

RESEARCH NEWS

The newsletter of the Research Division of the Department of Conservation and Land Management

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No 6/90

JULY/AUGUST 1990

EDITORIAL

For those who thought the July Newsletter would never appear, well here it is as a combined issue. Mt Lesueur raised its head again, the Research Plan and the Budget all contributed to delays with getting the Newsletter out on time.

July/August issue sees the return of Steve Hopper from his trip to the USA as a Visiting Scientist. *The West Australian* has featured an article in Big Weekend on the Herbarium. A Spinifex Workshop was conducted and most important of all the finalisation of the Research Division's 1989/90 Budget.

Christine.

| | ISSUE | DEADLINE | DISTRIBUTION |
|-------------------------|-------|-------------|--------------|
| DEADLINE FOR NEXT ISSUE | SEPT | LATE AUGUST | EARLY SEPT |



Information from the RDPG meeting

The last two meetings of RDPG were held on the 26 June and 26 July 1990 at the Herbarium and Dwellingup Research Centre.

The following is a summary of discussions from those meetings.

Budget 1989/90

Research Division was set a target saving of \$25,000. In fact we came out with a saving of \$16,768 (0.82%) more than was required of us. The final Budget figures have been sent to Program Leaders and Research Centre Managers.

Appreciation is extended to John Dorlandt for an excellent job in controlling and collating the 1989/90 Budget.

Country Seminar Manjimup

Andrew Burbidge will conduct a seminar at the next RDPG meeting to be held in Manjimup on the 27 September 1990.

Suggested Rationalisation of CALM Research Support Services

RDPG agreed to the amalgamation of Computing and Methods Program with M Choo as the Program Leader. The new title is Research Techniques.

South West Forests Defence Foundation Meeting

Andrew recently attended meetings with the Conservation Council and the Farmers Federation to discuss Fire. Neil Burrows has suggested holding an annual seminar on the subject of fire.

Research Division Prize

RDPG have agreed to a Research Division Prize. Andrew Burbidge will discuss this idea with Roger Underwood.

CALM journal - new title

Progression has been made towards a new title for the CALM journal - three names have been submitted to the Corporate Executive.

RWG IV (Native Forest Silviculture meeting)

CALM Research is hosting the annual meeting of the Native Forest Silviculture Research Working Group meeting in Manjimup from October 1 to October 5 1990.

Long Service Leave circular

The above circular has been distributed to staff asking that long service leave be cleared. RDPG agreed that port folio managers should handle this issue and make staff aware of it - we have until 31 August. All

applications for Long Service Leave must be with their Supervisors by the 24 August 1990.

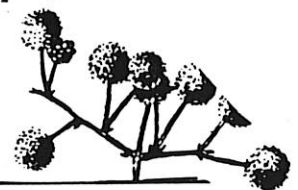
Next meeting at Woodvale Research Centre on 6 September 1990

Publishing in Landnote

Landnote is published by Operations and is intended to allow land managers in the Districts ready access to relevant research findings. It also permits others (eg scientists) to gain information directly from land managers.

Landnote is not a scientific journal. It is lightly edited by Peter Kimber but is not formally refereed. Currently the cost of its publication is borne by Public Affairs Branch.

For further details, please consult p.55 of Marianne Lewis' *Guide to Authors*



Competition Note

Three titles have been submitted to Corporate Executive - I will keep you posted for the winner's name.

Library Strategic Plan, 1991-1995

The first Library Strategic Plan was written in January 1988 and has been developed as much as possible, given current conditions, but the overall situation regarding library services to CALM has deteriorated since 1988 and another Strategic Plan is needed.

I am about to start writing a draft plan and I hope to have it completed by the end of July. My main concern will be to seriously consider the possibility of establishing the main library at Como and converting the Woodvale Library to a Research Division Branch Library. Another major concern is the serious accommodation problem at the Herbarium Library. Anyone who is keen to comment on these and any other issues relating to Library services in CALM is invited to contact me as soon as possible.

I intend to forward a copy of the draft to any interested person in CALM and I hope to have the final report written by September. If you would like to see library services in CALM improve from third rate to first rate and if you have any definite ideas on the subject, please contact me by phoning 1055132 - or write me a memo.

Hugh Clift
Librarian-in-Charge

RESEARCH PROJECT PLANS

The following Research Project Plans have been approved for this month.

- | | | | |
|--------------------|---|--------------------|--|
| No: | 11/90 | No: | 35/90 |
| Title: | Integration of plantations of <i>Eucalyptus globulus</i> on farmland and its effect on groundwater and impact on production of adjacent pasture | Title: | Biological survey of Cape Arid National Park |
| Officer in Charge: | R Silverstein | Officer in charge: | A H Burbidge |
| No: | 12/90 | No: | 36/90 |
| Title: | Integration of plantations of <i>E. globulus</i> on farmland and its effect on drain runoff quantity and quality (with particular emphasis on phosphorus leaching). | Title: | Post planting control of recurrent weeds in <i>E. globulus</i> plantations using pre and post emergent herbicides applied with a side delivery nozzle. |
| Officer in charge: | R Silverstein | Officer in charge: | J Winchcombe |
| No: | 13/90 | No: | 37/90 |
| Title: | Comparison of production of plantation of <i>E. globulus</i> on farmland with standard farm practice on the leaching sands of the Swan Coastal Plain. | Title: | Comparison of thirteen pre-plant herbicide treatments, plus control, on the establishment and growth of <i>E. globulus</i> seedlings. |
| Officer in charge: | R Silverstein | Officer in charge: | J Winchcombe |
| No: | 26/90 | No: | 38/90 |
| Title: | Stage of development of <i>Cardiospina brunnea</i> | Title: | The use of controlled release "Marshall auscon" insecticide granules in the control of African Black Beetle in <i>E. globulus</i> plantations |
| Officer in charge: | Janet D. Farr | Officer in Charge: | J Winchcombe |
| No: | 27/90 | No: | 39/90 |
| Title: | The association between plant communities, landform/soils units and burning history in the Perup Nature Reserve. | Title: | The effect of stocking density on productivity and droughting of <i>E. globulus</i> plantations established in the low rainfall zones (700 mm mean annual rainfall in the south west of Western Australia. |
| Officer in charge: | Grant Wardell-Johnson | Officer in charge: | G Ellis |
| No: | 28/90 | No: | 40/90 |
| Title: | Tree growth response to subsoil ripping | Title: | Fertilization of <i>E. globulus</i> plantations established on ex-pastured sites with (1) DAP fertilizer tablets and (2) DAP. Agras #1 and NPK Blue Special |
| Officer in charge: | John Bartle & Gavin Ellis | Officer in charge: | G Ellis |
| No: | 29/90 | No: | 41/90 |
| Title: | Yield Testing prospective pulpwood species provenances and clones | Title: | The influence of container type and volume, and root inhibiting paint on the survival and performance of <i>E. globulus</i> seedlings planted on farmland in the South West of Western Australia |
| Officer in charge: | John Bartle & Gavin Ellis | Officer in charge: | G Ellis |
| No: | 31/90 | No: | 42/90 |
| Title: | A biological survey of the proposed Boonanarring Nature Reserve | Title: | Multi-Factor Experiment. The influence of seedling container type, site preparation, weed control and fertilizer in the establishment of <i>E. globulus</i> plantations on farmland in the south west of Western Australia |
| Officer in charge: | A H Burbidge | Officer in charge: | G Ellis |
| No: | 34/90 | | |
| Title: | <i>Pinus radiata</i> breeding and propagation trial. | | |
| Officer in charge: | Richard Moore | | |

No: 43/90
 Title: Plaid density design for investigation of the effect of stocking density and espacement on the productivity of *E. globulus* plantation.
 Officer in charge: G Ellis

No: 44/90
 Title: The effect of mounding and scalping on the survival and early growth of *E. globulus* seedlings established in deep, grey siliceous sands on the Swan Coastal Plain.
 Officer in charge: G Ellis

No: 45/90
 Title: N P factorial fertilizer trial plus comparison with formulated fertilizer mixes - DAP. Agras Cu Zn Mo. Slow release tree tablet
 Officer in charge: G Ellis

No: 46/90
 Title: N P factorial fertilizer trial - the role of nitrogen and phosphorus in the establishment of *E. globulus* on farmland in the south west of W.A.
 Officer in charge: G Ellis

No: 47/90
 Title: The benefits of various levels of post planting manual weed control in the establishment of *E. globulus* plantations.
 Officer in charge: G Ellis

No: 48/90
 Title: Comparison of Roundup/Oust and Roundup/Simazine herbicide sprays for the establishment of *E. globulus* seedlings on farmland.
 Officer in charge: G Ellis

No: 49/90
 Title: The role of lime, phosphorus and potassium in the establishment of *E. globulus* plantations on ex-bush acid sands
 Officer in charge: G Ellis

No: 50/90
 Title: DAP, Agras + Co Zn Mo, tree tablet fertilizer timing trial
 Officer in charge: G Ellis

No: 51/90
 Title: The short and long term benefits of weed control in the establishment of *E. globulus* plantations
 Officer in charge: G Ellis

SCIENTIFIC & TECHNICAL PUBLICATIONS

The following have recently been approved for submission for publication:

Author(s): K. Morris
 Title: CHUDITCH - Its biology to conservation.
 For submission to: "Wildlife Australia" magazine

Author(s): G. Keighery
 Title: Taxonomic Review of the *Grevillea drummondii* species group (Proteaceae).
 For submission to: Nuytsia

Author(s): N. Burrows and P. Christensen
 Title: A Survey of Aboriginal Fire Patterns in the Western Desert of Australia.
 For submission to: Fire and the Environment Symposium Proceedings.

Author(s): G.K. Brennan, B.R. Glossop and L.R. Mathews
 Title: Assessment of different watering schedules for regrowth Jarrah and Karri log stockpiles.
 For submission to: WURC Report

Author(s): Burbidge, A.H., McNee, S., Newbey and Rolfe, J.K.
 Title: Supplementary Report to WWF (Aust.) on Project No. 118: Conservation of the Ground Parrot in W.A.
 For submission to: World Wildlife Fund (Aust.)

Author(s): Brennan, G.K. and Ward, S.L.
 Title: Recovery from Regrowth Jarrah Saw Loss.
 For submission to: WURC technical Report No. 19 Limited distribution.

Author(s): McComb, J. Bennett, I., Stukely, M. and Crane, C.
 Title: Selection and Propagation of Jarrah for Dieback Resistance: A Progress Report.
 For submission to: Conference paper for International Plant Propagators Fac. Conf. Perth.

Author(s): Kelly, Coates, Herford, Hopper, O'Donoghue and Robson.
 Title: Declared Rare Fauna and Other Plants in Need of Special Protection in the Northern Forest Region.
 For submission to: Western Australian Wildlife Management Program.

Author(s): I. Abbott, R. Smith, M. Williams, R. Vontier.

- Title:** Site factors associated with infestation of regenerated stands of Karri (*Eucalyptus diversicolor*) by Bullseye borer (*Tryphocaria acanthocera, arambycidae*) in Western Australia.
For submission to: Australian Forestry.
- Author(s):** G.P. Hall
Title: Host preferences of Paropsini (Coleoptera : Chrysomelidae) in South-Western Australia.
For submission to: Journal Royal Society of W.A.
- Author(s):** D.L. Kent
Title: Predicting the profitability of small hardwood sawmills which dry timber.
For submission to: WURC Technical Report
- Author(s):** D.L. Kent
Title: General Utilisation Model of Timber Resources.
For submission to: WURC Technical Report.
- Author(s):** J.T. Trendall and J.A. Stoddart
Title: Barramundi genetics - How the facts can spoil a good story.
For submission to: Northern Territory - Barramundi Newsletter.
- Author(s):** G.K. Brennan
Title: Powder Post Borer (*Lyctus* spp.) attack on dry timber.
For submission to: WURC Report No. 19
- Author(s):** J.A. Stoddart and S. Osborne
Title: A Survey of the Effects of *Drupella* Prediction in Ningaloo Marine Park.
For submission to: CALM Technical Report.

RESEARCH SEMINARS - date changes for 3 seminars

Per Christensen's proposed Seminar on the 2 November has been changed to 25 October 1990

also

Garry Brennan's Seminar has been changed from 18 October to 20 September 1990 and

Penni Hewett's Seminar to of 20 September has been changed to 18 October 1990.

Philosophy Corner

Rarity of all sorts piques the curiosity of humans. Rare objects, whether discoveries of natural origin or artifacts of cultures, are avidly sought by collectors and are treasured, housed, and exhibited for the benefit of others. This fascination with that which is rare may partially explain the naturalists' and systematists' time-honored preoccupation with rare and endemic taxa. To be sure, there are sound justifications for acquiring and studying rare organisms. But we suspect that the rarity-seeking syndrome in humans has fostered much of the biologists preoccupation with rare and endemic plants and animals.

A R Kruckeberg and D Rabinowitz.

SPECIAL THANKS TO:-

Jill Pryde (Woodvale)
 Natalie Allday (Como)
 and Deanne Burton (Como)
 For their unfailing help and expertise
 in the preparation of this year's
 Research Plan.



Paradise riflebird (Ptiloris paradiseus)

Seminar

Structural And Immunological Studies Of The Dieback Fungus, *Phytophthora cinnamomi*

to be held on Monday September 17 1990 and presented by Dr Adrienne Hardham (Plant Cell Biology Group, Research School of Biological Sciences, Australian National University, Canberra)

Venue: Room 2.15, 2nd floor Physics Building, University of Western Australia at 4.00pm

Some "food for thought" from the Len Evans' Cookbook (1985), especially for Wine Club members:

The Len Evans Theory of Capacity

1. There is an awful lot of wine in the world, but there is also a lot of awful wine.
2. No sensible person drinks to excess. Therefore any one person can drink only a certain predictable amount.
3. There are countless flavours, nuances, shades of wine; endless varieties, regions, styles. You have neither the time nor the capacity to try them all.
4. To make the most of the time left to you, you must start by calculating your total future capacity. One bottle of wine a day is 365 bottles a year. If your life expectancy is another 30 years, there are only 10,000 odd bottles ahead of you.
5. People who say, "you can't drink the good stuff all the time" are talking rubbish. You must drink good stuff all the time. Every time you drink a bottle of inferior wine it's like smashing a superior bottle against the wall. The pleasure is lost forever. You can't get that bottle back.
6. There are people who build up huge cellars, most of which they have no hope of drinking. They are foolish in overestimating their capacity, but they err on the right side and their friends love them.
7. There are also people who don't want to drink wine and are happy with the cheapies. I forgive them. There are others who are content with beer and spirits. I can't worry about everybody.
8. Wine is not meant to be enjoyed merely for its own sake; it is the key to love and laughter with friends, to the enjoyment of food and beauty and humour and art and music. It rewards us far beyond its cost.
9. What part is wine of your life? Ten per centum? Then ten per centum of your income should be spent on wine.
10. The principles of this theory should be applied to other parts of life.

"PUBLISH, OR ELSE"



"Surely you were aware when you accepted the position, Professor, that it was publish or perish."

CURRENT
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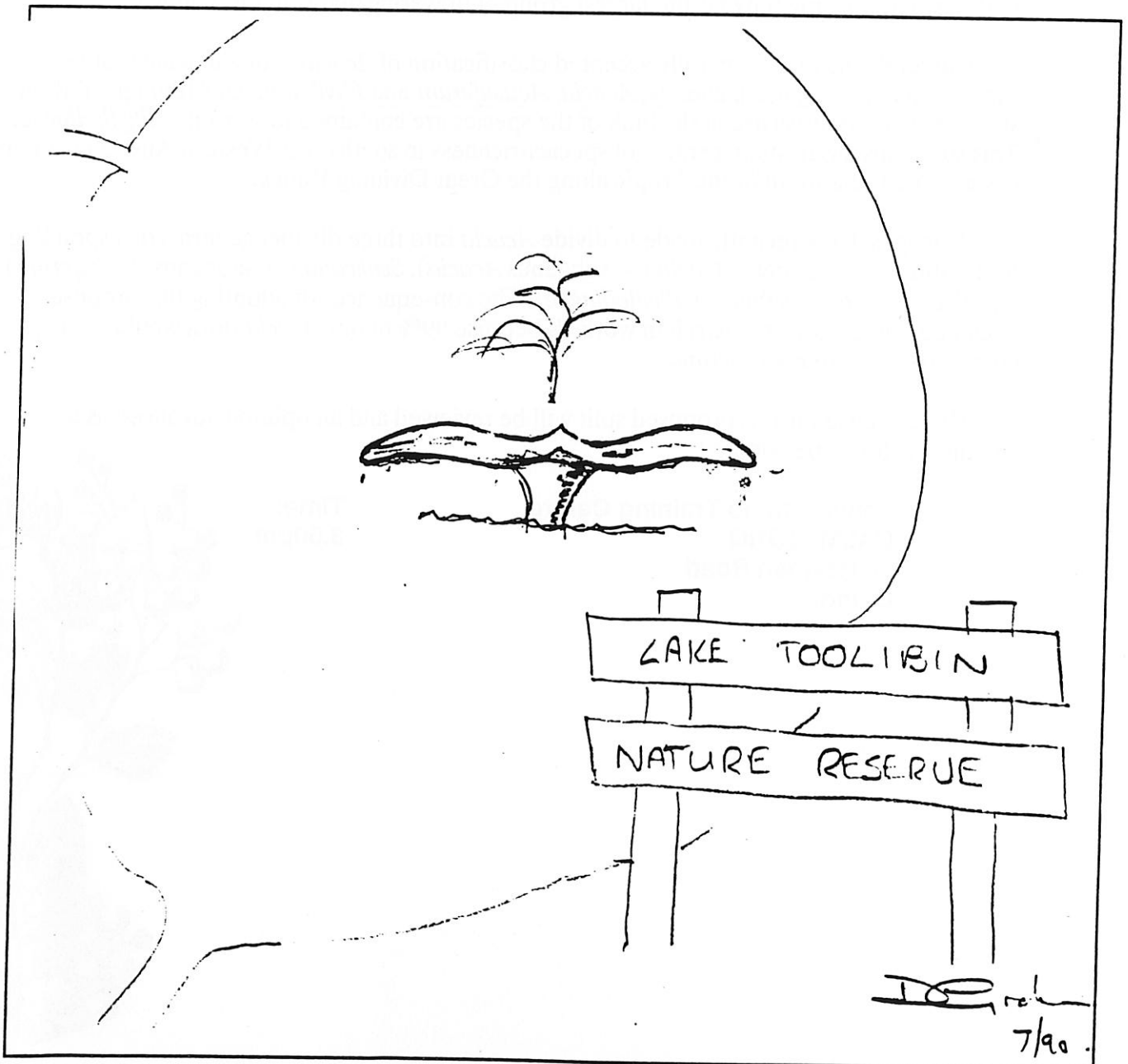
Extract from a Memo sent to Andrew Burbidge from F/R Darren Graham dated 20 July 1990

"Declared Endangered Animals"

As a Forest Ranger in the Wheatbelt Region with a keen interest in Wildlife Management, I was somewhat surprised (while reading the "Declared Endangered Animals and Specially Protected Fauna" listing, 3 July 1990) to note that the Southern Right Whale *Eubalaena australis* is considered endangered in this Region.

I understand that quite extensive summer rains have produced large bodies of water in the Region, but I do not perceive these as suitable habitats for the species.

Would it be possible to obtain records of the locations of sightings, as I feel there may be a strong correlation between these sightings and the location of "Cultivated introduced Flora" on Nature Reserves.





SEMINAR

Thursday 16 August 1990

ACACIA: HOW MANY GENERA?

Presented by Bruce Maslin

Acacia ("Wattles") is a genus with more than 1200 species occurring in all continents except Europe and Antarctica. In Australia there are about 900 species (about 120 as yet undescribed) making it by far the largest group of flowering plants in this country.

Currently the most generally accepted classification of *Acacia* is one in which three subgenera are recognised, namely, *Acacia*, *Aculeiferum* and *Phyllodineae*. Although all three subgenera occur in Australia the bulk of the species are contained in subgenus *Phyllodineae*. This subgenus has its main centres of species-richness in south-west Western Australia and in eastern Australia south of the Tropic along the Great Dividing Range.

A proposal was recently made to divide *Acacia* into three distinct genera, corresponding to the subgenera, namely, *Acacia* (= subgenus *Acacia*), *Senegalia* (= subgenus *Aculeiferum*) and *Racosperma* (= subgenus *Phyllodineae*). The consequences of adopting this proposal would be enormous for Australian workers because 99% of our *Acacia* flora would need to change its name to *Racosperma*.

The evidence for this proposed split will be reviewed and an opinion advanced as to whether it should be adopted.

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

Time:
3.00pm



Computing NEWS & tips

PRESENTATION SOFTWARE

Presentation packages are useful for producing slides and transparencies for overhead projections. These are suitable for seminars and workshops. The software will normally run on most micro-computers and are very easy to use. In Research we have been using the *Harvard Presentation Graphics (HPG)* Software for a number of years and have found the package to be very useful.

The features offered by *HPG* are numerous and includes:

1. Creating charts

HPG is very versatile in chart creation. It has options to produce the following types of charts.

- Text Chart - see attached fig. 1.
- Pie Chart - see attached fig. 2.
- Bar Chart - see attached fig. 3.
- Line Chart.
- High/Low Chart.
- Organisation Chart - see attached fig. 4.

2. Annotating Charts

Annotation can be carried out by drawing lines, boxes, circles and polygons. There is also a comprehensive symbols set to choose from. An example is given in the attached fig. 5.

3. Import/Export

This option allows the system to communicate with a host of different softwares. All the charts produced here are produced in *HPG* and then transferred to *WORDS* using the *HPGL* option within *EXPORT*.

4. Slide Show

This allows the user to create a slide show of his presentation. The frames could be displayed on a time interval basis or by depressing the enter key on the keyboard. Various screen show effects may be chosen. These include fade, weave, iris, scroll.

How to use the system

There are copies of *HPG* at Woodvale, Como Research, Dwellingup Research, Busselton Research and at the Herbarium. To run the system, simply activate the *HG.EXE* file (a *.BAT* file may be available to do this). Once the system has been loaded, it is then a matter of choosing options from the screen and entering data. Data may also be imported from other softwares (e.g. lotus).

Output can be in colour and can be directed to a *PRINTER*, *PLOTTER*, *DISK* (for transferring to 35mm slides), or to screen. The screen output could be used in conjunction with the *SHARP* Overhead Projection Aid (available at Woodvale). This option combined with the slide show feature provides a very versatile facility for presentations to be projected directly from a computer.

Queries: M Choo, P. Gioia.

Field Trial at Narrogin

- Introduction
- Method
- summary

fig.1 Example of a TEXT chart

Research Computer Usage

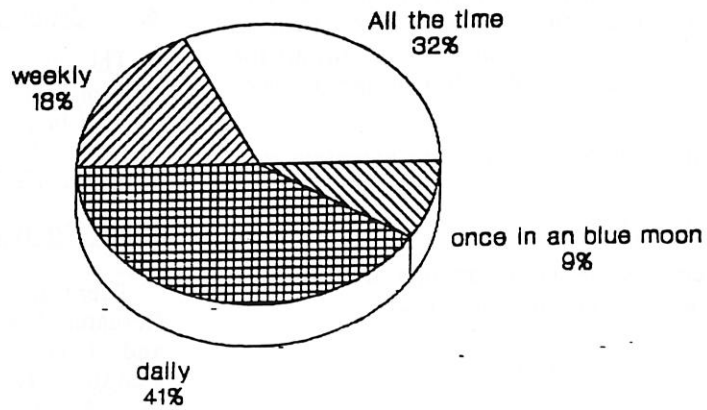


fig 2 Example of a PIE chart

Research Computer Usage

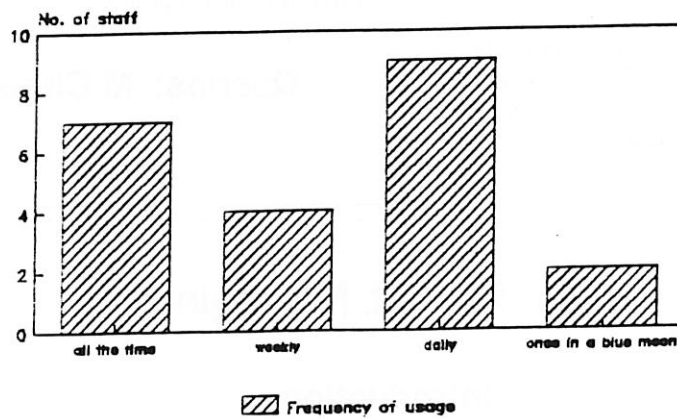


fig.3 Example of a BAR chart

Conservation & Land Management Research Computing Support

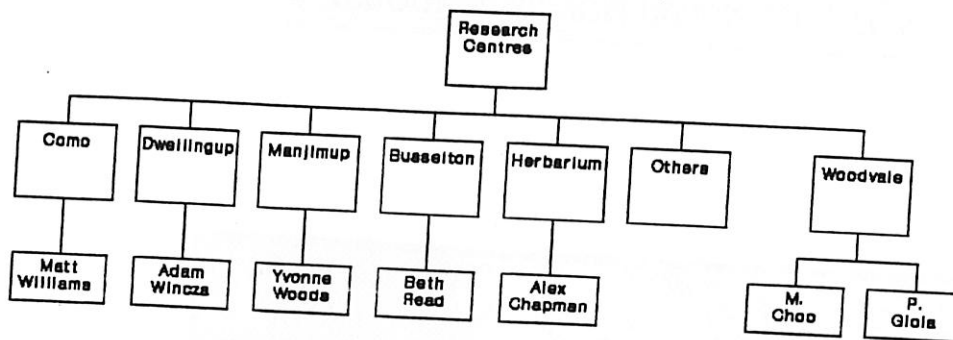


fig.4 Example of an ORGANISATION chart

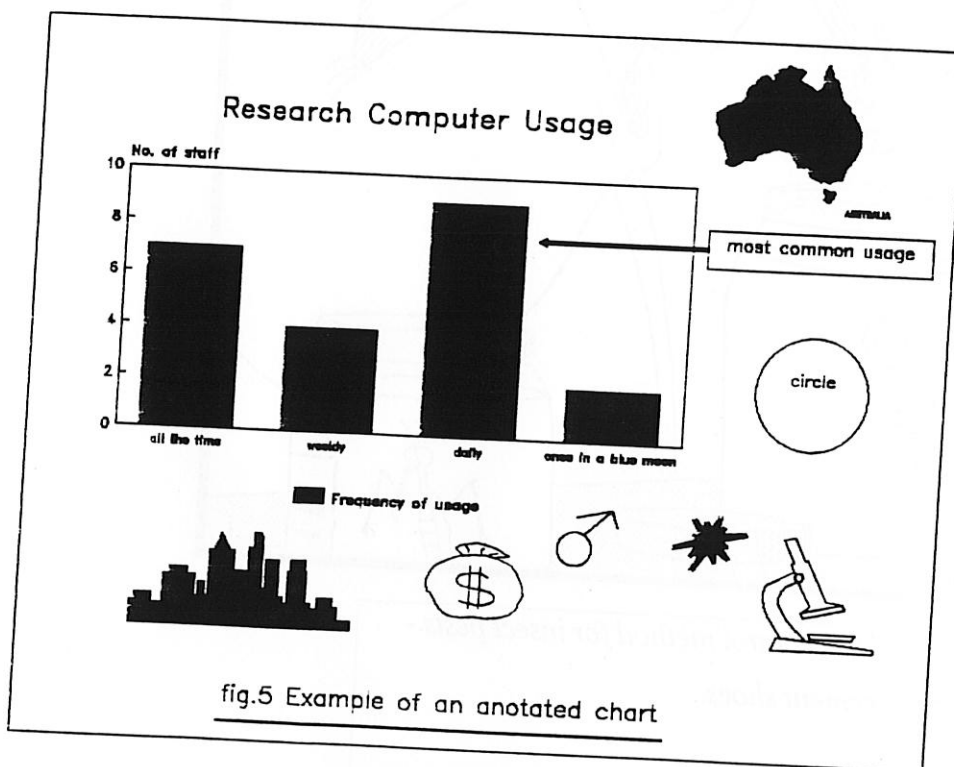
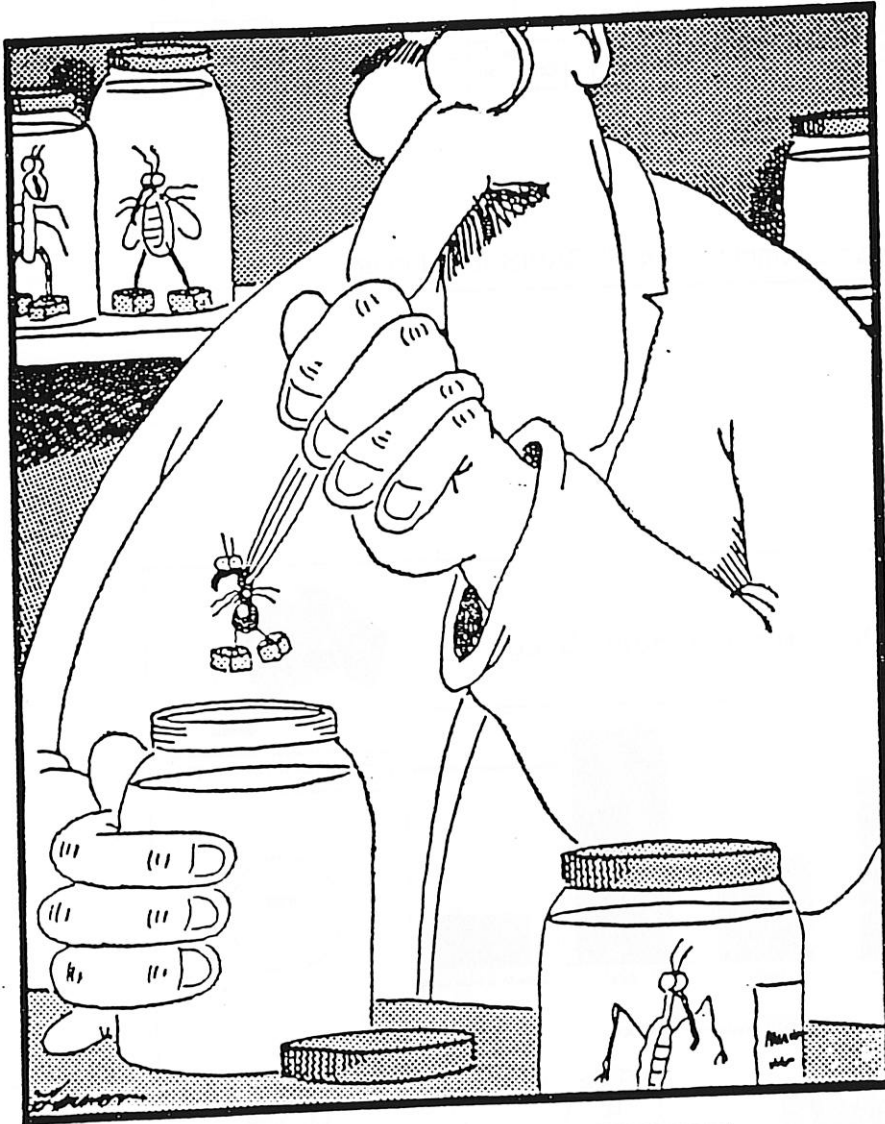


fig.5 Example of an anotated chart

STOP PRESS
DEADLINE FOR ACCRUED LONG SERVICE LEAVE
APPLICATIONS
TO BE WITH YOUR SUPERVISOR BY 24 AUGUST



*New control method for insect pests -
cement shoes.*