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DEPARTMENT OF PARKS AND WILDLIFE

Newsletter of the Science & Information Division, Department of Conservation and Land Management

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Next deadline
Thu, 29 Feb 96

EDITORIAL

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A belated Happy New Year to everyone!

In the editorial of the last SIDNews Ray Wills and I tended our resignations as editors. Since then comments from a number of colleagues and Pam's offer to co-edit the newsletter influenced me to change my mind and so I'm still here! Welcome Pam.

Thanks again to all those who contributed to Volume 1, even though it required lots of prodding by the editors. At the outset of a new volume the editors would like to remind readers that the style and content of SIDNews depends almost entirely on the readers and their contributions. As well as news we need feedback to help us shape each issue. It is not a management publication, but a forum for SID staff to express themselves (within reason) about their work and their research centres.

DIVISIONAL NOTES

CRF BUDGET REQUIREMENTS

You should by now have seen the Director's memo of 20.12.95 (and reminders) requesting scientists to submit their CRF budget requirements for 1996/97 to Section Managers by 2 February. This is a reminder for you to do so. Also include new SPPs.

Group notes

BIO-CONSERVATION GROUP

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Acting arrangements

Neil Burrows will be on leave from 29 January until 9 February and Keith Morris is Acting HOG while he's away.

David Pearson will be Acting CC Section Manager for Gordon Friend (see below) until that position is advertised and filled.

Section Manager - Community Conservation

Applications are invited from scientists for this important leadership position. Closing date is February 23 1996. See the Directors News Fax 96/1 for details and the list of duties.

Gordon Friend leaving

Gordon will be taking up the post of Manager of Conservation Programs in the National Parks Service (in CNR) in Victoria in March.

Since joining CALM in 1984, Gordon has consolidated his reputation as a leading researcher in

the field of fire ecology and native fauna. He conducted significant projects on the impacts of fire on small mammals (inc. life cycle modelling), reptiles and invertebrates in wheatbelt reserves (Tutanning and Stirling Range NP) and more recently in the jarrah forest. Gordon also helped organise national fire conferences in 1987 and 1993 and been part of SID's management team for most of his time with CALM.

Gordon recently emailed this farewell note to SID staff.

...As many of you have heard by now I will be leaving CALM to take up a position as Manager of Conservation Programs within the National Parks Service in Victoria (my old stamping ground). I haven't finalized a date for leaving yet (it's dependent on portability of LSL etc), but I will be away from the 15th January for a couple of weeks getting kids into schools and finding rental accommodation in Melbourne, then back for a few weeks in late Jan/early Feb to clear up things here before finally departing.

I'll take this opportunity to thank you all for providing a happy, relaxed and stimulating environment in which to work, one which I have enjoyed immensely over the past 10 years. You're a great bunch and SID and CALM as a whole have been fantastic to work for. Keep up the good work and keep in touch... I'll be on internet and my "address" will probably be - gordonf@dce.vic.gov.au.

My work address will be

National Parks Service

Department of Conservation and Natural Resources

240-250 Victoria Parade

East Melbourne VIC 3002

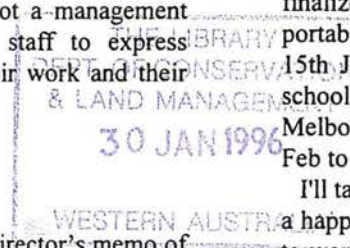
Cheers

Ray Wills leaving

This is really serious, another ecologist is leaving SID for 'greener pastures'. Ray has been great to share an office with and will not only be missed for his ecological expertise but his persistent championing of the advantages of Macintosh computers.

Ray has provided a potted work-history of his time with CALM.

...Ray started with CALM at the Research Centre at Manjimup in November 1988 when he was employed on a temporary contract (during Joanna Tippet's maternity leave) as a Research Scientist in the Plant Diseases Program under Bryan Shearer.



Ray's task was to assess the ecological impact of *Phytophthora cinnamomi* on species and communities of the Stirling Range National Park. Following Joanna's resignation, Ray was appointed permanently in September 1989, and started to work more broadly on the ecological impact of plant pathogens, such as *Phytophthora* spp. and canker fungi, on ecosystems in south western Australia.

The research aimed at assessing the ecological impact of plant pathogens, such as *Phytophthora* spp. and canker fungi, on ecosystems in the south of Western Australia. The work came to focus on isolating and identifying pathogens from diseased plants found in populations of rare, threatened and poorly known flora or from associated species at those sites, and to collect seed and vegetative material of threatened taxa for storage and micropropagation.

His most recent project, funded by the Australian Nature Conservation Agency, aimed to develop a Geographic Information System-based model which will provide a tool for managing *Phytophthora cinnamomi*.

Ray is taking up a position of Research Botanist (Ecology) with Kings Park & Botanic Garden. He will be conducting research to provide information for the ecologically-based management of urban bushland managed by Kings Park. Ray will bring together a team of researchers in ecology, including postgraduate students, to work with the Kings Park & Botanic Garden. His work will include close collaboration with researchers from universities, government and private industry.

(You may have heard Ray was moving to Canberra to work with the Environmental Resource Information Network (ERIN). That's no longer the case...).

(Carolyn Wills will continue to work at the Herbarium, although she will certainly be taking some time of later this year to prepare for the arrival of Carolyn's and Ray 2nd child!).

BIO-RESOURCES GROUP

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Acting arrangements

Neville is on annual leave until 12 February. Judy Wheeler is Acting HOG, Terry Macfarlane Acting Section Manager, as before. By the way, does anyone remember Neville Marchant? I have only a vague recollection.

Flora of Australia

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After 15 years, Bruce Maslin and colleagues at PERTH have submitted the *Flora of Australia* manuscript of *Acacia* to ABRS. Their contribution comprises treatments for 700 of the 950 species that will appear in the Flora and was underpinned by research resulting in the descriptions of about 250 new taxa, mostly from WA.

Lichen collecting

An interesting visitor to the Herbarium from Darwin (of the two legged kind) was Nathan Sammy, who has been our unofficial long-distance curator of lichens for many years. Chang Sha accompanied him on a highly successful collecting trip to the south west in

November. They think they may have found a new species of lichen on top of Toolbrunup Peak, but this has yet to be confirmed. Just from looking at Chang Sha when he came back, this trip must have been quite exhausting, and he claims he still hasn't recovered. Good work guys!

Seance revisited

On December 1st the Bioresources Group held a follow up meeting at Woodvale, after which a BBQ was enjoyed by those able to stay on. The points covered at the meeting were those raised during the Dryandra meeting in October, with reports tabled from those responsible for action items. It was agreed that a further Bioresources group meeting would take place in March (date and venue as yet undecided) in order to follow through on the remaining action items.

The next SIMC meeting will be well "advertised" as to venue and date in order that a general open meeting can follow which will provide an opportunity for those who have questions to ask SIMC members.

There will be a series of workshops organized by Bioresources. The first workshop is happening on 5 March - on "IBRA" at the Woodvale Centre. Norm McKenzie & Greg Keighery are the organisers, so please contact them for more information.

The Group discussed in general the prospect of having the libraries liaise with Crawley to ensure Jim Armstrong gets copies of all reports & publications. Paul Gioia suggested that a small database system could be organized to keep a list of such approved reports so that Christine Farrell can ensure the libraries can keep up to date.

Angas and Norm have been working on a possible future course to be offered to all of CALM, much like the Batalling small mammals course. Yours truly will be contacting Regional Managers in Operations to ask them for suggestions for courses to be developed by SID, as that would be a method of ensuring wide appeal and support.

The completion of the State's inventory is being addressed as best we can, given our financial constraints. It was agreed that an Action Plan needs to be developed for implementation of SID's Strategic Plan. We have the beginnings of a fungi collection and Chang Sha to look into methods for long term preservation; Allan Clarke is looking at our present insect collection and its curation; methods for recording "negative" information on a database are being developed.

It was also suggested that N. Lander liaise with Mike Choo to work on a system to link a "simple language" summary of each SPP to our Home Page on the NET so that we don't have to get into the WASSP system just to review summaries. Matt Williams prepared a report on such summaries which was tabled at the meeting. There was enormous variation on the simple language idea so more specific criteria needs to be made ready for people to use when preparing summaries of their SPPs.

Please contact me if you have any queries or for a copy of the full report.

*SUSTAINABLE RESOURCES GROUP**Section Manager - Natural Products*

Lachie McCaw, a Senior Research Scientist and Research Centre Manager at Manjimup, has been appointed Natural Products Section Manager. Congratulations Lachie!

CALM/CSIRO collaborative dry forest fire study

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Phil Cheney and Jim Gould of the CSIRO Bushfire Research and Management Unit in Canberra spent a week with members of the fire research team from Manjimup in early December. CALM and CSIRO are developing a proposal for a study to determine what effect fuel age and fuel loading have on fire behaviour. Although this subject has been investigated to some extent by previous fire researchers in Australia, there is a need to quantify more precisely the relative contribution of fuel age and fuel loading to fire behaviour. The project will involve conducting concurrent experimental fires in fuels of different ages, with other variables held constant. An experimental site has already been partially prepared at McCorkhill block west of Nannup, and a second site in Mornington District is being evaluated. CSIRO staff will be returning in February 1996 to conduct detailed fuel assessments.

CALMfire will be participating actively in the project, and funds are being sought from fire and land management agencies around Australia, as most of these agencies stand to benefit from the results of the study.

Sandalwood research

lachie@manj.sid

The Natural Products section has been expanded by the appointment of Jonathan Brand in November 1995. Jon has been appointed on a contract funded by the Sandalwood Business Unit in CALM to undertake research into the ecology and silviculture of the Western Australian sandalwood (*Santalum spicatum*). He has considerable experience with sandalwood, having done honours and masters level studies into the species. After an initial 2 week field induction with staff from CALM Kalgoorlie, Jon has had his head down preparing science project plans. Jon is based at the SID centre at Como.

Softwood field day

johnm@buss.sid

A field day looking at the mid-rotation thinning and fertilizer trials in the Central Forest region was held in early December for the Softwood Business Unit staff. The day was attended by 18 people and considerable interaction occurred, making it a successful day.

*SCIENCE SERVICES GROUP**INFORMATION SCIENCE SECTION*

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WINDOWS 95 update

The purpose of this article is to update SID staff on the issue of installing the Windows 95 operating system. As yet there is no necessity to upgrade to Windows 95. Indeed there are substantial reasons not to do so. Note that:

- There is no software essential to our operations that requires Windows 95 to run.
- Unless your machine is very recent there are many costs in ensuring your system can operate optimally under Windows 95. For example, if your machine has only 8mb of RAM it is highly likely you will need to add another 4-8mb to run efficiently. Note that where laptop memory is required it will be quite expensive. This extra cost factor, together with the cost of the upgrade, effectively nullifies any cost advantage offered by purchasing Office 95.
- Setup is complicated and time consuming and prone to failure if non-standard hardware or configurations are encountered. It is especially troublesome when installed over a pre-existing setup.
- Retraining for the new interface will be necessary as it is very unlike previous versions of Windows.
- Compatibility issues abound eg. between 16 and 32-bit versions of Windows software such as Word for Windows and Excel, and some software may not even work, or will work more slowly.

Thus significant human and material resources will be required to implement Windows 95 across the Division. In these days of diminishing research budgets this will not be welcome news.

Be assured that ISS staff are exploring the use and implementation of Windows 95, particularly in connection with the Vines network. Windows 95 is being installed on an ISS machine at each centre where you are welcome to trial it.

Thus our existing strategy (as outlined previously by Paul Gioia in this newsletter) remains. That is, in the absence of identifiable productivity gains, the implementation of Windows 95 across the Division is neither necessary or desirable. In this context we note that Information Management Branch (IMB) has adopted an identical policy for the Department as a whole. Clearly the most cost-effective implementation of Windows 95 would be on a whole of Department basis in cooperation with IMB.

Centre notes

BUSSELTON

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Staff

Congratulations to Keith and Megan Mungham on the arrival of their first child - a beautiful bouncing baby girl Demi Victoria, on Sunday 7th January (in the wee small hours). Mother, Baby and Dad are all well. Dad has recovered after a slow start to the week! Keith has expressed his appreciation of the rigorous training in disrupted and short sleep periods provided by measuring pre-dawn water potentials over the last few years.

Moving

The long awaited move of the staff previously located in the former single men's quarters at 40 Adelaide Street to the building adjacent to CALM that was formerly occupied by the Water Authority is about to happen. At the moment much painting, hammering, etc. is going on as the lucky occupants make the place more comfortable. Plans to link the current CALM building and the WAWA building have been put on hold until funds are available, possibly from the sale of the site at 40 Adelaide Street. The new arrangements will be a major improvement as all staff will be on one site.

DWELLINGUP

SID catering *barbarag@dwel.sid*

Dwellingup SID members have recently been involved in fire operations. I have it on good authority that firefighters would go hungry if not for the assistance of SID staff with the catering at fires. A letter from Tom Wood, Harvey, addressed to Dwellingup District manager is proof of this. In it Tom congratulated Robyn Bowles, Don Devlin and Richard Fairman for the great service provided to his crew during a fire in December. He was full of praise for excellent meals prepared on time throughout the night..

Mainland Quokka Assessment *mickd@dwel.sid*

A study is in progress to assess numbers of the Mainland Quokka populations in areas where they have been known to occur since the early 1970's. The assessment is being carried out in several Districts which include Walpole, Pemberton, Manjimup, Nannup, Mornington, Dwellingup and Jarrahdale. To date, indications are that numbers are generally down on what they were approximately 25 years ago. The survey involves looking at "runs" and scats in areas where Quokkas were known to occur and had been either trapped or numbers assessed previously. At the same time, a brief vegetation assessment is also done to develop a list of plants common to all sites. This information will be used to attempt to have the Mainland Quokkas placed on the "vulnerable" list.

HERBARIUM *pamb@herb.sid*

My normal contribution will normally be lodged here, but as I am now editorial staff I've decided to have an occasional segment at the end of the newsletter entitled *Pam's Prattles*. I intend to make those contributions as "light" as possible, so we end things on a cheery note.

Fumigation

Staff and volunteers breathed a sigh of relief when it was announced that fumigation has not been required during this Christmas period. But we will continue to monitor and will review the situation in April. We do, however, have white ants again.

Plant specimen ID course

The Herbarium is embarking on a new training course to be offered to the public who wish to volunteer in assisting with the plant specimen identification. Eleanor Bennett has been working with Neville Marchant, Judy Wheeler, Ray Cranfield and Chang Sha Fang for a few weeks now. They have developed this

course entitled "Training in Herbarium Techniques and Plant Identification" which will be offered at the Herbarium starting on the 1st of February at a cost of \$120. The classes will be once weekly, for 12 weeks, finishing on April 18th. At the end of the course, the participants will be given accreditation in Herbarium Techniques and Plant Identification. Anyone interested can contact Chang Sha, Ray or Diane Johns for a copy of the brochure and an application. Interview for applicants will commence on the 19th and 22nd of January.

Gardening

Those of you who make use of our pretty outdoor area downstairs may not be aware that some new planting of shrubs, reticulation for same and considerable clean-up took place right around the Christmas season. The people who need to take bows for this hard work are Suzanne Curry, Harry Bennett (volunteer) and Ray Cranfield. They got stuck into ripping out a lot of the overgrown weeds in the pond itself, cleaned up all around in general and Suzanne bought some plants to refurbish the beds immediate to the seating area. I got to watch some of the goings-on from my window vantage point while sitting in an air conditioned office and let me tell you just watching them made me tired! It took a few days, lots of hard yakka and they deserve a few kudos

Volunteers

We have a new volunteer, Janet Harding, who is working with Kath Napier's group on the descriptive catalogue of West Australian genera. Welcome, Janet!

MANJIMUP

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Staff

Regrettably, Tanya English will be leaving Manjimup at the end of January to move to Perth with her husband Dean who has been promoted in his job. Tanya has made a very worthwhile contribution in the 4 months she has been at Manjimup and SID staff will no doubt miss her enthusiasm and efficiency. As well as running the office she has turned her hand to karri plot assessment, mammal trapping, vegetation studies and even a bit of gardening! We wish Tanya and Dean all the best for the future.

Past and present staff from Manjimup have been busy expanding the population in recent months with babies born to Penni and Gavin Ellis (Jack) and Joanne and Jim Elliot (Connor) in November, and Lachie McCaw and Kerry Mather (Darcie) in December. All offspring are doing well, although parents could use a bit more sleep.

Several temporary staff will be assisting with work at Manjimup over the summer months. Environmental science student Darren Lee will be helping Alex Robinson with counting tree ring cross-sections from Kingston forest block. Nigel Slater will be working with Tubby Liddelow on forest fauna surveys, and Craig Kirkpatrick will be involved in the Entomology sections summer insect trapping program in karri regrowth stands. Both Nigel and Craig and being supported through government training schemes.

Safety

On the Friday before Christmas staff spent the morning doing a much-needed working bee around the centre. Most work areas received a thorough tidy-up to remove unwanted items that could become a hazard or inconvenience. Several trees which could eventually cause damage to buildings were removed, and the gardens given a general spruce up. The intention is to undertake some further planting which will be in keeping with the general environment of the Manjimup centre. Thanks to all those who participated. The day finished off with an enjoyable barbecue lunch and some light refreshments.

WOODVALE

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Staff

Angas Hopkins is recuperating at home after a recent operation and will be returning in February.

You all would have heard about Gordon Friend, so all I will say is that we wish him and his family all the very best for their futures.

CLASSIFIEDS**For sale**

barbarag@dwel.sid

Bradford Gold Insulation Batts at \$10 per pack. We have 19 packs of 8 batts each. R 2.5 insulation rate, with 4.5 sq. metre coverage per pack. Phone Robyn or Barb at Dwellingup SID on 538 1105.

FORTHCOMING SEMINARS**SID seminars**

- 5 March at Woodvale (see G.Keighery for details, which are still being arranged)
- "IBRA" WORKSHOP

Botany Dept., UWA Seminars

- Every Mon (during Sem.) 4 pm in Top Floor Seminar Room

Conservation Biology Discussion Group

- 30 Jan 1996 (4th Tues of the month) 5.30 pm at University House, UWA. Dr A.B. Cunningham WWF/ UNESCO South Africa *Local people, protected areas and land-use conflicts*. Contact Kristina Lemson, Botany UWA (klemson@uniwa.uwa.edu.au)

School of Environmental Biology, Curtin Uni

- Every Wed (during Sem.) 12.00 noon, Watson Lecture Theatre (307:101).

SOCIAL EVENTS**Wine Club Dinner**

A dinner to farewell founding member and wine connoisseur, Gordon Friend, will be held at the *Mahsuri* Malaysian Restaurant, 313 Albany Hwy, Victoria Park. BYO your favorite wine. For more details contact Dave Coates at the Herbarium.

APPROVED FOR PUBLICATION patrickp@herb.sid

Here is a list of SID approved publications Oct-Dec 1995. I'll try to make this a regular feature as it is a partial guide to some of the work SID scientists do.

Algar, D. and Kinnear, J.E. Secondary poisoning of foxes following a routine 1080 rabbit-baiting campaign in the WA Wheatbelt. Wildlife Research.

Bellgard, S.E., Crane, C.E. Shearer, B.L. and Smith, B.J. Control of *Phytophthora* and *Diplodina* Canker in Western Australia. Progress report to ANCA.

Brown, A., Keighery, G. and Thomson, C. Common wildflowers of the south west. Public Booklet for CALM.

Burrows, N.D., Ward, B. and Robinson, A.D. Jarrah forest flora and fire. Proceedings of the Urban Bushland Council conference on fire and urban bushland.

Christidis, L. and Burbidge, A.H., True blue birds: The genealogy of Australia's birds, Landscape

Cochrane, A., Kelly, A. and Pigott, D.J., Documentation for germplasm banks, Conference abstract.

Curry, S. and Chapman, A., Update to the Flora of the Perth Region; Update to the Flora of the Kimberley Region, Nuytsia.

Davies, P.M. and Lane, J.A.K. The impact of vegetated buffer zones upon water and nutrient flow into Lake Clifton. Journal of the Royal Society of WA.

Edwards, J., and Harper, R., Utility of simple soil classifications for predicting *Eucalyptus globulus* survival and growth. Conference Proceedings Abstract.

Edwards, J., Harper, R. and Smettem, K.R.J., Site selection of trees for improved water use and rehabilitation of saline lands, Australian Journal of Soil & Water Conservati

Friend, G.R., Impact of fire on fauna in remnant vegetation - a summary of key research findings, Proceedings of the Urban Bushland Council conference on fire and urban bushland.

Friend, G.R. and Van Heurck, P. Conservation of jarrah forests in WA the impact of prescribed burning. Progress report to WWF.

Friend, J.A. Protecting endangered fauna from introduced predators, Unwanted Aliens? - Australia's Introduced Animals.

Friend, J.A. Taxonomy and phylogeny of terrestrial Amphipods of Australia. ABRs Progress report

Halse, S.A. Pearson, G.B., Jaensch, R.P., Kulmoi, P., Gregory, P., Storey, A.W. and Kay, W.R. Waterbird surveys of the Middle Fly River Floodplain, Papua New Guinea Wildlife Research.

Keighery, G. Plant ecological consequences of genetic engineering-past, present and future. Anzaas proceedings.

Keighery, G.J. *Succowia balearica* (Brassicaceae): a new and potentially serious weed in Western Australia. Nuytsia (new records/short notes).

Keighery, G.J., *Emex australis* in Western Australian conservation areas; an amenity or conservation problem. Conference abstract.

Keighery, G.J. Conservation status of vascular flora of south Swan Coastal Plain, ANCA Interim Grant Report N710.

Keighery, G.J. and Cranfield, R.J. A new rare *Grevillea* (Proteaceae) from Western Australia, *Nuytsia*.

Kenneally, K., Thomson, C., Done, Chris and Wheeler, J., Common plants of the Kimberley, CALM Bush Book Series.

Lepschi B.J. A new subspecies of *Harnieria Kempeana* (Acanthaceae) from Western Australia. *Journal of the Adelaide Botanic Gardens*.

Macfarlane, T.D. and Guymmer, G., Nomenclature of the Boab (*Adansonia*), ASBS Newsletter

McCaw, W.L. and Catchpole, E.A. Comparison of grass fuel moisture contents predicted using the McArthur Mark v Grassland fire danger meter and the corresponding equation of Noble et al. *Australian Forestry*.

McRoberts, K.M., Meloni, B.P., Morgan, V.M., Marano, R. Binz, N., Erlandsen, S.L., Halse, S.A. and Thompson, R.C.S., Morphological and molecular characterisation of *Giardia* isolated from the Straw-necked Ibis in Western Australia. *Journal of Parasitology*

Pearson, D.J. and Kinnear, J.E., A review of the distribution, status and conservation of rock-wallabies in Western Australia, *Australian Mammalogy*

Perry, G. and Rye, B.L. Nomenclatural notes in the genus *trymalium* fenzl (Rhamnaceae). *Taxon*.

Pigott, J.P., WWW Homepages (at [HTTP://www.merriweb.com.au/patrick](http://www.merriweb.com.au/patrick)) inc. index, profile, research biography, current activities, publications and weed conference reports and abstracts.

Pigott, J.P. and Farrell, P. Bridal creeper in the Naturalist Region: A case study. Abstract for Bridal Creeper Symposium.

Pigott, J.P. and Loneragan, W.A. Fire and human disturbance regimes and impacts on plant communities

at the Star Swamp Bushland Reserve. Proceedings of the Urban Bushland Council conference on fire and urban bushland.

Radomiljac, A.M., The influence of pot host species, seedling age and supplementary nursery nutrition on *Santalum album* Linn. (Indian Sandalwood) plantation establishment within the Ord River Irrigation Area, WA, *Forest Ecology and Management*.

Radomiljac, A.M., Weed control for flood irrigated *Santalum album* Linn. plantations within the Ord River irrigation area., *Journal of Australian Forestry*

Richmond, G. and Coates, D. Population dynamics, seed biology and conservation of six endangered *Eremophila* species. ANCA ESP Project No 353 Final Report.

Shearer, B.L., Byrne, A., Dillon, M. and Buehrig, R.. *Armillaria luteobubalina* distribution, and impact on community diversity and structure in Eucalyptus wandoo forest and South-western Australia. *Australian Journal of Botany*.

Wardell-Johnson, G. Williams, J.E., Hill, K. and Cumming, R.. Evolutionary biogeography and contemporary distribution of Eucalyptus. *Eucalypt Ecology*.

Wardell-Johnson, G., Williams, M., Hearn, R. and Annels, A. A floristic survey of the Tingle Mosaic. Heritage Commission.

Wheeler, J., Common trees of the south-west forests, CALM Bush Book Series

Williams, A.A.E. and Atkins, A.F., Notes on the life history of the Western Australian *Skipper Mesodina Hayi* Edwards and Graham (Lepidoptera:Hesperiidae), *Australian Entomologist*

Wills, R.T., Robinson, C.J., Grant, M. and Behn, G., Problems of habitat complexity in remote identification of dieback disease caused by *Phytophthora cinnamomi*. Conference abstract.

SIDNEWS FEATURE**SETTING MILESTONES AND MEASURING PRODUCTIVITY OF SCIENTISTS**

“Complete autonomy for scientists is not considered appropriate. Go be creative is the kiss of death on output” (Carroll 1988).

How do we measure the productivity of research scientists? In this discussion paper, I would like to take a broader view of the performance of scientists, of appraisal systems and of relevant performance indicators. The discussion paper is a mix of my own ideas, and ideas gleaned from the literature (of which there is plethora!) and management training courses I have attended in the past. I invite your comment.

Performance Appraisal System

In my view, our current annual staff appraisal system could be improved to better reflect the nature of the work we do. The Department of Agriculture have recently been through a process of developing a performance appraisal system (PAS) which appears to be working very successfully (see Seal 1993 -Woodvale Library has a copy). There are some good ideas in the paper that we could adopt.

The evolution of a better PAS is probably something which should happen at a Departmental level rather than within SID. However, we could probably make some modifications to the existing system to suit current needs within SID

One weakness in the design and execution of the existing system is that the emphasis is on “filling in forms” rather than on good communication of expectations and evaluation of performance. This is particularly true for staff who are at the top of their level. Often, the only incentive for being appraised is to receive a salary increment. Another weakness is that there are no agreed levels of performance or achievement. The process of performance evaluation needs to begin with an agreement on what is expected of the employee in quite specific terms. People need to know specifically, what they are supposed to do, what standards are expected, what the time frames are and how this links with SID and Departmental objectives. There is insufficient attention given to this in the existing system. When this is done, then we have a basis for evaluating performance.

During this process it is important to define and agree on performance indicators. The following is a far from exhaustive list of potential performance indicators for SID scientists and I encourage you to modify the list as you see fit. To provide a quantification of performance, one could also allocate a weighted value to each of these indicators. This is always a bit dodgy, but it might be helpful at the end of the day if we could develop an individual “Performance Index” over a specified time period. This could be used (cautiously) to discern performance trends and perhaps to set goals. For example, you might strive for an annual PI of say 100! The PI could also be used with other criteria for deciding which scientists should receive funding etc. The catch here of course is that if you don’t get funds, it’s difficult to produce, hence you could be forever stuck on a low PI value. The corollary is that scientists with high levels of funding should be able to produce more, therefore generate higher PI values. Perhaps we could introduce a measure of rate of return - outcomes verses expenditure? It could be a simple ratio of PI value:\$ spent!

The Following are potential performance indicators and possible range of index values (shown in parenthesis).

<i>A. WRITTEN TECHNICAL PUBLICATIONS</i>	<i>B. POPULAR PUBLICATIONS</i>	<i>C. MANAGEMENT PUBLICATIONS</i>
Book (15-20)	Landscape or equivalent (3-6)	Recovery plan (4-8)
Subject review paper (10 - 15)	CALMnews, SIDnews (1-4)	Management plan (4-8)
Journal publication (5-10)	Pamphlets, brochures, information sheets (2-5)	Operations plan (4-8)
Book chapter (5-10)	Media articles/responses (1-4)	Prescription/guideline (4-8)
Conference/workshop publications (4-8)	Ministerials (1-3)	
Technical notes (3-6)		
Poster presentations (3-6)		
Unpublished report (2-6)		
SPP progress reports (1-4)		
<i>D. ORAL PRESENTATIONSⁱ</i>	<i>E. OTHER</i>	
Conference/workshop (3-6)		
Seminar (3-6)		Landscape expedition (2-5)
Talks (1-4)		Supervisor (2-4)
Field day (3-5)		Associate Editor (2-4)
Lecture (1-4)		Volunteers (1-3)
Media (1-3)		External funds obtained (?)
Committee membership (1-4)		

ⁱ Oral presentations rather than written technical reports or publications are the primary means by which scientific professionals collect and transfer information and ideas to project groups” (Carroll 1988).

During the annual staff performance appraisal process (or at any stage), scientist and supervisor jointly agree on what should be achieved with regard to the above performance indicators over an agreed time frame. Tasks and standards to be achieved should be quite clearly specified, e.g., "Publish in a journal, the research on the hairy-nosed wombat (SPP # 37/2) by next appraisal" etc. There should be written, formal documentation of this process and of the agreed tasks to be undertaken.

Progress should be monitored as regularly as deemed necessary and feedback provided. Feedback should not only occur once a year during the annual appraisal. At the next formal annual appraisal, an assessment (quantifiable) is made of the extent to which the agreed achievements were in fact met. Reasons for under-achievement can be discussed and, in a consultative manner, corrective measures formulated. This relies on the supervisor taking an active role in managing people.

This is a discussion paper - meant to stimulate some ideas. It is vital that scientists and technical officers are involved in any process of determining performance indicators. We also need to consider other groups within SID, particularly the Admin. and Library staff; their performance appraisal needs and appropriate performance indicators. The best way to do this is to involve them in the process.

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References

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