Wanneroo, Commission Plantations Branch; Mark Graves, L2, Forest Ranger, Mundaring, Sharefarming Midwest Branch; David Griffiths, L3, Area Coordinator, Albany, Sharefarming Southcoast Branch.

H Brian Haines, AWU L3, Overseer, Harvey, Timber Technology Centre; Sharon Hann, L4, Business Manager, Collie, Sharefarming Southwest Branch; Kevin Haylock, L7, Manager, Harvey, Northern Forests Branch; Ian Herford, L5, Liaison and Promotions Officer, Collie/Albany, Sharefarming Branch; Peter Heslewood, L4, Consultant Employee Relations, Rivervale; Graeme Hobson, L3, Forester, Collie, Sharefarming Southwest Branch; Greg Hodgson, L4, Forester Planning, Walpole, Southern Forests Branch; Neville Holland, L4, Forester Harvesting, Nannup, Northern Forests Branch; Suzanne Howell, L1, Clerical Officer, Harvey, Northern Forests Branch; James Howesmith, L3, Operations Officer Harvesting, Harvey, Northern Forests Branch; Therese Hughes, L3, Programmer/Analyst, Rivervale, Business Operations Branch; Murray Hull, L1/2, Assistant Area Coordinator, Albany, Sharefarming Southcoast Branch; Natalie Hull, L1, Clerical Officer, Manjimup, Southern Forests Branch; Emily Humble, L1, Clerical Officer, Harvey, Timber Technology Centre; Stephanie Hutson, L2, Administrative Assistant, Rivervale, Business Operations Branch.

I Mike Innis, AWU L4, Overseer, Collie, Sharefarming Southwest Branch.

J Darryl Jackson, L3, Senior Timber Inspector, Bunbury, Business Operations Branch; Natasha James, L1/2, Assistant Area Coordinator, Guildford, Sharefarming Midwest Branch; Matt Jones, L3, Forester, Collie, Sharefarming Southwest Branch; Peter Jones, L6, Manager, Harvey, Arid Forests Branch; Terry Jones, L5, Marketing Manager, Rivervale; Barry Jordan, Level 7, Manager, Albany, Sharefarming Southcoast Branch.

K John Kaye, L7, Manager, Bunbury, Sharefarming and Southwest Branch; Wayne Keals, L5, Senior Forester Harvesting, Manjimup, Southern Forests Branch; Merrilyn Kearney, L4, User Liaison Officer, Bunbury, Business

Operations Branch; Jack Kenbeek, L4, Plantation Forester, Harvey, Commission Plantations Branch; Shane Kirkwood, L1/2, Assistant Area Coordinator, Albany, Sharefarming Southcoast Branch.

L Greg Lange, L4, Operations Officer, Dwellingup, Northern Forests Branch; Sean Lawson, AWU L2, Mill Worker, Harvey, Timber Technology Centre; Pauline Leeson, L1, Clerical Officer, Albany, Sharefarming Southcoast Branch; Jason Lette, L1/2, Assistant Forester, Katanning, Sharefarming Southcoast Branch; Michael Lobb, L1/2, Assistant Forester, Collie; Alan Lush, L7, Manager, Manjimup.

M Deidre Maher, L5, Senior Forester Silviculture, Manjimup, Southern Forests Branch; Karan Maisey, L2, Administrative Assistant, Albany, Sharefarming Southcoast Branch; Paul Mammone, L4, Forester Roding, Nannup, Northern Forests Branch; John Marshall, L1/2, Assistant Operations Officer, Pemberton, Southern Forests Branch; Sue Martin, Level 2, Administration Officer, Bunbury, Commission Plantations Branch; Jennifer Maunders, L1, Clerical Officer, Manjimup, Southern Forests Branch; John McAlinden, AWU L 4, Roding Supervisor, Manjimup, Southern Forests Branch; David McMillan, L3, Area Coordinator, Albany, Sharefarming Southcoast Branch; Samir Mehta, L1, Clerical Officer, Rivervale, Business Operations Branch; Rosemary Melvey, L1, Clerical Officer, Guildford, Sharefarming Midwest Branch; Maria Michael, L3, Conveyancing Officer, Collie, Sharefarming Southwest Branch; Andrew Milne, L3, Forester, Nannup, Commission Plantations Branch; Ryan Mincham, L1/2, Assistant Area Coordinator, Guildford, Sharefarming Midwest Branch; Dragan Misic, L5, Economist, Rivervale; Murray Mitchell, L4, Plantation Forester, Nannup, Commission Plantations Branch; Tim Mitchell, L3, Area Coordinator, Albany, Sharefarming Southcoast Branch; Tim Mitchell, L4, Plantation Forester, Manjimup, Commission Plantations Branch; Diane Mowday, L1, LOIS Officer, Bunbury, Business Operations Branch; John Mowday, L1/2, Timber Inspector, Manjimup, Business Operations Branch; Jon Murch, L8, Manager, Rivervale; Justine Murphy, L1/2, Forest Ranger, Harvey, Timber Technology Centre.

N Chaz Newman, L4, Plantation Forester, Collie, Sharefarming Southwest Branch; Ronald Newman, L4, Plantation Forester, Nannup, Commission Plantations Branch; Yvonne Nicol, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; Morton Nilsson, L5, Senior Forester, Collie, Sharefarming Southwest Branch; Kris Nostrini, L1/2, Field Officer, Albany, Sharefarming Southcoast Branch.

O Tim O'Connell, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch.

P Jackson Parker, L1/2, Assistant Area Coordinator, Guildford, Sharefarming Midwest Branch; Carole Paterson, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; Brendan Peet, L3, Forester, Manjimup, Commission Plantations Branch; Jason Pember, L1/2, Field Officer, Rivervale, Northern Forests Branch; Kim Phillips-Jones, L5, Senior Forester, Kalgoorlie, Arid Forests Branch; Steve Pickering, L4, Plantation Forester, Collie,

Sharefarming Southwest Branch; Lindon Piggott, L5, Field Manager, Bunbury, Commission Plantations Branch; Peter Piper, AWU L2, Timber Worker, Harvey, Timber Technology Centre; Judi Pitcher, L3, Operations Officer, Harvey, Timber Technology Centre; Beverley Pollitt, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; Stefan Prokopyczyn, AWU L2, Mill Worker, Harvey, Timber Technology Centre; Grant, Pronk, L3, Industry Project Officer, Harvey; Alan Prosser, AWU L2, Field Worker, Manjimup, Plant Propagation Branch; Troy Prosser, AWU L2, Field Worker, Manjimup, Plant Propagation Branch.

R Trevor Radford, AWU L4, Overseer, Collie, Sharefarming Southwest Branch; Mark Read, L4, Forester Harvesting, Manjimup, Southern Forests Branch; Tania Read, L1, LOIS Officer, Manjimup, Business Operations Branch; Carlo Renzullo, AWU L2, Nursery Worker, Manjimup, Plant Propagation Branch; Rosa Ribeiro, L4, Finance Officer, Rivervale; Fiona Robert, L2, Systems Support Officer, Rivervale, Business Operations Branch; Andrew Robertson, AWU L3, Overseer, Albany, Sharefarming Southcoast Branch; Michelle Roche, L1, Clerical Officer, Manjimup, Plant Propagation Branch; Ian Rotheram, L6, Manager, Timber Technology Centre, Harvey, Timber Technology Centre; Vernon Rutherford, L3, Operations Officer Harvesting, Harvey, Northern Forests Branch; Andy Rynasewycz, L5, Senior Forester, Bunbury, Business Operations Branch.

S Donna Sachse, L1, Clerical Officer, Rivervale; Ben Sawyer, L3, Operations Officer Silviculture, Harvey, Northern Forests Branch; Sean Sawyer, L7, Operations Manager, Bunbury; Martin Scantlebury, L3, Operations Officer, Harvey, Northern Forests Branch; Bob Selkirk, L5, Operations Auditor, Bunbury, Executive Branch; Lisa Christy-Sell, L1, Clerical Officer, Rivervale; Alan Seymour, L6, Senior Forest Officer, Manjimup, Southern Forests Branch; Linda Sheehan, L2, Administrative Assistant, Collie, Sharefarming Southwest Branch; Graeme Siemon, Level 7, Principal Research Scientist, Rivervale; Grace

Silvestro, L2, Financial Auditor, Rivervale, Executive Branch; Bob Simpson, L2, Timber Revenue Officer, Rivervale, Business Operations Branch; Merv Smith, L5, Senior Forester Planning, Rivervale, Northern Forests Branch; Kerry Soltwisch, L1, Receptionist, Rivervale, Business Operations Branch; Robbie Stainton, L4, Business Manager, Manjimup, Plant Propagation Branch; Andrew Stone, AWU L4, Overseer, Collie, Sharefarming Southwest Branch.

T Bill Towie, L5, Industry Training and Standards Officer, Mandurah; Gary Treeby, AWU L3, Overseer, Albany, Sharefarming Southcoast Branch.

V Mark Virgo, L3, Operations Officer Silviculture, Pemberton, Southern Forests Branch.

W Geoff Waideman, AWU L3, Overseer, Albany, Sharefarming Southcoast Branch; Denise Walsh, L2, Technical Officer, Manjimup, Plant Propagation Branch; Steve Ward, L5, Site Evaluation Coordinator, Bunbury, Commission Plantations Branch; Ken Wheeler, L1/2, Forest Ranger, Katanning; Shannon White, L1, Clerical Officer, Rivervale, Business Operations Branch; Christine Wilson, L1, Clerical Officer, Bunbury, Business Operations Branch; Nevin Wittber, L3, Forest Ranger, Rivervale, Business Operations Branch; Keith Wombell, L5, Senior Finance Officer, Rivervale, Executive Branch; Scott Wood, L6, Planning Officer, Bunbury, Commission Plantations Branch; Gavin Wornes, L4, Plantation Forester, Esperance, Sharefarming Midwest Branch; Russell Wornes, L1/2, Assistant Area Coordinator, Albany, Sharefarming Southcoast Branch; Neil Worrell, L5, Senior Forester, Albany, Sharefarming Southcoast Branch; Mike Wright, L3, Operations Officer Silviculture, Busselton, Northern Forests Branch.

Z Ann Zalek, L2, Technical Officer, Bunbury, Commission Plantations Branch; Ivan Zirngast, L1/2, Assistant Operations Officer, Manjimup, Southern Forests Branch.

CALM staff movements

(Continued from page 4)

Lachie McCaw, to Manjimup, as Regional Fire Coordinator, Level 6; Karlene Bain, to Stirling Range National Park, as National Park Ranger, Grade 2, from Walpole District; Kriston Narducci, to Dwellingup, as Reserves Officer, Level 1/2, from Katanning; Clayton Sanders, to Swan Region, Perth District, as District Operations Officer, Level 4, from Softwoods Business Unit, Katanning; Lindsay Brown, to Purnululu National Park, as Range-In-Charge, at Snr Ranger Level, from Fitzgerald River National Park;

Transferred (Temp)

John Gault, to Kununurra, as Regional Business & Finance Manager, Level 4 from Swan Region, Kensington; Paul H Brown, to Swan Region, Kensington, as Regional Planning Officer, Level 6, from Regional Parks, Fremantle; Steve P Gunn, to Dwellingup, as Forest Ranger, Level 1/2, from Collie.

Retired

Jack Kinnear, from CALM Science, Woodvale, as Principal Research Scientist, Level 7; Arthur Pepper, from Denham District, as Construction & Maintenance Worker, Level 2; Irene Robson, from Swan Region, Armadale, as Clerical Officer, Level 1; Mike Mason, from Forest & Tree Crops, Manjimup, as Senior Technical Assistant, Level 4.

Resigned

Ashley R Bone, from Forest Management Branch, Bunbury, as Forest Ranger (Photogrammetry), Level 1/2; David B Gardiner, from Manjimup District, as Recovery Catchment Officer, Level 4; Nicholas J Gales, from Wildlife Branch, Kensington as Principal Zoologist, Level 7; Arletta Ralph, from CALM Science, Kensington, as Technical Officer, Level 2.

Earning carbon credits in the Wheatbelt

A WICKEPIN farm is hosting research projects to fight salinity and greenhouse gas emissions.

The dusty topsoil has been planted with several varieties of tree crops to test theories on how to maximise tree water use across the landscape and produce a future income for Wheatbelt farmers.

CALM carries out most of the practical work on the farm that became the destination of a field trip by joint researchers in February.

CALM is a partner in two new Australia-wide Co-operative Research Centres (CRCs). The first, the CRC for

Greenhouse Accounting, is based in Canberra and is investigating how to measure accurately the amount of carbon stored in plants and soil so that Australia's 'carbon credits' against greenhouse gas emissions can be recorded. Big carbon emitters, such as overseas power companies, could lease

Wheatbelt farms to plant thousands of hectares of trees to be used as 'carbon credits' to offset their emissions.

The second, the CRC for Plant Based Management of Salinity, has been established to investigate the management of dryland salinity. Local participants include

CALM, the University of WA and CSIRO.

Two representatives from the CRC for Greenhouse Gas Accounting accompanied the field trip with representatives from CALM and CSIRO.

This feature explains what's happening on this Wheatbelt farm.

Looking for rosy future with CALM

SYD Martin surveys his 3000-hectare Wickepin property and looks for a rosy future.

The Wheatbelt farmer watches in despair as 80 hectares of his best land which once grew lush wheat crops have turned to salt.

But for farmers there's always hope in the air—a good season, good rains or an improved market.

This year, that hope for Syd and his wife Pat lies in a partnership with CALM and the Forest Products Commission (FPC) to experiment with trees, tillage methods and other crops to reverse the effects of salinity.

CALM is also part of research to turn part of the farm into a carbon 'sink' to discover how much carbon a

by Sue McKenna

tree stores within itself and in the soil. That project involves the FPC planting trees—in this case maritime pines—on behalf of BP to combat the greenhouse gas effect. The trees are counted as 'carbon sinks' against the amount of greenhouse gas produced by industries.

Syd and Pat's two married sons are on the farm, too. Sometimes, he says, the easy solution would be to follow the trend in the district, to sell and move out.

"But we've never sold any land we've bought," Syd said. "I believe this generation sells the farm too easily. Sometimes the farms have three or four generations

behind them so what they are selling is their father's and grandfather's work."

He is concerned that the Shire of Wickepin's population has dropped by almost a fifth in the past decade as desperate people move out.

"But I want a future for my family, my children and my grandchildren. I can do the farm work but I don't have the know-how about what is best for the land. That's why CALM is so important for us—the people have the knowledge which will help us," he said.

Two years ago 60,000 pine trees were planted for carbon credits. The effect on the land is being studied while Syd will be able to reap the financial rewards of the crop.

He allocated another por-



CALMScience research scientist Nicole Robinson, principal research scientist Richard Harper and Wickepin farmer Syd Martin stand on the Martin family's featureless, salt-affected land. Photo by Sue McKenna

tion of his farm for CALM to carry out trials using pines, eucalypts likely to be useful for timber, and crops such as lucerne. Successful crops that earn money will be his future.

Syd said farms further east and north had much more salt damage than his farm, which sat at the top of two catchments. One farm had lost half its land to salinity.

"We need cash to keep our farms running so we need to plant crops that earn an income. In that way, money is important but knowledge is even more important."

Finding new crops to fight the salt

RESEARCH into timber crops could put Wheatbelt farmers on the cusp of sowing successful new ventures.

John Bartle, Manager of CALMScience's Farm Forestry Unit, said weaving successful new research with large-scale farming operations was a challenge. There was enormous potential to produce world-beating timber products.

"It's the heart and soul of this research," he said.

CALM Research Scientist, Richard Harper, said farmers needed a two-pronged solution to salinity. The first was to find new crops of trees and bushes to reduce the amount of water being recharged into the water table and the second was to ensure those crops were commercially viable.

"Several million hectares of land are at risk from salinity," Richard said.

"Indications are that to overcome the problem we'll need to replant millions of hectares—but it won't happen unless those trees are profitable.

"People need cash crops to survive so we have to solve it by looking at factors such as the strategic placement of trees to intercept groundwater and watercourse flows, and to clean up the water in the valley floor soils.

"We need to create

by Sue McKenna & Debbie McFadyen

commercial drivers. If our research leads to farmers being able to plant trees that reduce salinity in land that subsequently becomes a greenhouse 'sink' where the amount of carbon 'credits' is recorded to offset the gas emissions produced by, for example, petroleum industries, then it will have been a success. Carbon investors may well underwrite the massive revegetation program."

New ways

To allow this to happen, the trials at the Martin's farm will be repeated at half a dozen other catchments. These trials include considering new ways to plant trees—including phase farming with trees, examining plant genetic trials and carbon sequestration trials.

"Phase farming with trees is at the 'blue sky' end of the research spectrum and involves planting trees such as bluegums closely together to dry out the soil rapidly. Although the trees will undoubtedly die, they will use up the water that is causing a problem and allow a return to agriculture."

Trials are being established in the Wheatbelt this year to compare dif-



On field assignment at Syd Martin's Wickepin farm were (back, from left) Forest Products Commission marketing officer, Ian Herford; CALMScience Senior Research Scientist Richard Harper; Chemistry Centre of WA Research Officer, Surender Mann; CALMScience's Tree Crop Development Program Manager, John Bartle and CALMScience's Forest and Tree Crops Group Manager, John McGrath; and (front, from left) CALMScience Research Scientist, Nicole Robinson; CRC for Greenhouse Accounting's Communications Officer, Alison Saunders; CRC for Greenhouse Accounting's Communications Manager, Rowena Muller; and CALMScience Senior Research Scientist, Peter Ritson. Photo by Sue McKenna

ferent species, to see if the trees can be made to grow even faster and if the system can be made profitable.

The Martin's farm also hosts trials in which maritime pine trees are planted in recharge zones to trap the water before it gets to the water table.

The amount of land that needs to be revegetated is not clear at this stage and this research will work that out.

This work is being done in co operation with UWA and CSIRO Land and Water scientists.

CALM is looking at planting the trees in parts

of the landscape where there is rainfall run-off so that more water can be absorbed. A nest of equipment monitors the amount of water used by trees.

A total of 80 hectares has been allocated to such trials in an effort to find a solution to salinity

and produce an income for the Martin families.

There are still more questions than answers. Does soil carbon decrease when you establish a plantation? How much carbon is stored in a tree? Which trees absorb the most water? Where's the best place to

plant them? How do you get rid of the salt in the soil when the recharge stops?

Richard says CALM is lucky because it deals with enthusiastic farmers who are as keen for success as CALM.

"That's what makes this worthwhile," he said.



Acting project leader (Map Publishing) Mark Laming (right) with cartographic officers Sasha Pop-Markov and Holly Smith looking pleased with themselves—and their award.
Photo by Verna Costello

Another mapping award

CALM has picked up another award for cartographic excellence at the Mapping Sciences Institute of Australia's recent Biannual National Conference in Sydney.

The Highly Commended Award for Mapping Excellence in the Thematic Category was for one of the Bibbulmun Track maps, which are produced by the Publications Mapping Group headed by acting map publishing project leader Mark Laming, of Information Management Branch's Geographic Information Section.

Because of their excellent quality and high public profile, each of these maps can take up to 150 hours' work to produce—even with the latest tools of computer-assisted map publishing.

This effort continues to be well justified, however, given the popularity of the maps and their continuing high sales levels.

The award was presented before a large contingent of delegates from Australia and overseas. Congratulations to all involved in the Publications Mapping Group.

Using bugs to monitor river health

NOTHING bugs Woodvale Research Centre technical officers Mike Scanlon and Jim Cocking as much as bugs in waterways.

Wading into a University of Western Australia summer school they showed 17 students how to monitor the biological health of rivers, streams and creeks by sampling a range of bugs, or macro-invertebrates.

"A pristine river would have larvae of stoneflies, mayflies and caddisflies; a disturbed river would not," Mike said.

Disturbances caused by

by Sue McKenna

riparian vegetation being cleared, sediment build-up, nutrient enrichment, salinity and recreational pressures affected the occurrence of macro-invertebrates.

"Bugs are sensitive to many things and are a direct reflection of the health of a river. Many people use chemical analysis to sample the health of waterways but measuring the abundance and richness of bugs (biomonitoring) can give even greater levels of accuracy," Mike said.

Summer school students searched the Southern River at Gosnells for water boatmen, whirligig beetles, corixids, midges, dragonflies, mayflies, stoneflies and mosquitoes to measure the water's biodiversity.

Others to lecture at the summer school on the ecological health and restoration of rivers and streams included UWA zoology department senior researcher Peter Davies, UWA senior research fellow Andrew Storey and the Water and Rivers' Commission restoration and management program manager Luke Pen.

Big Brook relay

THE deadline for the last issue of CALM News may have beaten them, but as Jodie Watts reports, Forest Management Branch's unbeaten run at the Big Brook Relay continues:

Fourteen teams from CALM and the FPC competed in the 12th Annual CALM Big Brook Relay in Pemberton with many spectators there to cheer them on. They came from as far away as Denham, with the Midwest Maulers the most-travelled side.

The relay events were the cross-cut sawing (five rings), mountain bike ride (12kms), gravel run (7.5kms), two-person Canadian canoe (3km), finishing with the swim leg (800m). A barbecue lunch, friendly bar facilities, volley-

ball, and tug-a-war for both kids and adults, rounded off the day.

The fourth team in a row from Forest Management Branch (FMB), to take line honours was "EFFEMM-BEE" in 1hr 31m 34seconds. Teams members Ian Moore, John Webb, Jodie Watts, Paul Weir, and Nola Withnell (FMB, Manjimup) together with Andrew Loch (CSIRO/CALM, Manjimup), and Sally Hogan (Dieback Contractor, Mandurah) were ecstatic that their effort paid off.

Second place went to Wild and Wetlands team, with 1hr 36m 51seconds, and just behind in third place was Bunbury Bullets with 1hr 37m 16seconds. The toilet seat "prize" for last place

went to the Lunchtime Legends with 2hrs 1m and 8 seconds.

For those who had some left over energy it was onto the Pemberton social club for a late night supper and get-together.

Thanks go to all the participants who helped make it another CALM success story. This year's event will be held in late November (the final Saturday is still to be confirmed) and if you're thinking of nominating a team or have any questions you can contact Rod Annear or David Meehan from Pemberton District on (08) 97761207.

It is a great time for both participants and friends and, if you're up to it, FMB is ready to defend its title yet again.

School invitation a big success

TRIBAL Trevor and Ranger Myles made a big impact on 30 eight-year-olds at Leda Primary School recently.

They teamed up to give a double-act presentation about CALM and the Aboriginal significance of plants, animals and culture to an energetic Year four class.

District wildlife officer Trevor Walley and Perth District nature conservation officer Myles Mulvey arrived with plants, kangaroo skins, digging sticks, a mya mya (Aboriginal tee-pee home), a bobtail lizard, spears and other artefacts.

Quick questions from inquisitive minds came fast but were easily

answered by Trevor and Myles.

The question about what the word CALM meant had the class stumped. One wag said: "I thought it stood for CALM down!!"

Trevor and Myles held their audience captive by telling them what plants were found where and the cultural significance of the Leda Nature Reserve behind the school.

Eating sap from an acacia branch, Tribal Trevor delighted the class by telling them about plants that could be used as lollies, how to build a bush home, the best plant for catching prawns, the best plants to eat and plants to be used as medicine

for upset stomachs and infections.

Tribal Trevor, who grew up in the area and is familiar with the region's Aboriginal camps, brought a banksia fire stick to welcome the spirit of the bush to the school, told Dreamtime stories, taught Aboriginal songs and brought ochre paint.

Later the children daubed each other's faces with the ochre and became engrossed with traditional 'splatter painting' of hands and leaves on paper that they hung in their classroom as reminders of the visit.

The presentation came at the request of teacher Sandy Tasker.



Nancy, Geoff and Terry Passmore. Story and photo by John Watson

Passmores engage in CALM family affair

CAPE Le Grand National Park ranger-in-charge Geoff Passmore was ably assisted this summer by camp hosts Nancy and Terry Passmore.

What a turn-around from 20 years ago when Terry was ranger-in-charge of the same national park—and school-boy Geoff used to help his dad at weekends!

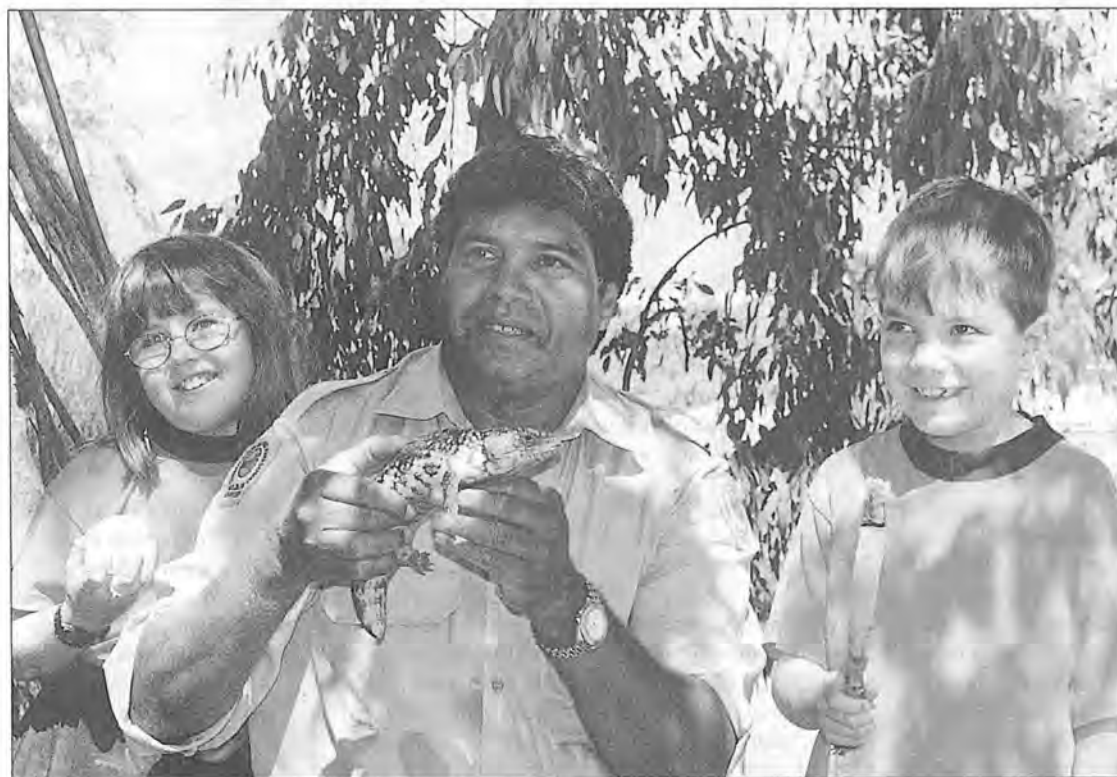
Terry retired from CALM in 1999, having worked his way from 'rangering' through to CALM's South Coast Region Recreation and Tourism Leader.

When they are not 'camp-hosting'

Terry and Nancy are snapped up to help with other activities. As this goes to print, Terry is acting in a temporary capacity as CALM mobile ranger at Lucky Bay in Cape Le Grand National Park, where Nancy is gate attendant.

Among the Passmore seniors' favourite activities, however, is taking care of Geoff and Justine's sons Nathan, 7, and Hayden, 3, and two-year old daughter Hollie.

"They keep us young and on the ball," said Terry.



Trevor Walley shows a bobtail lizard to Leda Primary School's Year four pupils Megan Kellerman and Kieran Donnelly. Story and photo by Sue McKenna