

RESEARCH INFORMATION NEWS

1988
WESTERN AUSTRALIA

Department of Conservation and Land Management

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Editorial



Over the next few editions of the "Newsletter" we will be endeavouring to publish some short articles on "Time Management". Last edition we hinted at this with a couple of quotes in "Philosophy Corner". In this issue we bring you an article titled "Short of Time?" To be effective we need to maximise both the quantity of time we have available and the quality of how that time is used. Time management is demanding, because for most of us it represents a change of well established habits. We hope you enjoy these articles - and maybe put some of the ideas presented into practice.

For any reader who may wish to respond to any of the articles in these newsletters - please do. We'd love a bit of two way communication and after ten issues it really is time we had a "Letters to the Editor" page!

Ed

	ISSUE	DEADLINE	DISTRIBUTION
DEADLINE FOR NEXT ISSUE	NOVEMBER 88	23 NOVEMBER 88	EARLY DECEMBER



Information from the Research Division Policy Group Meeting

The meeting was held on 27 October 1988 at the Herbarium

Regional Herbaria: A working group consisting of Bruce Maslin, Dave Coates, Tony Start and Steve Hopper is being formulated to discuss the concept of regional herbaria.

Technical Staff Criteria Progression: The Department has formally replied to the Public Service Commission expressing dissatisfaction with the PSC criteria for progression. It is anticipated that the "Management Team" will hold a meeting with Technical staff representatives early in December.

1988/89 Budget Allocations: These have now been circulated to all Program Leaders. Expenditure within the Program is the responsibility of the Program Leader.

PhD Studies: The RDPG encourages the gaining of higher qualifications. To attract RDPG support for Departmental sponsoring of PhD studies the following conditions must be met:

- (1) the topic studied must be of high priority
- (ii) it should not entail more than 15% of the officer's work time (otherwise leave without pay should be applied for).
- (iii) the officer must satisfy commitments to existing projects.

These criteria will be presented to Policy Directorate in an expanded "Draft Policy" form.

This RDPG meeting was followed by a meeting with Program Leaders where the following items were discussed:

- Travel money allocations
- 1988/89 budget allocations
- Research Division archives - a working group has been formulated to look at this.
- Program Leader leadership styles
- Radio call signs
- Seminar attendance
- Research Project Plans
- Publications
- Publicity
- Performance Criteria for Research Scientists

The RDPG is looking at rostering Program Leaders through RDPG for 3 to 5 month periods in order to give them a better understanding of the workings of the group and the issues addressed.

During the afternoon a meeting was held with Herbarium staff. This was followed by a thought provoking presentation from Dave Ward - "The Ecocube and Question Map".

SEMINAR

Thursday 17 November 1988

**The Small Eucalypt Processing Study:
a mid-term report**

Presented by Dr Graeme Siemon

The Wood Utilisation Research Centre at Harvey is over halfway in a four year study on processing of small eucalypts. The research is funded jointly by the Commonwealth through a Public Interest Project, by the State, and by the WA timber industry. The major objective is to maximize the value-added benefits by developing processes of sawing, seasoning, and manufacturing of regrowth and short mature logs which are currently unutilizable.

The research includes:

- stockpiling
- sawmilling
- seasoning
- wood properties assessment
- product development (eg furniture panels)
- management ("Gumtree" model)
- marketing surveys.

There is close liaison with industry to ensure that the research program is "needs based" while being objective.

This is resulting in successful vertical integration between forest growers, timber producers and manufacturers.

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

Time: 3.00pm



SEMINAR

Friday 2 December 1988

Conservation of Forrest's Mouse *Leggadina forresti* on Thevenard Island

Presented by Keith Morris

Since the introduction of the House Mouse *Mus musculus* to Thevenard Island in 1986, the population of Forrest's Mouse on the island has been monitored. This is the only known island population of this species and it was believed that the presence of *Mus* may have a detrimental affect on this native rodent population. Preliminary dietary analysis has shown some overlap in diet. This study has confirmed that both *Mus* and *Leggadina* are distributed throughout the island, and that *Mus* are in significantly greater numbers. Trap success rates of *Mus* have increased throughout the study. While *Leggadina* are spring breeders, *Mus* have been shown to breed throughout the year with a peak in activity during spring.

Although *Leggadina* have survived two years in the presence of *Mus*, it is proposed to relocate some *Leggadina* to another island to ensure the survival of this species.

Venue: Wildlife Research Centre
Ocean Reef Road
Woodvale

Time: 3.00pm

RESEARCH METHODS NOTE NO. 4

WHY LARGE EXPENSIVE EXPERIMENTS SHOULD BE RARE

by Dave Ward

There is in Australia a certain forest research organisation which has, over the last decade or so, spent over a million dollars on a large and complicated experiment. It's a sort of graeco-latin-split-plot-balanced-incomplete-blocked-fully-replicated-randomised-lattice-design, and numerous papers have been derived from it, symposia and seminars held, and learned statisticians consulted. To the present, as far as I can fathom, the only solid conclusion reached is that pine trees grow rather better on loamy soil than they do on sand, and that a bit of fertilizer is not a bad idea.

In the last article I outlined a method of question analysis by which we can reveal questions that are concealed within other questions. The logical end result of such analysis can be a set of "yes-no" questions, and barristers have used this method for centuries in the examination of witnesses. It is sometimes more effective in a law-court to pin a witness down to a binary answer of "yes" or "no" than to offer a more general question with the potential for a misleading answer.

If we can achieve this simplicity and clarity in our research questions, we should have little trouble in design. This does not mean that each survey or experiment need be single purpose. As pointed out by Sir Ronald Fisher, it is often cheaper and more effective in the long run to present nature with an inventory of questions, a full cross-examination. However, each question must, in itself, be clear and simple.

The main principles to remember in design are RANDOMIZATION, REPLICATION and CONTROL. When dealing with a situation in which some variables are manipulated, we have an experiment. When we cannot manipulate, but must accept nature as she stands, then we have a survey.

In my view, most of the mental effort should go into determining your research questions. You should then need less effort for design, and hardly any for statistical analysis.



Selection of a site for a single Metropolitan Research Centre

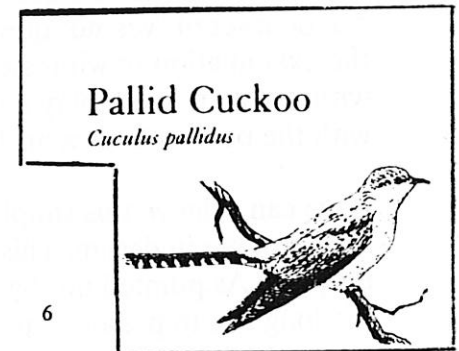
As all staff are aware, RDPG has been deliberating on this vexatious question, and has considered space for expansion, building costs, travel time of staff, proximity to SOHQ and tertiary institutions, and available facilities.

Another factor is quality of the acoustic environment, by no means a trivial factor when considering the state of happiness of staff.

Here then is a list of bird species recorded at Woodvale and Como.

Woodvale

Breeding proven	Regularly recorded*	Regular visitor	Occasional visitor
Laughing Turtle-Dove Red-capped Parrot Port Lincoln Ringneck Shining Bronze-Cuckoo	Galah Southern Boobook Tawny Frogmouth Laughing Kookaburra	Brown Goshawk (Summer) Little Eagle (Winter-Spring) Elegant Parrot (Autumn-Winter)	Carnaby's Black Cockatoo Brown-headed Honeyeater New Holland Honeyeater Pallid Cuckoo (Winter-Spring) Mistletoe Bird Spotted Pardalote
Barn Owl Rainbow Bee-eater Scarlet Robin Rufous Whistler Grey Shrike-thrush Grey Fantail Splendid Fairy-wren Western Thornbill Yellow-rumped Thornbill Brown Honeyeater Western Spinebill Silvereye Grey Butcherbird	Weebill Western Greygone Inland Thornbill Varied Sittella Singing Honeyeater Striated Pardalote Australian Magpie Australian Raven	Fan-tailed Cuckoo (Autumn-Winter) Welcome Swallow Tree Martin Black-faced Cuckoo-Shrike Red Wattlebird	
Total 17	12	9	6



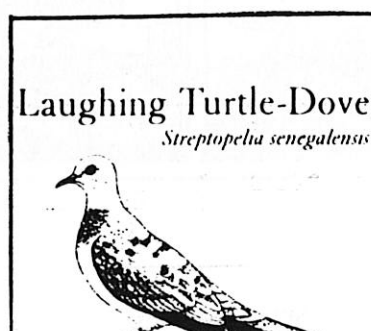
Como

Breeding proven	Regularly recorded*	Regular visitor	Occasional visitor
Laughing Turtle-Dove Laughing Kookaburra Grey Butcherbird	Australian Raven	Rufous Whistler (Spring) Carnaby's Black Cockatoo (esp. Autumn) Feral Pigeon Red Wattlebird	Australian Magpie-lark Australian Magpie Silvereye Yellow-rumped Thornbill Indian Turtle-Dove Singing Honeyeater Black-faced Cuckoo-Shrike Willy Wagtail
Total 3	1	4	8

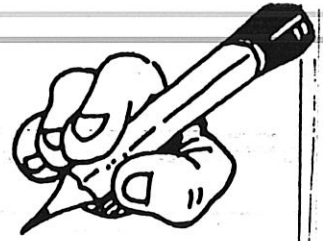
**Breeding expected but no local records*

My thanks to Allan Burbidge for collecting the Woodvale list. It would be interesting to have similar information for our other Research Centres and Stations

Ian Abbott



A WORD FROM THE SCIENTIFIC EDITOR



I often come across the word compare used with the wrong preposition in people's writing.

Do you compare with, or do you compare to?

Well, it depends on the nature of the comparison which preposition you should use. Both are right, but not in the same circumstances, and, conversely, both can be wrong. Used incorrectly a meaning different from the one intended is conveyed.

Comparison may imply similarity or it may imply difference, and whichever meaning is intended is made clear by the use of the appropriate preposition.

When compare means to liken, to point out the similarities between two things, it is followed by to, not with... eg the karri tree has often been compared to the Californian redwood for its grandeur-means the two trees are similar or in the same class.

When compare means different from, to evaluate one against the other, point out the differences or dissimilarities it is followed by with, not to.

eg. Marri has little value as a commercial timber compared with karri - is pointing out a difference in the things being compared.

Marianne Lewis

Just to be a bit pedantic

I submit that the title of our Newsletter is tautologous (since "news" is one type of "information"), and should be replaced with "Research Division Newsletter".

Any comments? Other suggestions?

Gordon Friend.

If you recall we asked for suggestions for a title in our very first edition back in January. Now that we are a regular publication perhaps we could put our thinking caps on and try again. All suggestions welcome.

Ed.

Short of Time?

Do you feel that you have more to do than time to do it in? 'Practically everyone does these days' says Dr Merle Ace, Associate Professor of Organisational Behaviour at the University of British Columbia.

"One of the biggest reasons time is wasted on the job, is that jobs are not properly clarified by senior staff. Immeasurable time can be saved if the supervisor/manager spends a few extra minutes at the start ensuring that his co-workers know exactly what is expected." Here are some of the most common myths of time management which cause loss of time:

The higher the level at which a decision is made, the better. Not so, according to Professor Ace. A decision should be made at the lowest level appropriate. Not only does this save time, but it also gives a necessary kind of responsibility to lower-level employees.

Delay improves the quality of decisions. Again, not so - procrastination just makes decisions more difficult. Also, a last minute bad decision can't be changed.

Managers who are the most active get the most done. This belief occurs when activity is confused with accomplishment, when we lose sight of our objectives. Activity, originally designed to meet desired ends, ultimately becomes the end in itself. Management becomes busy-ness.

Delegation saves time, worry and responsibility. This is true only if one takes a long-term perspective. Investing time now in delegation can earn a handsome rate of interest in the future. Authority must be delegated with responsibility, but accountability must always remain with the delegator.

The most efficient manager is the most effective. These terms are too often confused. A manager may be very efficient on the wrong task, at the wrong time, or in the short run, and still be ineffective. Efficiency is doing the job right. Effectiveness is doing the right job right.

The harder one works the more he gets done. However, end results are seldom proportional to the buckets of sweat generated. One hour of planning can save three in the execution. Hard workers often do things the hardest way. Work smarter, not harder.

The open door policy improves a manager's effectiveness in dealing with the team. This has unfortunately come to mean open at all times, a simple invitation to socialize. Managers must have scheduled unavailability time to think and plan-through having someone intercept phone calls, retreating to a hideaway or simply staying at home.

Many managerial short cuts are time savers. This is misleading. Short cuts usually cost more time. Making decisions yourself, refusing to delegate and cutting important

conversations short to make another meeting only create further serious time problems. 'If you don't have time to do it right, when will you have time to do it again?'

Professor Ace points out that when asked what their biggest 'time-wasters' are, managers are prone to blame outside factors, such as telephone, meetings and interruptions. In fact it is the internal factors over which we have the most control and where the most improvements can be made, such as failure to delegate, procrastinating and inability to say 'No!'

Professor Ace suggests keeping a daily time log as a means of assessing how your time is really utilized. He says that people are not able to assess how they have spent their time from a retrospective point of view. An analysis of time logs kept for just one week will reveal where your time traps are hidden. Then perhaps you can find the time to do something about time.

Here are some simple suggestions from Professor Ace on how to save time.

- Have a light lunch so you don't get sleepy in the afternoon.
- Skim books quickly looking for ideas.
- Don't own a television set.
- Give up forever all 'waiting time'. If you have to wait consider it a 'gift of time' to relax, plan or do something you would not otherwise have done.
- Carry blank 3 x 5 index cards in your pocket to jot down notes and ideas.
- Put signs in your office reminding you of your goals.
- Keep long-term goals in mind even while doing the smallest task.
- Always plan first thing in the morning and set priorities for the day.
- If you seem to procrastinate ask yourself: 'What am I avoiding?' - and then try to confront that thing head-on.
- Start with the most profitable parts of large projects and you will often find it is unnecessary to do the rest.
- Concentrate on one thing at a time.
- Do much of your thinking on paper.
- Work alone creatively in the morning and use the afternoons for meetings, if necessary.
- Try to listen actively in every discussion.
- Delegate everything you possibly can to others.
- Generate as little paperwork as possible and throw away anything you possibly can.
- Write replies to most letters right on the piece of paper.
- Save up all trivia for a three-hour session once a month.
- Try not to think of work on weekends.
- Keep small task to a minimum during work hours.



Research Project Plans

The following Research Project Plans have been approved this month.

No: 44/88
Title: *Edaphic climatic and floristic pattern associated with the distribution of three species of forest Eucalypts restricted to the Walpole area of S.W. Australia.*
Officer-in-Charge: *G Wardell-Johnson*

No: 45/88
Title: *An assessment of the use of edge jointed regrowth jarrah panels for furniture manufacture*
Officer-in-Charge: *D Challis*

Scientific and Technical Publications

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

Author(s): *S D Crombie*
Title: *Transpiration of Eucalyptus marginata Donn Ex Smith and its Associated Understorey on Deep Soils During Summer Drought*
For Submission to: *Forest Ecology and Management*

Author(s): *A A Burbidge & P J Fuller*
Title: *The correct vernacular name for Petrogale burbidgei*
For submission to: *Australian Mammalogy*

Author(s): *S D Hopper & D J Coates*
Title: *Conservation of genetic resources in Australia's flora and fauna*
For submission to: *Australian Ecosystems : 200 years of degradation, utilization and reconstruction. D.J. Saunders (ed) (Invited review paper)*

Author(s): *L McCaw*
Title: *Measurement of fuel quantity and structure for bushfire research and management*
For submission to: *Proceedings conference on National Fire Danger Rating System for Australia (Invited Paper)*

Author(s): *D Ward*
Title: *Monitoring Community Attrition*
For submission to: *Biological Conservation*



Who's Who in Research Division

David Jefford Ward - (Bachelor of Applied Science) Program Leader - Research Methods

Regular readers of this "Newsletter" will have noted the number of articles submitted by Dave Ward. Our ever curious reporter decided to make a few investigations on this interesting personality - the results of which are printed below and of which we hope you enjoy.

Ed

David Jefford Ward was born in Hereford England on 24 October 1938 - a birthdate shared with the Prophet Muhammed! Dave's family moved to Addis Ababa, Ethiopia when he was nine. At twelve they again moved to Egypt where Dave attended the British Army School in Fayid. Dave's high school years were spent back in England where he obtained 'O' level passes in nine subjects.

After being expelled from school in seventh year Dave joined the army in 1956 and was involved in active service in Cyprus. In 1959 he served with the British Colonial Police in Northern Rhodesia. He then went on to become Officer-in-Charge of a small police station - responsible for the supervision and training of a native sergeant and thirty constables. During this time Dave escorted H.M. the Queen Mother to Barotseland (she was not amused)!

Travel was again on the agenda for Dave in 1962. As a field officer with the Anglo-American Corporation he went to Zambia. Here he was responsible for setting up field camps in remote areas such as the Lukusashi Valley. It was during this time that he gained experience in field geology, geobotany and surveying. It was also during this time that he caught malaria and hepatitis simultaneously - quite a rare achievement!

Still with the travel bug Dave migrated to Western Australia in 1968 and took up a position with the then Forests Department at Yornup where he gained experience in general forestry activities. He was later promoted to technical assistant at Manjimup where he worked in Fire Research under the supervision of Mr George Peet. It was during the early 1970s that Dave commenced studies in mathematics through W.A.I.T. and later completed his degree with a double major in mathematics and biology.

Through statistical analysis Dave has contributed to publications on northern Jarrah shrubs, insects, forest hydrology, forest fauna, soil chemistry, dieback and many more. From 1981 onwards Dave took on the task of pressing for the introduction of micro-computers and more terminals into every Research Centre. With the advent of CALM Dave's work in biometrics initially came under the helm of the Research Computing Program. This changed earlier this year when the Research Methods Program was born (see June issue) and Dave was appointed as Program Leader.

Dave's office is located at the Como Research Centre and he is available for consultation in any of the following areas:

- Design of surveys and experiments (description phase)
- Statistical analysis (analysis phase)
- Systems ecology (synthesis phase)

Have you Heard.....?

Annette Wilson has replaced Barbara Rye at the Herbarium. Barbara is on maternity leave until 17 April 1989.

Steve Hopper's secondment to the EPA is about to draw to a close. As of 7 November Steve will be 95% "back on board".

Professor Robert Wyatt from the University of Athens, Georgia will be visiting Woodvale on and off until 11 November 1988. Robert's main area of interest is in mosses and plant reproductive biology. Anyone interested in meeting him should liaise with Steve Hopper.

PHILOSOPHY CORNER

CONSULTATION FOR THOSE WHO FEEL FINANCIALLY NEGLECTED....

"We are raising a generation of young men who will not look at any scientific project which does not have millions of dollars invested in it...

We are, for the first time, finding a scientific career well paid and attractive to a large number of our best young go-getters. The trouble is that scientific work of the first quality is seldom done by go-getters, and the dilution of the intellectual milieu makes it progressively harder for the individual worker with any ideas to get a hearing..."

Norbert Wiener (1894-1964) in Bulletin of the Atomic Scientists 1948

(Norbert Wiener will be familiar to biologists through the Shannon-Wiener index of diversity)

"We haven't the money, so we've got to think...."

Lord Rutherford (1871-1937)

Research Malady No. 2:

VEGETATING

Many individuals have good intentions, even ideas and plans, but never get started on a project. There is both a long-range and a short-range factor in getting started. The long-range factor spoken of as "ambition" consists of a sort of personal integration toward a long-range objective. Not just any objective, but rather one that results in increased position relative to one's associates. It is this integration that causes one to forgo present pleasures for the prospect of future ones. Such a person has a *long-range view*.

A short-range emotional factor is also important. The psychologists speak of it as the "disturbed state". Bichowsky, in his book, *Industrial Research*, says that the individual not only must be faced with a problem but also must be required to do something about it. The person must be disturbed, uneasy, uncomfortable about it. When the surroundings are too comfortable, there is a human tendency to "vegetate". Under such conditions, creative thinking does not flourish.

Adapted from Lewis E Lloyd, 1966.

TECHNICAL COMMUNICATION

FUDGE FUNCTIONS FOR FUN

1. It has long been known.....
I haven't bothered to look up the original reference.
2. Of great theoretical importance.....
Interesting to me.
3. While it has not been possible to provide definite answers to these questions.....
The experiment didn't work out, but I figured I could get some publicity out of it.
4. Extremely high purity, superpurity.....
Composition unknown except for exaggerated claims of the supplier.
5. Three samples were chosen for detailed study.....
The results of the others didn't make sense and were ignored.
6. Accidentally stained during mounting.....
Dropped on the floor.
7. Handled with extreme care during the experiments.....
Not dropped on the floor.
8. Typical results are shown.....
Best results are shown.
9. These results will be reported at a later date.....
I might get around to it later.
10. Presumably at longer times.....
I didn't take the time to find out.
11. It is believed that.....
I hope that.
12. It is generally believed that.....
I think that.
13. It might be argued that.....
I have such a good answer for this one objection that I shall now raise it.
14. It is hoped that this work will stimulate further work in this field.....
This paper is not very good, but neither are any others on this miserable subject.
15. It is clear that much additional work will be required before a complete understanding is established.....
I don't understand it.
16. Correct within an order of magnitude.....
Wrong.
17. Thanks are due to Joe Glotz for assistance with the experiments and to John Funk for valuable discussion.....
Glotz did the work, Funk explained it to me.

