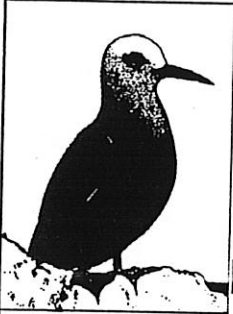


# RESEARCH NEWS



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

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## EDITORIAL

### ENVIRONMENTAL ASSESSMENT OF INNER HARBOUR EXTENSIONS AT BUNBURY

by Stuart Halse

The Bunbury Port Authority is planning extensions to the Inner Harbour that involve reclamation of a large pool at the southern end of Leschenault Inlet near the mouth of the Preston River. This area is important for waterbirds and when they assessed the proposal the EPA recommended against reclamation (Bulletin 497). The Port Authority wish to appeal against this recommendation and, recognizing that the original CER contained an inadequate treatment of waterbird conservation value of the area, the Port Authority has appointed the environmental consulting arm of Kinhill Engineers to undertake a comprehensive analysis of the conservation value of the area. The Government can then adjudicate the appeal by weighing well-documented environmental and economic arguments.

Stuart Halse, Grant Pearson and Adrian Pinder (Murdoch University) undertook a detailed study of waterbird use of Leschenault Inlet and the invertebrate fauna of the marshes and mudflats in 1987-88. They also examined the diet of a large number of birds in different parts of the Inlet. The work is still unpublished but Kinhill approached CALM to ask whether the data could be made available if Kinhill paid the costs of assembling it and some of the cost of collection. This was agreed to and CALM has employed Margaret Platell, who has had considerable experience working on the benthic fauna of marine and estuarine areas, for one month to collate and curate the data. This will enable CALM to give Kinhill a detailed account of the invertebrate species present in the area proposed for reclamation and its value as a feeding site compared with other parts of the Inlet. A much more complete picture of the value of the area will be provided using CALM's data set that was collected two-monthly over a full year than could be provided by Kinhill alone, who would only be able to take autumn samples. The public interest benefits from this process through (i) the final environmental assessment by EPA being based on better information and (ii) employment of Margaret enabling completion of the Leschenault Inlet study and its publication sooner than would otherwise have occurred. The fact that Kinhill approach CALM is an apt reminder that, in spite of occasional public criticisms, CALM is very much seen as an expert and professional body representing nature conservation values that will provide scientifically sound advice.

ISSUE	DEADLINE	DISTRIBUTION
DEADLINE FOR		
NEXT ISSUE . . . JUNE 91	. . . 21 JUNE	. . . LATE JUNE

## INFORMATION FROM RDPG'S APRIL MEETING

Held at Wildlife Research Centre, Woodvale on 4 April 1991

### Budget

The Division is currently 73% through the fiscal year and the total spent is approximately 63%. Overtime is slowing down well and appears to be in hand.

### ALCOA proposals

It was agreed by RDPG to submit the following proposals to ALCOA

- a. Assessment of improved methods of isolation and identification of *Phytophthora* spp. (E Davison)
- b. Provenance trials measurement 91/92 (R Mazanec)
- c. Eucalyptus patens seed collection (R Mazanec)
- d. Conservation of the Chuditch (K. Morris)
- e. Biogeography of the Dale Botanical sub district (G. Wardell-Johnson)

### Research Station at Narrogin

Following an approach from the Regional Manager, Wheatbelt, RDPG has agreed that Narrogin will remain a research station and that it will seek to fill the vacant Technical Officer position there once advertising "freezes" are lifted.

### Safety of chemicals and volatile liquids - Woodvale Research

Investigations have been made concerning the possibility of installing a seatainer at Woodvale following an inspection and report by Mr Rowe of the Chemistry Centre. The report indicated a number of serious problems in the handling and storage of chemicals, solvents and flammable liquids in laboratories at Woodvale.

R Sokolowski, Research Centre Manager, Woodvale is seeking financial assistance for a seatainer and RDPG agreed that if Ron cannot obtain money from SOHQ, \$2,500 will be made available out of the Contingency Fund.

Concerns were also expressed whether similar safety problems existed at other Research Centres, ie Como, Manjimup and Dwellingup, and the relevant PRS will be checking this.

### Research Project Plans

It was generally felt that there was a need to update the RPP form as several sections were now inappropriate. Ian Abbott and Matt Williams are currently updating the proforma and guidelines.



### External Funding

Colin Ingram, Coordinator, External Funding, proposes to hold a workshop on external funding and Research Division will nominate a representative.

### Allowances for officers acting as Program Leaders or Research Centre Managers

RDPG agreed that it would be useful to have a set of principles in place as a guideline and the following recommendations were accepted:

- i) Officers below L6 who accept responsibility as a PL or RCM be paid a special allowance to the base of the level above that at which they are classified (for RCM this applies to Dwellingup, Manjimup and Como.)
- ii) Wherever possible people appointed to be PL or RCMs, should be L6+ officers. Level 2/4 officers should never be selected if there are more senior officers available. In relation to acting arrangements there would have to be at least two other scientists with their majority of time in that program before an allowance would be approved.

### Research Plan

Corporate Relations have prepared a suggested design for this year's Research Plan. It was agreed to have two animals, two trees and two other plants.

## RESEARCH TECHNIQUES

### CALM Insurance

CALM's equipment insurance policy has an excess of \$20000. The cost of a PC or laptop ranges from \$1000 to \$5000. On this basis, loss of a PC will not be covered by insurance.

This matter came to light recently when a CALM vehicle with an NEC Powermate in it was stolen. The vehicle might hopefully be recovered, but we in all probability have to say goodbye to the NEC.

To minimise the likelihood of loss, officers should ensure that PCs are not left in vehicles for any extended periods of time. Where possible, the PC should be taken indoors if the vehicle is to be left unattended, especially overnight.

Laptops are easier to steal and should never be left in an unattended vehicle. At the office, they should be safely locked away after hours.

Each PC is the responsibility of the user to which it has been assigned. As such it is considered that the user should be responsible for any damage or loss (caused by negligence on the part of the user). A policy is being considered by the Research Techniques program and recommendations as to whose budget should bear the cost will be made to the RDPG.

For any queries about insurance, contact either J. Dorlandt or J. Ireland.

M. Choo

*GREG KEIGHERY has recently been accepted as a CALM scientific representative by Australian Geographic to join their expedition to the Recherche Archipelago in May.*



### Letter from Bruxells.....

"The course here is absorbing. I am making interesting contacts - wildlife officers from Brazil, India, Kenya and Tanzania, biologists and geographers from the US, medical men from Yugoslavia and Nigeria, even an Iranian dentist fleeing the Ayatollahs. As readers for my thesis I have Dr Britta Jungen from Sweden, Dr Finn Arler from Denmark, Professor Gerry Young from Washington State, and Dr Tony Vann from England, all supervised by Professor Luc Hens from Brussels. There is an international conference at Goteborg University in June, and I shall be presenting a paper, an experience which I will enjoy. There will be a poster display - is there any particular aspect of human effect on the environment in Western Australia which you would like me to bring to their attention? The trade-off is some help with the cost of attending the conference - about \$800 at present Belgian exchange rates!"

*Toutes mes felicitations*  
- David Ward

## New and revised Policy Statements and Administrative Instructions

- Policy Statement No 33 Conservation of Endangered and Specially Protected Fauna in the Wild with associated
- Administrative Instruction No. 44 Protection of Endangered and Specially Protected Fauna in Departmental operations.
- Policy Statement No 37 Filling Vacancies by Promotion and Transfer with associated
- Administrative Instruction 27 Transfer Policy - Field Staff with Certificate in Conservation and Land Management or equivalent
- Revised Policy Statement No 20 updated from October 1989 version A Marine and Estuarine Reserves System in Western Australia

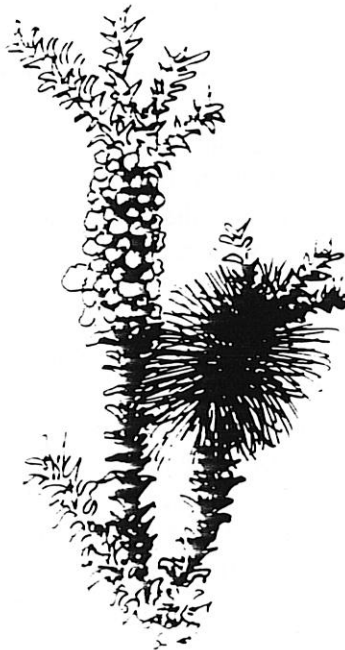
Photocopies of any of the above can be provided by ringing Jill (x128) or Christine (x105) at Woodvale.

*JIM ARMSTRONG as the representative of Oceania has recently attended the CITES Plants Committee meeting in Lomba, Malawi.*

## Scientific and Technical Publications

The following have recently been approved for submission for publication:

- |                    |  |                    |   |                    |   |
|--------------------|--|--------------------|---|--------------------|---|
| Author(s):         | P Newby  | For submission to: | Wildflower Society Occasional Paper   | Author:            | A N Anderson and A H Burbidge   |
| Title:             | Practical aspects of producing Valwood® Blanks   | Author:            | Wong, DH, Kirkpatrick, W.E., Kinnear, J.E. and King, D.R.   | Title:             | An overview of the ant fauna of Cape Arid National Park WA  |
| For submission to: | WURC Technical Report No 26  | Title:             | Defluorination of sodium monofluoroacetate by microorganisms isolated from Western Australian soils | For submission to: | Journal Royal Society of WA   |
| Author(s):         | S A Halse, G B Pearson and S Patrick   | For submission to: | WA Soils  | Author:            | J A K Lane  |
| Title:             | Vegetation of depth-gauged wetlands in nature reserves of south-Western Australia 1987-88          |                    |   | Title:             | An overview of wetland conservation policies and programs in West Australia   |
| For submission to: | CALM Technical Report  |                    |   | For submission to: | Proceedings of "Wetland Conservation and Management Conference" Feb 91 Newcastle                                    |
| Author(s):         | N S Lander   |                    |   | Author:            | Keighery G J and Keighery, B J  |
| Title:             | Kippistia, Minuria, Olearia  |                    |   | Title:             | Floristics of Brixton Street wetlands   |
| For submission to: | Flora of New South Wales   |                    |   | For submission to: | Wildflower Society Occasional Paper   |
| Author(s):         | B R Maslin & A S Weston  |                    |   | Author:            | G J Keighery  |
| Title:             | <i>Acacia senulifera</i> : a new Kimberley record of a rarely collected northern Australian Wattle |                    |   | Title:             | Floristics III Flora List Blackwell Reach   |
| For submission to: | Naturalist News  |                    |   | For submission to: | Wildflower Society Occasional Paper   |
| Author(s):         | A N Start  |                    |   | Author:            | J A Davies, S A Harrington, J A Friend  |
| Title:             | Food for bats  |                    |   | Title:             | Relict stream communities in the arid zone: The macroinvertebrate fauna of the George Gill Range, Central Australia |
| For submission to: | Naturalist News  |                    |   | For submission to: | Australian Journal of Freshwater and Marine Research  |
| Author(s):         | A A Burbidge   | Author:            | Keighery, G J, Luccese F, Pignattii E and Pignattii S.  |                    |   |
| Title:             | What the tortoise taught us  | Title:             | Vegetational sketch of the Stirling Range (W Australia)   |                    |   |
| For submission to: | Landscape  | For submission to: | Journal of Vegetation Science   |                    |   |



## Research Project Plans

The following Research Project Plans have been approved

- |  |   |   |
|--|---|---|
| No: 15/91<br>Title: Impact of <i>Phytophthora cinnamomi</i> and other plant pathogens on the flora of national parks in southern Western Australia<br>Officer-in-charge: R Wills       | No: 21/91<br>Title: Fire responses of plants from Banksia woodlands vegetation associations<br>Officer-in-charge: N Burrows   | No: 30/91<br>Title: The ecology and conservation of small mammals on Barrow Island<br>Officer-in-charge: Keith Morris   |
| No: 16/91<br>Title: Survival and distribution of inoculum of <i>Phytophthora cinnamomi</i> in the roots of both resistant and susceptible plant species<br>Officer-in-charge: R Willis | No: 22/91<br>Title: Assessment of conservation values of VCL near Coolcalalaya<br>Officer-in-charge: A H Burbidge   | No: 32/91<br>Title: Pelican breeding colonies, movements and survival<br>Officer-in-charge: J Lane  |
| No: 17/91<br>Title: The pathogenicity of canker fungi isolated from native plant species at the King Jarrah Heritage Trail, Manjimup<br>Officer-in-charge: R Wills                     | No: 23/91<br>Title: Pattern analysis of climatic data to assess correlates with the activity of pathogenic fungi in the south-west of Western Australia<br>Officer-in-charge: R Wills                                 | No: 33/91<br>Title: Conservation of the Chuditch <i>Dasyurus geoffroii</i><br>Officer-in-charge: K Morris   |
| No: 18/91<br>Title: The impact of pathogenic fungi on native vegetation at the King Jarrah Heritage Trail, Manjimup<br>Officer-in-charge: R Wills                                      | No: 26/91<br>Title: Symptoms on <i>Pinus radiata</i> clones infected by <i>Phytophthora</i> spp.<br>Officer-in-Charge: E Davison and M Stukely  | No: 34/91<br>Title: Western Swamp Tortoise - population monitoring<br>Officer-in-charge: AA Burbidge  |
| No: 20/91<br>Title: Register of type specimens and photographs held at the Perth Herbarium<br>Officer-in-charge: B Koch  | No: 27/91<br>Title: Measurement of oxygen concentration in sub-surface flows<br>Officer-in-charge: E Davison  | No: 35/91<br>Title: Western Swamp Tortoise captive breeding project<br>Officer-in-charge: AA Burbidge   |
|  | No: 28/91<br>Title: The eradication of the introduced Black Rat <i>Rattus rattus</i> on Barrow and Middle Islands<br>Officer-in-charge: K Morris  | No: 44/91<br>Title: Taxonomy and phylogeny of Rutaceae<br>Officer-in-charge: J Armstrong  |
|  | No: 29/91<br>Title: Monitoring the total numbers of the Lesser Noddy ( <i>Anous tenuirostris</i> ) in Australia and the numbers of some other seabirds breeding on Pelsaert Island.<br>Officer-in-charge: AA Burbidge | No: 46/91<br>Title: Taxonomic studies in the family Rhamnaceae<br>Officer-in-charge: B Rye  |
|  |   | No: 47/91<br>Title: Preparation of Flora Handbook "Flora of the Kimberley Region"<br>Officer-in-charge: J Wheeler   |
|  |   | No: 48/91<br>Title: INFORM: An integrated taxonomic multimedia tool for the description of Western Australian flora<br>Officer-in-charge: A Chapman, N Lander, T Macfarlane |



No: 49/91  
Title: Allergenic and  
irritant plants,  
Identification  
Guide

Officer-in-charge: S Patrick

No: 50/91  
Title: Taxonomic studies  
in the genus  
Olearia  
(Asteraceae)

Officer-in-charge: N S Lander

No: 51/91  
Title: Endemic plant  
species of the  
Darling Scarp.

Identification  
guide to  
Threatened and  
Reserve List Taxa

Officer-in-charge: S Patrick

No: 66/91  
Title: Genetic variation  
among endemic  
eucalypts

Officer-in-charge: G Wardell-Johnson

No: 67/91  
Title: Vertebrate and  
flora survey of the  
Walpole Nornalup  
National Park

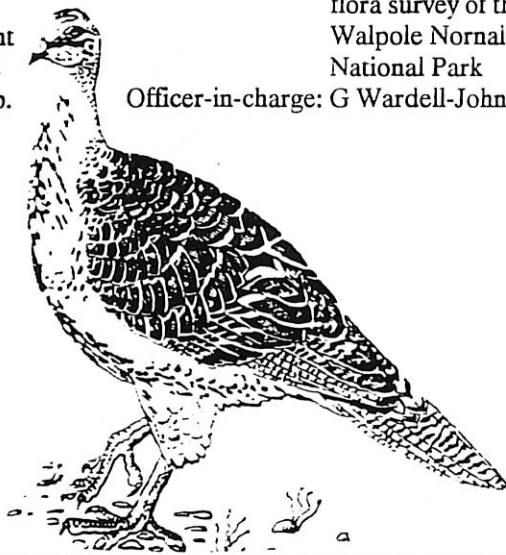
Officer-in-charge: G Wardell-Johnson

No: 68/91  
Title: Floristic pattern in  
the Warren and  
Menzies botanical  
subdistricts

Officer-in-charge: G Wardell-Johnson

No: 69/91  
Title: Forest fauna and  
habitat  
management in  
south-western  
Australia - a  
review of research

Officer-in-charge: G Wardell-Johnson



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## CURRENT CONTENTS ON DISKETTE WITH ABSTRACTS

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"Subscribe to the only research tool that gives you current bibliographical, data - and abstracts - in one research tool"

The Institute for Scientific Information has had this product available for some time now and CALM Macintosh users are subscribers. If, like me, you have an IBM compatible PC, then the Mac. format is not much use. On

behalf of CALM researchers who operate IBM compats (which is most of us!), the Library is willing to subscribe to Current Contents on diskette with abstracts. But, yes you guessed it, we researchers have to pay.

Subscription costs about \$900 per annum, far too much for one person, so if you would like Current Contents on diskette you

might like to share the costs? If so please contact me (after the end of May) at Woodvale. Obviously the more people involved, the less the cost to the individual. For more information about Current Contents on diskette (with abstracts) contact High Clift at the Library.

Neil Burrows



## SEMINAR

Thursday 16th May 1991

### Early postfire regeneration of granite outcrop mallee communities on Chiddarcooping Nature Reserve

presented by Stephen D Hopper

Although mallee vegetation is ubiquitous in much of semi-arid southern Australia, the biology and management of mallee eucalypts has received scant attention. In Western Australia, some of the rarest mallees are confined to granite outcrops, habitats whose communities are often fire-free for long periods of time. This monitoring study began after a wildfire on Chiddarcooping Nature Reserve (NE of Merredin) in November 1987. Chiddarcooping has three mallees endemic to granite outcrops - *E. caesia*, *E. crucis* and *E. petraea*. The study has four aims: (i) to define floristic communities, (ii) to document community regeneration processes, (iii) to compare regeneration in summer-burnt vegetation, in spring-burnt bulldozed heaps, and on a bulldozed fire-break, and (iv) to document seedling recruitment and lignotuberous regeneration in the mallees themselves. High floristic complexity over small distances was found. This was pronounced the first spring after the fire, with many short-lived fire opportunists appearing. *Gyrostemon subnudus*, for example, was not known on the reserve from flora surveys conducted prior to the 1987 fire, but dominated most granite communities for the following three years. The bulldozed firebreak recovered well, comparable to natural post-fire regeneration, except for the absence of obligate post-fire opportunists such as *G. subnudus*. In contrast, the spring-burnt bulldozed heaps still resembled scorched earth three years after the fire. Some seedling recruitment of all three granite rock mallees has occurred, with the poorest response in *E. crucis*. As expected, high mortality of seedlings occurred the first summer after the fire. Lignotuberous resprouts have achieved unparalleled growth (3-5.3 m tall in 3 years) in all three species. *E. caesia* flowered 18 months after the fire. Observations at a nearby rock burnt in 1978 suggest that recovery of Chiddarcooping vegetation to the pre-fire condition probably will take decades.

VENUE:  
TRAINING CENTRE  
CALM SOHQ  
50 HAYMAN ROAD  
COMO

TIME: 3.00PM

# **1991 IBM CONSERVATION AWARD**

**RDPG is considering nominating a person or team from Research Division for the 1991 IBM Conservation Award.**

**A submission must establish that the person has advanced conservation through significant achievement in one or more of the following fields:**

- . scientific research**
- . application of research findings or technological development to management of environmental problems**
- . public education programs**
- . public policy or the law**
- . community programs**

**The submission must relate to work done in the past five years.**

**The Western Swamp Tortoise Captive Breeding Management Team was a runner-up for the award last year and received a ceramic and \$1000.**

**This year the first prize is \$35 000 with five additional prizes to runner-ups of \$1 000.**

**If you want to suggest a nomination or want any further information, get in touch with Andrew Burbidge.**