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DEPT. CONSERVATION AND
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PERTH, WESTERN AUSTRALIA

RESEARCH INFORMATION NEWS

Department of Conservation and Land Management

Editor: Jeanette Gilmour
Tel: 4055105
Wildlife Research Centre
PO Box 51
Wanneroo 6065

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Number 6/88

June 1988

EDITORIAL

A large section of the Research Division staff have spent the last four weeks in the Kimberley carrying out research in relation to the Rainforest survey. At the time of writing a few members of the team were starting to filter back to the chills of the Perth winter. The field trip was a success - as was the food! Those that remained in Perth are looking forward to hearing more about the trip.

In this edition of the newsletter we have contributions from Dave Ward and Matthew Williams, Andrew Brown and Ian Abbott. We also bring you another episode in our "Who's who" series. Please don't forget that all Research Division seminar notices are now printed in the newsletter. Details of two coming seminars are contained in this edition.

Ed.



	ISSUE	DEADLINE	DISTRIBUTION
DEADLINE FOR NEXT ISSUE	JULY 88	22 JULY 88	EARLYAUGUST



INFORMATION FROM THE RESEARCH DIVISION POLICY GROUP MEETING

The June meeting of the Research Division Policy Group was held at Dwellingup Research Centre on 30 June 1988. The meeting was followed by a meeting with Program Leaders and then with Dwellingup Research Centre staff. A field trip was organized in the afternoon to look at dieback, thinning and rehabilitation sites. The RDPG and Program Leaders extend their appreciation to Bryan Shearer, Richard Mazanec, Geoff Stoneman and other Dwellingup staff for this informative afternoon.

INFORMATION FROM THE MEETING

* Program Reviews - Comments received from staff on the draft document were circulated to RDPG members. The paper will be re-written incorporating relevant comments.

* Research Centre Locations - RDPG supports the upgrading and maintaining of the Dwellingup Research Centre. Discussions are still underway with the aim of producing a paper on our plans for all country research centres.

N.B. In the June Newsletter comment was made on the future location of Metropolitan Research Centres. It should be noted that no formal decision has been made on future locations and the paper submitted to the General Manager was for discussion only.

* Budget - After final transfers had been carried out the close of the financial year saw the Division 100.89% spent. The RDPG extend their appreciation to Cleve Mathews and John Dorlandt for their efforts over the year and in particular for their efficient hard work over the final weeks of the financial year.

* Herbarium Transfer - Arrangements are underway to have the salaries and budget of the Herbarium transferred to CALM. The Herbarium became part of Research Division administratively on 1 July 1988. Amendments to the Mis-Use of Drugs Act are expected to be passed in the spring session of Parliament, thus allowing formal transfer to take place.

* Travel Funds - The allocation of interstate/overseas travel funds will be divided on a pro-rata basis between relevant programs.

* Five Year Research Plan - This is currently being re-drafted and should be compiled by October.

HOW NOT TO GIVE A SEMINAR

On 31 May I attended a seminar with the above title, given by Professor David Lindsay, Dean of the Faculty of Agriculture at UWA. Prof Lindsay's the author of the excellent book "A Guide to Scientific Literacy", published in 1984 by Longman Cheshire.

At the seminar he alternated in playing two roles - as an incompetent, dull boring presenter and as the opposite.

The following is my précis of the seminar.

INTRODUCTION

Discreetly check your zipper/tie/hemline etc before standing up.

Know how to switch on the overhead and slide projectors.

Start by saying what you are going to talk about - simply repeating the title is insufficient.

Be positive - don't apologize.

Don't be too cool - that betrays nervousness.

Speak naturally and avoid long sentences.

Avoid gripping the lectern.

Use lots of eye contact with your audience.

Involve the audience by using "you" as in "as you can see here".

Don't take your watch off - you'll never look at it.

Reading is okay so long as you can give the impression that you're ad libbing. You can do this by not using big words, not stumbling over pages and not staring at your notes.

METHODS

Reading out a string of numbers is a waste of time. Two numbers at any time are the limit.

Because the speaker knows more about the subject than the audience, presentation must be slow and deliberate.

Leave overheads and slides on the screen to aid contemplation.

Put important numbers another way in order to reinforce them.

Give the barest essentials only - let the audience ask for more.

RESULTS

Don't put up massive tables of information and then request the audience to ignore certain rows or columns - they won't.

Don't mask overheads - the audience will spend time wondering what is to be uncovered.

Position your notes and yourself correctly in relation to the projector(s) and screen(s).

Use a pointer on the screen, not on the original. Do not use your finger.

Allow for dead time. This is time for the audience to read the screen. Help them orientate by explaining axes, legends etc but then be silent for approximately 10 seconds (they won't be listening)

Fill the screen, but not by putting more information on it. The maximum's 18 rows down (including blanks) x 40 letters across (including blanks).

Provide one piece of new information every 3 minutes. Repeat your points in different ways without the audience realizing it. This is like the way a film producer avoids concentrating on one angle or close ups.

Alternate between the general and the particular. In a mixed audience the particular will be of interest to other specialists and the general will do for the rest.

Omit jargon - no one will be offended.

Let people read exact figures while you interpret for them.

Use a blackboard if you want a message to be visible for the duration of the seminar.

If you alternate between slides and overheads, be aware that you lose time.

CONCLUSION

Saying that "more research needs to be done" is trite.

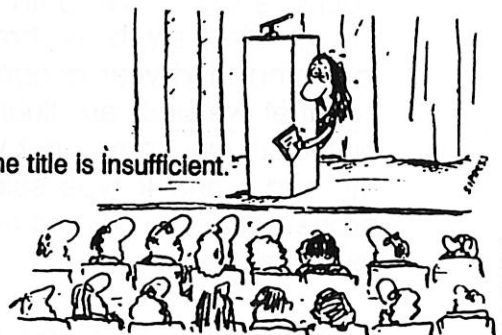
Instead, tell the audience what you've just told them.

It is better to finish earlier than later - information presented after time will not be taken in.

GENERAL

Personal presentation of the speaker is important - it signifies that the occasion's special for you and is a sign of respect to the audience.

The Chairman, Professor Robson, stated that the good reputation of many mediocre scientists followed from their being better presenters than writers.



.....*Ian Abbott*

BIRTH ANNOUNCEMENT - RESEARCH METHODS TEAM

After a little debate and name changing, the above team has been established. The team members are Matthew Smokey Williams, and myself, David Socrates Ward. We both have double majors in mathematics and biology, although Matthew, being brainier, has honours. However, I claim an extra point for doing third year geography too. But enough of this bragging, suffice it to say that we both are fluent in the jargons of both disciplines. Have no fear, biologists, we know what you mean by prokaryotes, trophic levels, poikilothermy and r and k type selection. Further, we can talk to you about Markov processes, eigenvectors and difference equations! Our aim is to help in the following areas:

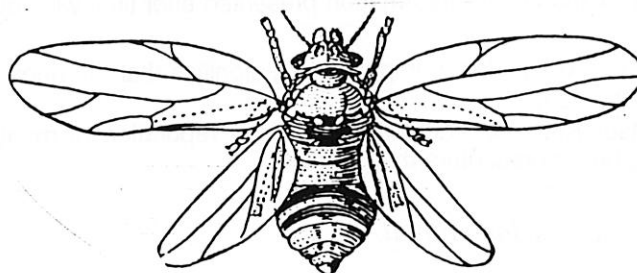
1. Design of surveys and experiments....(description phase)
2. Statistical analysis.....(analysis phase)
3. Systems ecology.....(synthesis phase)

Matthew lives near Woodvale and will be visiting once a week for liaison and hands-on problem solving. I will handle most of the problems from Perth south.

One of our first tasks is to devise an abstract general system under which all past and present projects and information can be mapped or catalogued. For example we may want to find out what projects, data and publications exist concerning the effects of fire frequency on mammals in the desert, or the effect of agricultural clearing on water quality and hence water-bird numbers or any other of the myriad management problems facing us. The prototype system framework has been dubbed "The Ecocube", and I will be giving a seminar on it in August. A recent dummy run on two members of the RDPG resulted in one hastily leaving the room, and the other sitting polite but glassy-eyed. Perhaps a descent from airy abstraction to more vivid, gestalt analogies is needed. Once the Ecocube is up and running we can begin to make a systematic approach to the various project team leaders to evaluate needs and priorities for analysis and modelling.

Yours methodically

.....*Dave and Matt*



WHO'S WHO IN RESEARCH DIVISION

Dr Ian John Abbott (BSc PhD) Principal Research Scientist, Science

As announced in last month's newsletter Dr Ian Abbott has recently been appointed to the position of Principal Research Scientist, Science. Our reporter has once again been out and about making a few enquiries about Ian in order to bring you another episode in our "Who's who series". Here's what we managed to uncover.

Ian was born on the 9th September 1947 in the New South Wales town of Ryde and went on to attend Drummoyne Senior High School. On completion of his schooling in 1964 Ian pursued his interest in science by enrolling in a degree course at the University of Sydney. In 1968 he graduated with first class honours in Zoology. Throughout his undergraduate years, Ian was awarded annual prizes for Zoology. He continued his studies and from March 1969 - March 1972 attended Melbourne's Monash University. It was here that Ian wrote his thesis for his PhD. on "The ecology and evolution of passerine birds on islands".

In his early post graduate years Ian held a number of positions which enabled him to move out of Australia.

In 1972 he was awarded a postdoctoral fellowship at the McGill University, Montreal, Canada. As part of his fellowship, four months field work was carried out in the Galapagos Islands studying the morphological variation in *Geospiza* species (Darwin's finches). This fellowship was followed by the awarding of the F.M. Chapman Fellowship with the American Museum of Natural History in New York.

In 1974 Ian returned to Australia and took up residence in Perth, Western Australia. From 1974 to 1978 he worked with the University of W.A. firstly in the Department of Zoology and then with the Department of Soil, Science and Plant Nutrition. At the conclusion of these fellowships he joined the Forests Department in 1979 as a Research Officer. Ian's initial task was to examine the effects of prescribed low intensity fires on the soil fauna of the jarrah forest, and to evaluate if *Banksia grandis* could be successfully reduced in abundance in the jarrah forest. In 1984 Ian was appointed forest entomologist and in 1986 he was appointed to the position of Jarrah Program leader within the Research Division of CALM.

Throughout his career Ian has been involved with a number of professional organizations. He is currently a member of the Australian Entomological Society, Royal Society of WA, Royal Australasian Ornithologists Union, South Australian Ornithologists' Association and the Ornithological Society of New Zealand. Ian's publication list is extensive amounting to over one hundred published papers and articles.

In 1986 Ian was awarded a grant from the M.R. Jacobs Fund administered by the Australian Academy of Science which enabled him to travel widely in the Eastern States and deliver a number of seminars on forest insect research.

Away from his office at Como Research Centre Ian is a keen cellist and currently plays for the Karinyup Symphony Orchestra. He also enjoys a work out at the local health club. Other spare time is spent with his wife and nine year old daughter. On reflection Ian feels that the time spent on the Galapagos Islands in 1973 was one of the highlights of his career.

The appointment of Ian to the PRS (Science) position is a reflection of his expert scientific knowledge.

RESEARCH PROJECT PLANS

The following Research Project Plans have been approved this month:

No: 13/88
Title: Wandoo Regeneration using fire
Officer-in-Charge: Neil Burrows

No: 14/88
Title: Effect of drying treatment, moisture
content and re-conditioning
treatment on collapse in regrowth
jarrah
Officer-in-Charge: Allan Thomson

No: 15/88
Title: Effect of blue stain on strength of
P. radiata power poles
Officer-in-Charge: D Donnelly

No: 16/88
Title: Adhesives for manufacture of
Jarrah Furniture Blanks
Officer-in-Charge: P Newby & L Mathews

No: 17/88
Title: Sawmilling - Effect of saw gauge,
packing method and tensioning
method on kerf of circular saws
and hence recovery
Officer-in-Charge: K White

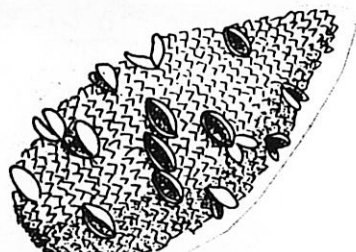
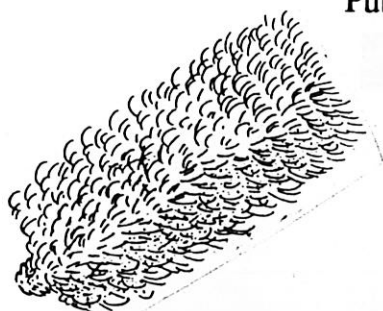
SCIENTIFIC AND TECHNICAL PUBLICATIONS

The following have been approved for submission for publication this month:

- Author(s): SA Halse and RP Jaensch
Title: Breeding Seasons of Waterbirds in South-Western Australia - The Importance of Rainfall
For Submission to: Emu
- Author(s): GJ Keighery and JJ Alford
Title: Flora of Benger Swamp
For Submission to: W.A. Naturalist

The following have been published:

- Author(s): S Crombie, JT Tippett & DJ Gorddard
Title: Water Relations of Root-pruned Jarrah (*Eucalyptus marginata* - Donor ex Smith) Saplings
Published in: Australian Journal of Botany Vol 35 1987 pp 653-663
- Author(s): BR Maslin, JE Dunn & EE Conn
Title: Cyanogenesis in Australian Species of *Acacia*
Published in: Phytochemistry, Vol 27 No. 2 1988 pp 421-428
- Author(s): BL Shearer, BJ Michaelsen & PJ Somerford
Title: Effects of Isolate and Time of Inoculation on Invasion of Secondary Phloem of *Eucalyptus* spp. and *Banksia grandis* by *Phytophthora* spp.
Published in: Plant Disease /Vol 72 No. 2.



SEMINAR

14th July 1988

THE DEVELOPMENT OF FARMING SYSTEMS WITH TREES TO CONTROL LAND DEGRADATION AND TO PRODUCE TIMBER

Presented by Richard Moore

Agroforestry research is concerned with developing methods of integrating trees with farming to help combat problems such as salinity and wind erosion. To make progress in controlling these problems, trees will need to be planted on a large scale. Also, they'll need to be planted in ways that integrate them with conventional farming practices so that farmers can stay farming the land. Trees are an important component of farming so it makes economic sense to use trees which can produce saleable products, such as timber, as well as protecting the land from degradation. With CALM's commitment to growing timber on farms, as exemplified by its sharefarming schemes, conditions are right for agroforestry to develop strongly. Long term experiments of several types of agroforestry, including widely-spaced eucalypts and multi-purpose shelterbelts, have been established. These studies are providing information which will tell us whether they are practical and economic methods of farming.

**Venue: Training Centre
CALM SOHQ
50 Hayman Road
Como**

Time: 3.00pm



SEMINAR

5 August 1988

PLANT PHYSIOLOGY : A QUIET TOOL FOR CALM MANAGERS Presented by Dr Stuart Crombie

Plant physiology is the study of the internal processes of plants. These processes change as plants interact with their environment. Physiological changes can be evident in relatively short periods (from seconds to weeks) as plants adjust to changed circumstances. In contrast, plant morphology, survival or distribution integrate the outcomes of these short-term processes over longer periods more related to the lifetime of the plant. Consequently, physiological studies can provide clues to the likely effects of disease or management actions which might take years to become evident in whole plants or communities.

The relevance of plant physiology research to CALM operations will be illustrated using studies of jarrah dieback and water catchment management. In the former invasion of jarrah tissues by *Phytophthora cinnamomi* has been shown to depend on tree water status. In the latter transpiration by understorey shrubs was shown to be minor compared to that of forest trees.

**Venue: Wildlife Research Centre
Ocean Reef Road
Woodvale**

Time 3.00pm

THE UNDERGROUND ORCHID (*Rhizanthella gardneri*)

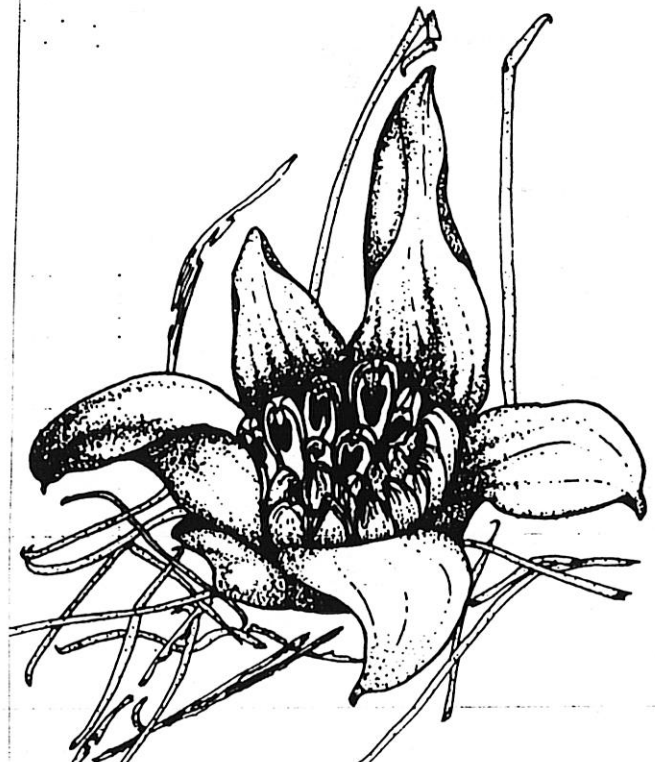
A new population discovered

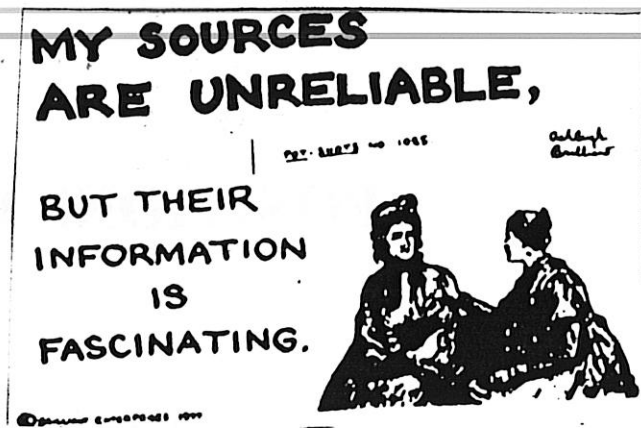
Following an unconfirmed report from a country member of the Western Australian Native Orchid Study and Conservation Group (WANOSCG), Andrew Brown and Steve Van Leeuwin from Woodvale Research, accompanied by members of "WANOSCG", searched a small reserve west of Corrigin, during June of this year (1988).

We are happy to report, that within half an hour, 8 plants of this rare and unusual orchid were discovered in full bloom.

This is a significant find, as previously, just five populations were known from the wild. A further bonus is that these plants were located on a C Class? reserve, which, as well as the orchid, contains much unspoilt remnant vegetation, once common to this area of the wheatbelt, but now becoming increasingly rare. Hopefully, with the discovery of a Declared Rare Species, this area will be regraded to A class, thus ensuring its preservation for future generations to come.

..... Andrew Brown





HAVE YOU HEARD

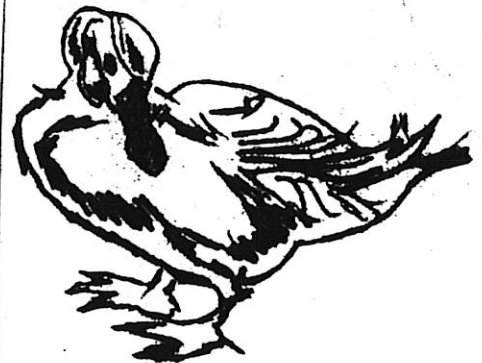
Bob Prince has recently returned to his office at Woodvale after several weeks at CALM's Crawley office. Bob has been acting for Scientific Advisors - John Blyth and Kieran McNamara. During this time he was involved with looking at the Camping Policy on Nature Reserves; Revision of the Wildlife Conservation Act and Herdsman Lake issues. A week was also spent at the Mammal Society Conference in Sydney.

Glenda Godfrey has recently joined the admin staff at Como Research. Glenda is employed under contract until the end of the year.

Rumour has it that a **prominent Woodvale Scientist** is tying the knot in August.



Congratulations to **Dave Algar** on his recent marriage



Marg Wilkie, Como Research has been seconded to the General Manager's module for five months. The secondment commences in October. Marg is currently on four weeks leave. She is travelling with family and friends along the Gunbarrel Highway to Ayres Rock.

POSITIONS VACANT

DEPARTMENT OF
CONSERVATION AND
LAND MANAGEMENT

TECHNICAL OFFICER

POSITION NO. 0210845

SALARY: \$23,105-\$25,897 per annum according to qualifications and experience plus a District Allowance of \$734 per annum (Married rate) or \$367 pa (Single rate).

QUALIFICATIONS AND EXPERIENCE: Tertiary Entrance Examination, with a minimum of four subjects including sound grades in English, Science and Mathematics, or approved equivalent. Progress towards a degree in Biology desirable. Two years' experience relevant to ecological research essential.

DUTIES: Carry out and assist with research on Nature Conservation problems in Western Deserts. Consult with Aboriginal communities. Maintain field and laboratory equipment.

CONDITIONS OF SERVICE: Permanent resident status in Australia is a prerequisite for appointment to the permanent staff.

General conditions of service applicable to permanent officers employed under the provisions of the Public Service Act 1978 will apply.

LOCATION: KALGOORLIE.

GENERAL: Current driving licence essential. Appointee will be required to travel widely and work in remote areas on extended field trips. Accommodation: Not provided.

Standard application forms, Selection Criteria and Position Data Forms can be obtained by telephoning (09) 367 0218. Applications should address the Selection Criteria; an interview may not be granted unless it is clearly demonstrated that an applicant meets the essential criteria.

APPLICATIONS: Applications quoting the position number to: (Envelope **MUST** be marked "CONFIDENTIAL - Vacancy Application")

Personnel Officer
Department of Conservation
and Land Management
50 Hayman Road
COMO WA 6152

NO LATER THAN: 5.00pm,
Thursday, 14 July, 1988.

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of Conservation and
Land Management is an Equal
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