

Department of Conservation  
and Land Management.

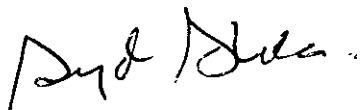
# Annual Report



22nd March 1985 to 30th June 1985

TO THE HON RON DAVIES, MLA  
MINISTER FOR CONSERVATION AND LAND MANAGEMENT

In accordance with Section 52 of the Conservation and Land Management Act, I present the Annual Report of the Department for the period 22 March 1985 to 30 June 1985.

A handwritten signature in black ink, appearing to read "Syd Shea". The signature is written in a cursive, slightly slanted style.

SYD SHEA  
EXECUTIVE DIRECTOR

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# 1. Foreword

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On 22 March 1985, the Forests Department, National Parks Authority, and the Wildlife Section of the Department of Fisheries and Wildlife combined resources to form the Department of Conservation and Land Management.

The first three months of the Department's existence have not, as would be expected, been without difficulties. Nonetheless the Department has performed all of the functions of its predecessors, and already has embarked on a number of new initiatives.

I am particularly grateful for the assistance provided to the Department by the Chairman of the Lands and Forest Commission, Mr Bruce Beggs, the Chairman of the National Parks and Nature Conservation Authority, Mr Norm Halse, and members of the Authority, and Forest Production Council.

I would also like to personally thank all members of the Department. No matter how carefully planned, any restructuring of an organisation increases the stress on the people who staff that organisation. The way in which staff have responded to this stress makes me very confident that the Department will be able to fulfil the highest expectations of the community as it tackles the immense challenge of public land and wildlife management throughout the State.

SYD SHEA  
EXECUTIVE DIRECTOR

## 2. Functions and Organisation

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The Department of Conservation and Land Management and three statutory controlling bodies were formed under the Conservation and Land Management Act 1984. The controlling bodies are:

The Lands and Forest Commission, the National Parks and Nature Conservation Authority, and the Forest Production Council - All are responsible to the Minister for Conservation and Land Management. The new Department combines the Forests Department, National Parks Authority and the Wildlife section of the Department of Fisheries and Wildlife.

### FUNCTIONS

The main function of the Department of Conservation and Land Management is to manage land vested as State forests and timber reserves, National Parks, Nature Reserves, Marine Parks and Marine nature reserves. These lands are vested with the Lands and Forests Commission or the National Parks and Nature Conservation Authority.

More specifically, the Department:

- . provides assistance to the three statutory bodies;
- . promotes and encourages the development of forest production;
- . conserves and protects flora and fauna;
- . carries out research relevant to its land management and nature conservation responsibilities;
- . provides advice to other departments, bodies or individuals in the public interest; and
- . advises the Minister for Conservation and Land Management on reservation of Crown Land.

In its nature conservation function the Department administers the Wildlife Conservation Act 1950 and associated regulations. Although the Forests Act 1918 and the National Parks Authority Act 1976 were repealed to make way for the Conservation and Land Management Act 1984, the Forests regulations and National Parks regulations remain in force until replaced by new regulations.

### ORGANISATIONAL STRUCTURE

Departmental functions are carried out by a Policy Directorate and an Operations group. The Executive Director heads both groups and is responsible to the Minister. The Policy Directorate comprises four directors who are responsible for forests, research and planning, National Parks and nature conservation. The Directorate advises the Minister, the Lands and Forest Commission, the National Parks and Nature Conservation Authority, and the Forest Production Council, and liaises with the Operations group to devise policy and promote sound management.

The Operations group is responsible for the overall management of the Department's functions, public lands vested in its authority, associated forest produce, and flora and fauna. This group is headed by the General Manager and Divisional Managers for Administration and Finance, Operations and Services.

This executive structure is shown in figure 1.

In support of the Policy Directorate and Operations executive there are specialist branches as shown in figure 2.

### REGIONAL ORGANISATION

Because Western Australia is a large State (2.5 million square kilometres) and the public land estate is widely

dispersed, operational management is based on a regional structure. The State has been divided into 11 regions, each with a high degree of autonomy. The regions are shown in figure 3.

A regional management structure retains the benefits of a small organisation while producing access to centrally based servicing branches. Regions are responsible for managing all lands vested in the Department, and for forest produce and flora and fauna conservation within their boundaries.

Various categories of land, for example State forests, National Parks and Nature Reserves, will be managed in accordance with approved policies and management plans, and with the guidance of the specialist branches. Where land management plans do not currently exist for National Parks and Nature Reserves, only necessary operations are to be carried out until a plan is approved.

Each regional headquarters has a Regional Manager and an officer representing the major functions in that region. These functions include operations, administration, planning, wildlife protection, research and extension services. Regional managers report to the Divisional Manager, Operations (see figure 2), a process which ensures that there is direct access from the regions to union management in the Operations group.

Those regions with larger responsibilities, staff and budgets are further divided into districts -- 18 districts in all.

#### LOCATIONS

The Policy Directorate is located at Matilda Bay and the Operations group at Como. As of 30 June, 1985, the Planning and Recreation branches were located at Canning Bridge, and the Wildlife Research Branch at Woodvale.



Members of the Forest Production Council inspect small regrowth hardwood logging trial.

FIG. 1 EXECUTIVE STRUCTURE

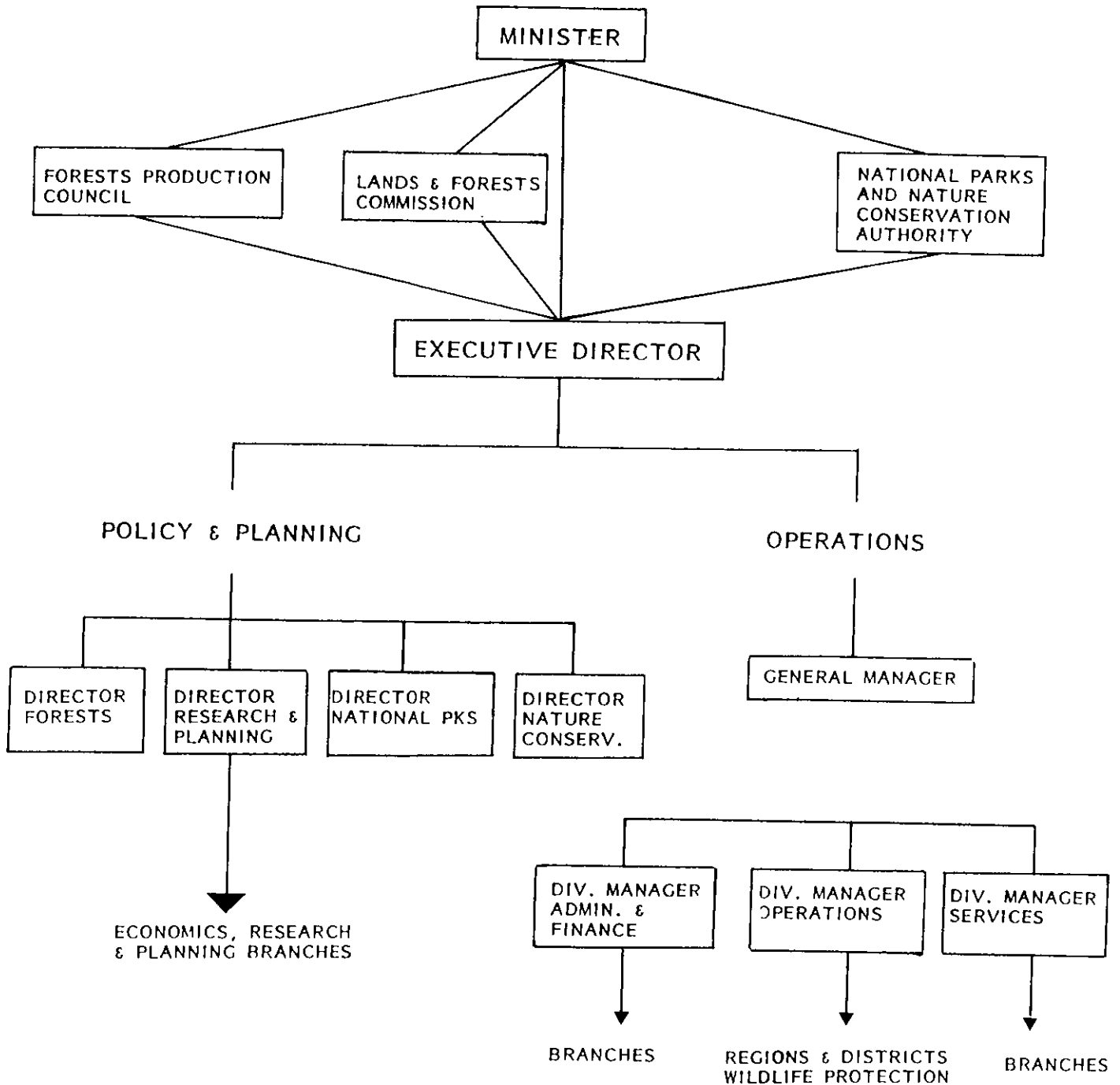
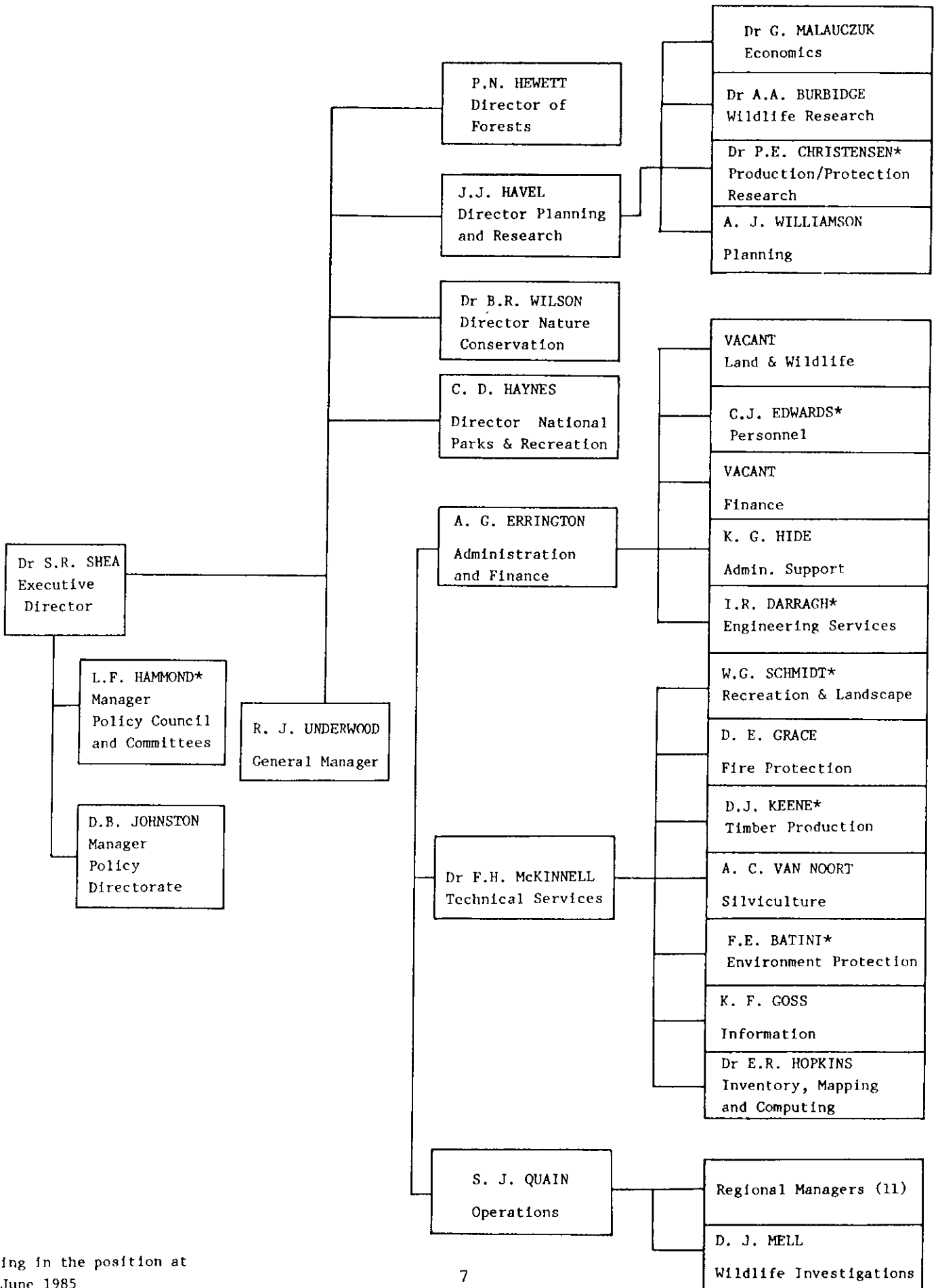


FIG. 2 BRANCH STRUCTURE



\* Acting in the position at  
30 June 1985



**FIG. 3 REGIONAL ORGANISATION**

Regional Managers

C.C. DONE\*  
Kimberley

Dr A.N. START\*  
Pilbara and Gascoyne

B.J. WHITE\*  
Greenough and Metropolitan

I.G. KEALLY\*  
Goldfields

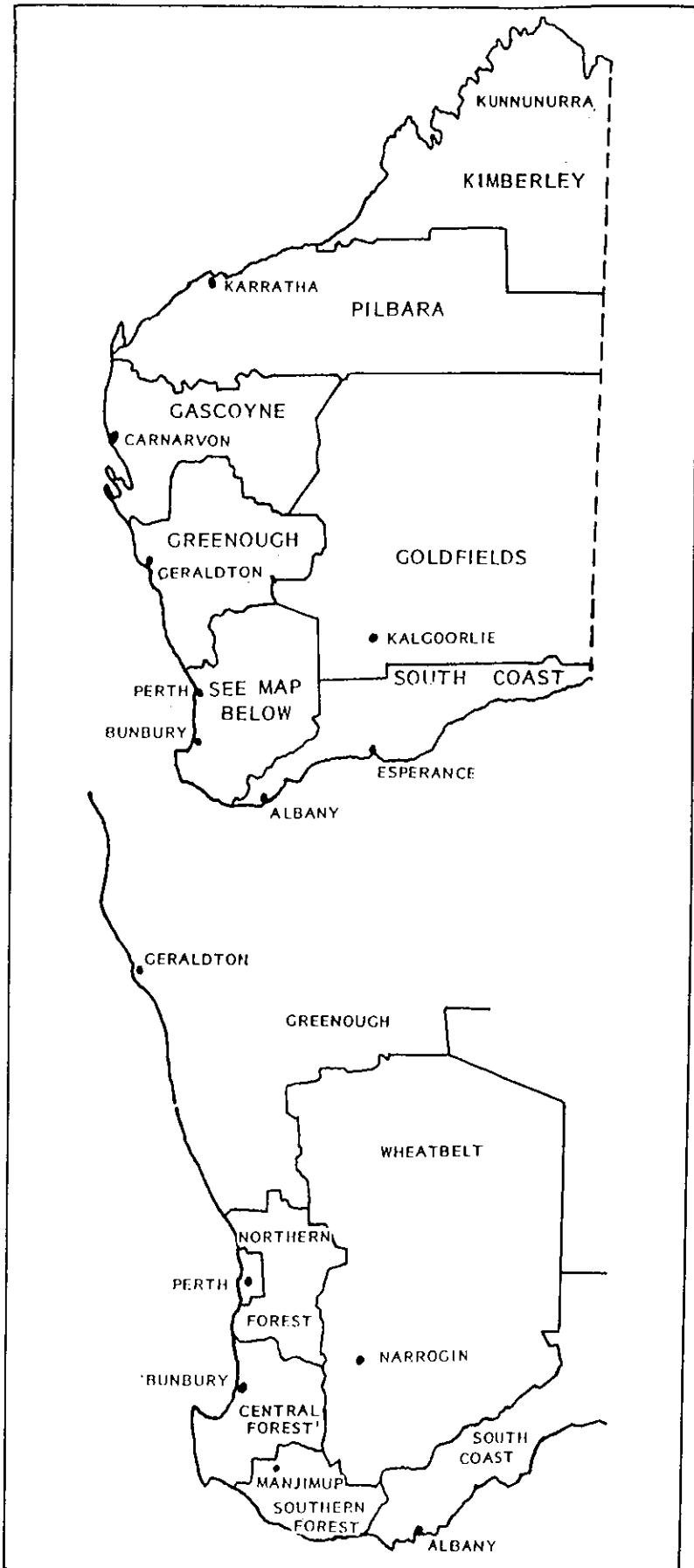
Dr J.R. WATSON\*  
South Coast

G.B. PEET\*  
Northern Forest

D. SPRIGGINS\*  
Central Forest

G.W. HEBERLE\*  
Southern Forest

K.J. WALLACE\*  
Wheatbelt



\* Acting in the position at 30 June 1985

# 3. Reports from Statutory Bodies

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In accordance with Sections 31(1) and 154 (3) of the Conservation and Land Management Act 1984, there follows the Annual Reports of the three Statutory Controlling Bodies.

## THE LANDS AND FOREST COMMISSION

### THE AUTHORITY OF THE COMMISSION

The Commission was established under the authority of Section 18 of the Conservation and Land Management Act, 1984 following proclamation of the Act on 22 March 1985.

Appointments of the Chairman and Deputy Chairman were made by the Governor under Section 20(1) of the Act following nominations of the Minister for Conservation and Land Management. The Executive Director, Department of Conservation and Land Management became the third member of the Commission *ex officio*.

### THE MINISTER RESPONSIBLE AND HIS DIRECTIVES

The Commission is responsible to the Minister for Conservation and Land Management who may request inquiry into or seek advice on any matter on which advice of the Commission is sought.

### OVERALL OBJECTIVE OF THE COMMISSION

The principal objective of the Commission is to maintain close liaison with the Minister and the Department of Conservation and Land Management in matters pertaining to those State forests and Timber Reserves which are vested in it.

### FUNCTIONS OF THE COMMISSION

The functions of the Lands and Forest Commission are prescribed in Section 19(1) of the Act and include:

- to have State forests and timber reserves vested in it together with other land reserved under the Land Act and by Order vested in the Commission.
- to develop policies to achieve or promote the purpose for which the land is vested.
- to consider cancellation, change of purpose or boundary alteration of specified land which is vested in the Commission.
- to submit proposed management plans to the Minister in respect of land vested in the Commission.
- to monitor the carrying out of management plans by the Department of Conservation and Land Management in respect of land vested in the Commission.

### THE POWERS OF THE COMMISSION

The Lands and Forest Commission is not provided with executive powers or functions. Its role is advisory but with direct approach to the Minister being provided.

### COMMISSION MEMBERSHIP

Members of the Commission are:

Mr B J Beggs, I.S.O.	- Chairman
Mr N J Halse	- Deputy Chairman
Dr S R Shea	- Member, <i>ex officio</i>

### STAFF

The Commission is serviced by officers of the Department of Conservation and Land Management.

### THE ACTIVITIES OF THE LANDS AND FOREST COMMISSION

The inaugural meeting of the Commission took place on 16 April

1985 and a further meeting was held on 12 June 1985.

During the first meeting, procedural requirements were determined and the role of the Commission specified in the Conservation and Land Management Act was established. Particular issues considered were:

#### Land Vested in the Commission

Areas of State forest and Timber Reserves that had been vested in the Commission as a consequence of the legislation were considered.

Preparation of schedules of these areas was directed. Additionally, information on any interested changes of management purpose or proposed revesting in the National Parks and Nature Conservation Authority were requested.

#### Compensation for Roads Unusable because of Cessation of Logging Operations in the Shannon Basin

Alternative proposals to compensate logging contractors for roads that had become unusable in the Shannon Basin were considered. A proposal to allow development of a link road of about 1 kilometre in the area was recommended to the Minister as a means of reducing compensation payable but at the same time effectively cancelling use of roads where it had been considered desirable to do so.

#### Proposal for an Export Woodchip Project Based on Private Property

The Commission considered reforestation proposals submitted as part of a project to export woodchips obtained from private property.

In this, a double royalty payment would be paid to the owners to ensure that the costs of reestablishment of the forest would be met.

On this basis, the proposal was endorsed in principle and the Minister advised accordingly.

During the Second Meeting of the Commission, matters considered were:

#### Change of Management Purpose of Land Vested in the Commission

It was advised that necessary changes to the former Forests Department General Working Plan had been made to take into account changed management requirements for the Shannon Basin and the Northern Jarrah Forest Reserve.

#### Preparation of Management Plans

It was reported that preparation of Management Plans had been commenced for the Shannon/D'Entrecasteaux National Park and the Northern Jarrah Forest Reserve.

#### Use of the Karri Thinnings Resource

It was advised that the Premier had announced the availability of small karri sawlogs which had become available as a result of thinning operations in regrowth forest. Tenders for the purchase of this material had been called.

#### FINANCE

Funds for servicing the Commission are provided from the budget of the Department of Conservation and Land Management.

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During the review period, no payments were involved.

THE CHAIRMAN'S REPORT

The Lands and Forest Commission, as stated in the body of the Report has functioned only for a short time. This must be considered to be a period of establishment and as a means of providing the basis of future deliberations and reporting.

The legislative requirements of the Conservation and Land Management Act are understood and the provision allowing for direct communication with the Minister is welcomed.

Members of the Commission have assisted me in a willing and competent manner and with their continued help I look forward to the forthcoming full year's deliberations.

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THE NATIONAL PARKS AND  
NATURE CONSERVATION  
AUTHORITY

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ESTABLISHMENT OF THE  
AUTHORITY

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The National Parks and Nature Conservation Authority was created under Section 21 of the Conservation and Land Management Act following proclamation of the Act on 22 March 1985.

Appointments of members of the Authority were made by the Governor on the nomination of the Minister for Conservation and Land Management under Section 23(1) of the Act and the Chairman and Deputy Chairman were also appointed by the Governor following nomination of the Minister under Section 23(2) of the Act.

The Executive Director and the Directors of Nature Conservation, National Parks and Forests of the Department of Conservation and Land Management became ex officio members.

THE MINISTER RESPONSIBLE AND  
HIS DIRECTIVES

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The Authority is responsible to the Minister for Conservation and Land Management who may request inquiry into or seek advice on any matter on which advice of the Authority is sought.

THE FUNCTIONS OF THE  
AUTHORITY

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The functions of the National Parks and Nature Conservation Authority are prescribed in Section 22(1) of the act and include:

- to have National Parks, nature reserves, marine nature reserves, marine parks vested in it together with other land

reserved under the Land Act and by Order, vest in the Authority.

- to develop policies:
  - \* for the preservation of the natural environment of the State and for the provision of facilities for enjoyment of the environment by the community;
  - \* for promoting the appreciation of flora and fauna and the natural environment;
  - \* in the case of National Parks and marine parks, to fulfil so much of the demand for recreation by members of the public as is consistent with the proper maintenance and restoration of the natural environment, the protection of indigenous flora, fauna and the preservation of any feature of archaeological, historic or scientific interest;
  - \* in the case of nature reserves and marine nature reserves, to maintain and restore the natural environment and to protect, care for and promote the study of indigenous flora and fauna;
  - \* in the case of land reserved under the Land Act and vested in the Authority, to achieve the purpose for which the land was vested.
- to consider cancellation, change of purpose or boundary alteration of specified land which is vested in the Authority.
- to submit proposed management plans to the Minister in respect of land vested in the Authority.

- to monitor the carrying out of management plans by the Department of Conservation and Land Management in respect of land vested in the Authority.
- to advise the Minister on the development of policies for the conservation and management of the flora and fauna of the State, whether on public land or private land.
- to advise the Minister on any matter on which the advice of the Authority is sought by the Minister but where this advice affects councils of municipalities under the Local Government Act, prior details of the intended advice must be given to those councils and the opportunity given for them to make submissions on it.
- to provide advice, upon request, on land vested, whether solely or jointly with another body, in the Authority to any body or person if the advice is in the public interest and it is practicable for the Authority to provide it.
- to provide for study or research to be undertaken with respect to management plans.

#### AUTHORITY MEMBERSHIP

Members of the Authority are:

Mr N J Halse (Chairman)  
 Associate Professor A J McComb  
 (Deputy Chairman)  
 Mrs M I Blackwell  
 Mr R Aitken OAM  
 Mr I J Maley  
 Dr J M Bailey  
 Mr W R Bailey  
 Mr J L Mumme  
 Mr R Neal  
 Mr A J Fewster  
 Dr S R Shea  
 Dr B R Wilson  
 Mr C D Haynes  
 Mr P N Hewett

#### STAFF

The Authority is serviced by officers of the Department of Conservation and Land Management.

#### THE ACTIVITIES OF THE NATIONAL PARKS AND NATURE CONSERVATION AUTHORITY

The inaugural meeting of the Authority was held on 16 April 1985 and subsequent meetings took place on 10 May 1985 and 14 June 1985.

During the first meeting, procedural requirements were determined and the role of the Authority specified in the Conservation and Land Management Act, was established. Particular issues considered were:

#### Vesting of Land in the Authority

A backlog of vesting requirements was reported to exist. This included:

- areas proposed as National Parks;
- Wildlife reserves;
- State forests now managed as if they were National Parks.

Action requested was for preparation of schedules of those areas to be followed with vesting as soon as was practical.

#### The Current Classification of National Parks in Western Australia

The appropriateness of the classification given to National Parks in the State was considered and it was requested that naming of the parks should be made under a more rational description of usage.

#### Advisory Committees

It was noted that with the revocation of the National Parks Authority Act and sections of

the Wildlife Conservation Act, the advisory committees established under that legislation had ceased to exist. As a consequence of this situation, it was agreed that new advisory committees would be established to meet future requirements.

During the second meeting of the Authority important matters considered were:

A Lease of part of Varanus Island in the Lowendal Island Group for the Purpose of Providing shore-based facilities for Oil Storage.

Through the procedure provided under the Petroleum (Pipelines) Act, Bond Petroleum sought a lease of part of Varanus Island and because it was advised that there were over-riding powers in the Petroleum (Pipelines) Act the Authority approved that a lease be granted subject to satisfactory conditions being imposed. In doing so, the Authority sought inclusion of stringent conditions in the lease to provide protection of those parts of the Island not included in the lease as well as providing for rehabilitation of the lease area following cessation of activities. The Minister was informed of the concern felt by the Authority. The lease had not been finalised by 30 June.

#### Ningaloo Marine Park

In order to facilitate planning of the Ningaloo Marine Park, the Authority recommended that the Marine Park itself and the Cape Range National Park should be treated as a single entity.

To assist liaison with the local community in the development phase of the Ningaloo Marine Park, establishment of a local

Advisory Committee was recommended to the Minister. Subsequent approval was given and a committee was established with the following membership:

Dr B R Wilson (Department of Conservation and Land Management); Chairman  
Mr D Bathgate (Councillor, Shire of Exmouth);  
Mr B Teede (Councillor, Carnarvon Shire Council);  
Ms J Lefroy (Pastoralist);  
Mr R French (Pastoralist);  
Mr H Baxter (Professional Fisherman);  
Mr B Stokes (Marine Naturalist).

The terms of reference of the Advisory Committee were established to be "to advise the Authority from a local point of view on the development of the Park".

During the third meeting, matters considered were:

#### Preparation of Management Plans

The statutory requirement for management plans to be written prior to work other than necessary operations being undertaken was considered in the context of the massive staff input required for their production. It was determined that to meet the requirements specified in the Act, a statement of general principles should be established to meet the immediate requirements for protection. This statement would be followed by interim plans for management purposes and finally, with formal management plans.

The Kangaroo Management Advisory Committee -  
Representation from the Authority

Dr J Bailey was nominated to

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represent the Authority on this Committee.

#### Initiation of Advisory Committees

It was agreed that the Department of Conservation and Land Management should be responsible for the initiation of advisory committees to meet the requirements of the Authority.

#### Use of the Former West Australian Wildlife Authority Trust Fund

It was recommended that expenditure from the former Wildlife Authority Trust Fund should in general, be directed to projects that were related approximately in proportion to the sources of income to the fund.

#### Protection of Stromatolites in Lake Clifton

It was agreed that officers from the Department of Conservation and Land Management, in collaboration with Professor McComb, should examine the requirement to protect stromatolites in Lake Clifton.

#### Field Visit to the South Coast National Park

A number of members of the Authority visited parts of the South Coast National Park on 20-22 June when areas within the park were inspected.

#### FINANCE

Funds for servicing the Authority are provided from the budget of the Department of Conservation and Land Management.

During the review period, no payments were involved

#### THE CHAIRMAN'S REPORT

The National Parks and Nature Conservation Authority, as has been stated in the body of the Report,

has been established for only a short time. However, I believe a substantial basis for the future working of the Authority has now been laid down.

This includes the development of an understanding of the legislative requirements of the Conservation and Land Management Act, the establishment of a direct means of communication with the Minister and development of a close working relationship with the staff of the Department of Conservation and Land Management.

The meetings of the Authority have been long and the members have had to address the wide variety of issues involved in their broad responsibilities. A number of tasks have been commenced which will take some time to bring to fruition. These include such matters as more precise classification of the various kinds of reserves, the new problems of managing marine reserves and the method of approach to developing management plans.

Finally, I wish to express my thanks to members of the Authority and the staff of the Department for their dedication in initiating this most important function of providing input to conservation and management aspects of Western Australian National Parks and nature conservation.

#### STATISTICAL INFORMATION

Data on the areas of National Parks and Nature Conservation Reserves have been reported in full in the Annual Report of the Department of Conservation and Land Management. However, the areas of National Parks and Nature Reserves that were managed by the Department of Conservation and Land Management on behalf of the Authority, at 30 June 1985 were:

National Parks 4,429 469 hectares  
Nature Reserves 9,915 024 hectares



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## THE FOREST PRODUCTION COUNCIL

### ESTABLISHMENT OF THE AUTHORITY

The Forest Production Council was formed under the authority of Section 24 of the Conservation and Land Management Act following proclamation of the Act on 22 March 1985.

The Executive Director and the Director of Forests of the Department of Conservation and Land Management, *ex officio* became the Chairman and Deputy Chairman respectively.

Appointments of members of the Council were made by the Governor on the nomination of the Minister for Conservation and Land Management under Section 26 (b) of the Act.

### THE MINISTER RESPONSIBLE

The Council is responsible to the Minister for Conservation and Land Management.

### THE FUNCTIONS OF THE COUNCIL

The functions of the Forest Production Council are prescribed in Section 25 of the Act and are:

- to advise the Minister generally on matters pertaining to production from State forest and timber reserves.
- to advise the Minister on the improvement of production in ways consistent with the maintenance of other forest values and the use, processing and marketing of forest produce.
- to advise the Minister on the need for, and form of research to promote the following objectives:

- to ensure the multiple use and sustained yield of indigenous State forest or timber reserves for the satisfaction of long-term social and economic needs.
- to achieve the optimum yield in production from State forest or timber reserves which are planted with exotic species in a manner consistent with the satisfaction of long-term social and economic needs.
- to advise the Minister on the contents of proposed management plans for State forest and timber reserves.

### COUNCIL MEMBERSHIP

Members of the Forest Production Council are:

Dr S R Shea - (Chairman)  
Mr P N Hewett - (Deputy  
Chairman)  
Mr G J Shepherd  
Mr D Spriggins  
Mr A Gosatti  
Mr P J McNamara  
Mr R G Bunning  
Mr K J Kelsall  
Mr B T Ray  
Mr R D McInnes  
Mr A V Wheatley  
Mr G L Airey  
Mr R J Gillman  
Mr R O Pollard

### STAFF

The Council is serviced by officers of the Department of Conservation and Land Management.

### THE ACTIVITIES OF THE FOREST PRODUCTION COUNCIL

The inaugural meeting of the Council took place on 16 April 1985 and

subsequent meetings were held on 3 May 1985 and 7 June 1985.

During the first meeting, procedural requirements were determined and the role of the Council specified in the Conservation and Land Management Act, was established. Particular issues considered were:

#### Appointment of Sub-committees

Agreement was reached to form sub-committees to consider specific projects on behalf of the Council. These were to include

- examination of the overseas market potential for quality hardwood projects.
- participation of the private sector in softwood production.

During the second meeting, matters considered were:

The Report of the Timber Utilisation and Marketing Task Force when it was resolved:

- that a marketing consultant should be invited to address Council.
- that a small group should be formed to establish the requirements for improved resource statements. The group was nominated as:

Mr C Krans  
Mr G Shepherd/Mr D  
Cullity  
Mr J B Campbell  
Mr H Kippo

- that a panel be established having as its broad terms of reference, "forest research and particularly the link between utilisation and silviculture".

Panel membership was agreed to as follows:

Mr D Jenkins/Mr D  
Cullity  
Mr A Gosatti  
Mr J Oldham  
Mr J J Havel  
Mr G Airey  
Mr H Kippo  
A representative from  
the Institute of Forests  
of Australia Inc.  
Mr S Morgan

Appointment of Chairman was held over until an invitation had been accepted.

#### Markets for Regrowth Hardwoods

Issues considered were those of the resources that were available and uses to which they could be put as a result of these discussions, a field visit was made to Dwellingup and the Wood Utilisation Research Centre at Harvey on 17 June 1985 when the type of regrowth logs available and the research being conducted into their utilisation were studied by the Council, the Lands and Forest Commission members and other representatives from industry.

#### Security of Access to Log resources

The relationship between the State's hardwood and softwood resources and the need for capitalisation of manufacturing plants was considered. To provide the necessary information for Council, a panel was appointed with the following members:

Mr P N Hewett  
Mr P J McNamara  
Mr R G Bunning  
Mr G Shepherd

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During the third meeting of the Council the following matters were considered.

Submission to the Department of Industry, Technology and Commerce of a Proposal for Financing a Public Interest Project Titled "New Generation Hardwood Processing".

Council endorsed submission of the proposal which would be made under Section 39 of the Industrial Research and Development Incentives Act, 1976.

The project envisages the industrial research and development of new techniques for the economic processing of small sized eucalyptus sawlogs and subsequent seasoning to produce high grade cabinet woods, joinery and other timber products.

Development of Pine Plantations on Privately-owned Land.

The problems of sub-dividing large holdings to enable investors to purchase and develop small lots were considered. It was agreed that the issue be brought to the attention of the Minister.

The Concept of Production Forestry

The lack of public appreciation of production forestry was discussed and in order to bring this matter to the notice of the public it was agreed that a sub-committee be established for the purpose. Membership was agreed to include:

Mr D Spriggins  
Mr R D McInnes  
Mr A Gosatti  
The Manager of the Forest Production Association (WA) with power to co-opt.

Address by Dr Frost, Marketing Consultant from the West Australian Institute of Technology.

Dr Frost addressed the Council on aspects of Marketing having relevance to forest - based industries.

#### FINANCE

Funds for servicing the Council are provided from the budget of the Department of Conservation and Land Management.

During the review period, no payments were involved.

#### THE CHAIRMAN'S REPORT

The Forest Production Council held its first meeting on 16 April 1985 and since that time has been actively involved in the functions required of it under the Conservation and Land Management Act.

The co-operation established between members of the Council has been admirable and has led to harmony during the meetings which have been held. But perhaps of equal importance has been the willingness of members to establish small sub-committees and panels to consider specific issues on behalf of the Council.

This procedure, although time consuming on the part of members, will allow a considerable volume of work to be undertaken in the future and thereby enhance the value of the Council itself.

Formation of the Council does, I believe meet the long standing requirement to bring together all those groups who rely on the forest for its commercial values and through the co-operation that has already been achieved, I look forward to reporting on the activities of the forthcoming full year.

# 4. The Crown Land Estate

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The area of land managed by this Department is as follows:

## STATE FOREST AND TIMBER RESERVES

The area of State forest at 30 June 1985 was 1,897,950 ha, which represents a net growth of 28,008 ha compared with the area at 30 June 1984. This substantial increase is mainly due to the inclusion into State forest of 28,011 ha of land in the Mitchell and Hay River District, near Denmark. The area of Timber Reserves (CALM Act 1984) also rose this year by 259 ha to 119,180 ha.

Freehold land vested in the Executive Director totalled 25,541 ha, an increase of 1,476 ha since last year. This category of land is intended mainly for the pine planting program.

## NATIONAL PARKS

The total area of National Park administered by this Department is 4,433,065 ha.

## NATURE RESERVES

The area of land reserved for the

conservation of flora and fauna is 9,915,024 ha.

## LAND ALIENATION AND LEASES

Land alienation is the process of transfer land from Crown to private ownership. In the three months to June 30, three applications for alienation were received, involving 44 ha of land, and 23 applications for leases were received, covering 2,857 ha. The Department agreed to the following:

### (a) Alienations

	NO.	AREA (ha)
State forest	0	0
Crown land	0	0

### (b) Leases

State forest	14	1,506
Crown land	7	1,188

The Department, on behalf of the Industrial Lands Development Authority, is also involved in management of land in the Kemerton area near Australind. This land had been purchased by the Government for a proposed aluminium smelter.

# 5. Land Management

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During the period covered by this report, management activities continued largely as they had before amalgamation. Much effort was devoted by senior staff to the task of setting up and staffing the eleven field administrative regions. Progress in staffing was not as repaid as had been anticipated due to difficulties in processing the large number of positions involved.

## NATIONAL PARKS

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### Equipment Improvements

During the three month period, the results of injecting about \$1 million of loan funds into National Parks were shown in a large number of improvements in equipment. New houses, sheds, fire trucks, vehicles and radios were completed, or made available during this period.

The major impetus took place in the two large National Parks in the Pilbara where construction commenced on two new houses and a storage shed at Hamersley Range National Park. At Millstream National Park an Aboriginal ranger training village was constructed, comprising five demountable accommodation units and a demountable training centre/classroom. Houses for rangers were also renovated at Margaret River and Northcliffe.

New fire trucks were made available to Kalbarri and Yanchep Parks. Five more fire trucks were ordered. In addition, access to fire tenders for National Parks was improved by the fleet management system developed for all Departmental vehicles.

An additional 23 ranger vehicles valued at \$360,000 were ordered and these will be progressively acquired in the coming financial year.

To some extent this additional equipment was made possible by the changeover of financial accounting systems brought about by the amalgamation of departments.

Substantial improvements were made in the area of radio communications. Rangers in the south-west of the State were brought into the VHF network which the Department inherited from the former Forests Department. Additional radios were purchased for areas in the north of the State and communications in the Pilbara and Kimberley regions have improved substantially.

### Improvements in Visitor Facilities

Visitor facilities in National parks have been substantially upgraded due to the injection of loan funds. These include ablution blocks and toilets, walk trails, visitor information, published material, static displays and roads. The roading program has been made possible through continuation of grants from the Main Roads Department.

Highlights during the period were the completion of a new ablution block and toilet facility at Geikie Gorge, which included access for disabled persons; and of additional toilets in Yanchep National Park and Leeuwin-Naturaliste National Park. In the latter area, a new style of sealed vault toilet suitable for bush areas was installed and it appears to have made a considerable improvement in this area. Previously ordered information shelters continue to be installed at selected locations. A new general information brochure on the National Parks of W.A. became available and has been widely used in all areas. The major road upgrading program for Kalbarri National Park, which was the single major roading program for the year, continued.

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### Control Work of Erosion, Feral Animals and Weeds

During the period, works initiated by the former National Parks Authority were monitored and maintained where necessary. Some initiatives which took place during the three month period were: the further planting of marram grass in south coastal areas; the fencing and partial removal of stock from Windjana Gorge National Park in the north of the State, an area where stock from adjoining stations have presented problems for many years; and planning a program to eliminate feral cattle and donkeys from the proposed Bungle Bungle National Park.

### Fire - Prescribed Burning

Existing prescribed burning policies for the three former organisations will be maintained until new policies for each have been developed.

During this period, prescribed burns were carried out in several National Parks in the southern part of the State in accordance with the policies of the former National Parks Authority. As a result of winter rain arriving late during this year, it was possible to continue burning programmes until later than normal. Of particular note was an experimental burn at Fitzgerald River National Park in which 5km of road was burnt by igniting from aircraft. Additional kilometres were lit from roadside edges in accordance with previously developed policies.

### NATURE RESERVE MANAGEMENT

From 1 July 1984 to 22 March 1985 reserve management operations were undertaken by the reserve management section of the then Department of Fisheries and Wildlife.

Reserve management teams were located at Katanning, Pingelly, Karratha, Woodvale and Two Peoples Bay, Albany.

With the formation of the Department of Conservation and Land Management on 22 March 1985, reserve management was delegated to the eleven regions within the new structure.

Under the regional management system all reserves are managed in accordance with approved policies and management plans, and with the guidance of specialist research branches.

Major management activities undertaken during the year included:

- i) Biological Survey
- ii) Firebreak construction
- iii) Firebreak maintenance
- iv) Wildfire and fire control
- v) Prescribed burns.

### FOREST MANAGEMENT

Areas of forest treated, and type of management applied during the past 12 months are given in Appendix 1.

Wood production figures from 30 June 1984 to 30 June 1985 are given in Appendix 2.

Management of forests continued in line with the policies approved under the General Working Plan No. 87 prepared by the Forests Department. In the re-organisation of field staff following the formation of the Department of Conservation and Land Management, the previous regional and district structures in the forest zone have remained largely intact. As a result, experienced foresters and forest workman have been able to maintain the former high

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standards of forest protection, recreation and conservation, and control of the timber and mining industries in State forests.

During the three months under review, major achievements are made in the areas of recreation development in the Murray River Valley near Dwellingup, fire protection of pinaster pine forests at

Wanneroo, fuel reduction and thinning in regrowth karri forests, and restriction of the spread of jarrah dieback through improved mapping, planning and control systems.

Comprehensive statistics relating to forest management, from 1 July 1984 to 22 March 1985 are given in the 1985 Forests Department Annual Report.



The Minister for Conservation & Land Management, Hon. Ron Davies (second from right), opened a new walk trail at Langford Park near Jarrahdale on Friday, June 21, 1985.

# 6. Wildlife Protection

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## Activities

See Appendix 3 for protected flora and Appendix 4 for protected fauna and fauna licences.

Subsequent to 22 March 1985, and the formation of the new Department, a number of changes have affected the Wildlife Protection branch. The branch name was changed from Investigations to Wildlife Protection, and Wildlife district boundaries were amended to conform with new regional and district boundaries.

Some areas such as the Kimberley and Pilbara remain the same; however, in much of the State there have been significant changes. Kalgoorlie for example has increased in area to exceed 800,000 square kilometres. Instead of 15 wildlife districts there are now 11 regions comprising 25 areas of responsibility. The traditional role of the wildlife officer and his branch structure has been retained.

In some instances interim arrangements have been made for branch staff to extend their operations to include an adjoining region or district which is currently unmanned by a wildlife officer. Although branch strength has increased, current staff numbers are unable to maintain the desired level of control in compliance with the Wildlife Conservation Act.

Two positions, one in Albany and the other in Geraldton, were created in an effort to minimise the illegal taking of protected and rare flora, and to oversee the flora industry. Extensive commercial exploitation occurs in both areas. The Albany area currently possesses over 30 per cent of the State's rare flora.

Wildlife officers are moving into regional offices as accommodation becomes available. This has resulted

in benefits in terms of support; however, additional demands are being placed on officers. The provision of new VHF radio equipment and HF radio frequencies is progressing.

During the year two American Nationals were apprehended and prosecuted for taking various species of parrots' eggs from nests. The offenders admitted their intention of returning to the United States of America with the eggs. There is considerable concern at the current level of bird and reptile smuggling.

Regular patrols are being maintained to minimise illegal bird trapping, shooting, reptile trapping, flora picking and parrot nest robbing. The level of nest robbing continues to cause concern, particularly as offenders are taking rare species, desecrating nest hollows, and in the extreme, felling trees to remove the young.

Major activities this period included the overseeing of licenced flora picking and the protection of flora throughout the State. The provisions of the Agriculture and Related Resources Protection Act, and Declared Bird Regulations, continue to be enforced. Import and export inspections of fauna and exotic birds were maintained. Aviary inspections were also maintained to ensure compliance with the provisions of these Regulations.

Enforcement surveillance of nature reserves is maintained throughout the year to prevent the illegal removal of timber and gravel, illegal grazing, camping, building, rubbish dumping and the taking of flora and fauna. Island nature reserves are patrolled regularly by wildlife officers.

Regulation of various seasons was maintained throughout the year.



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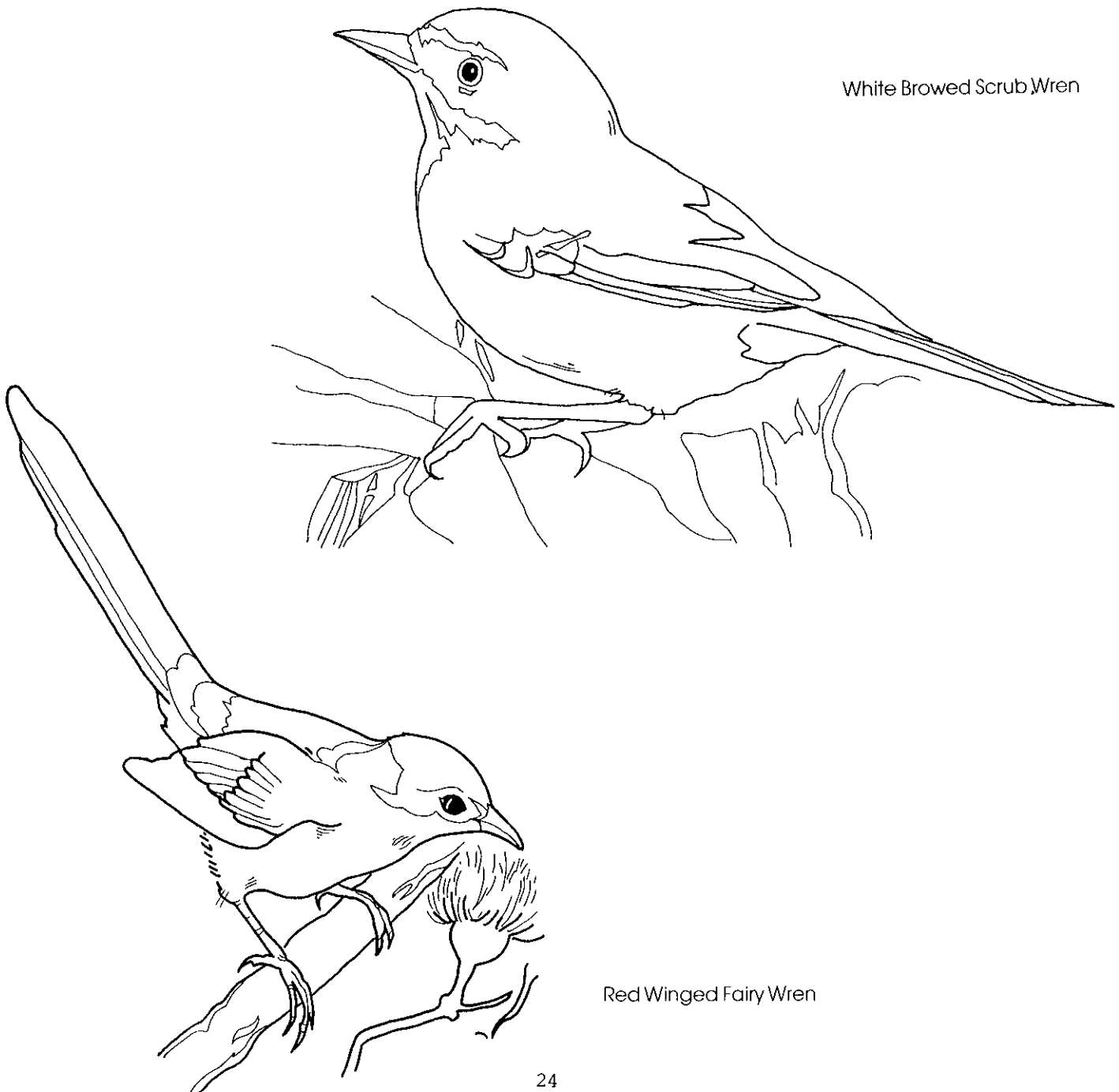
Professional kangaroo shooters, chillers, processors and skin dealers were checked regularly. Wildlife officers policed the open season for ducks, the finch trapping season in the Kimberleys and licenced parrot trapping activities in the south-west.

Monitoring wetlands and the status and condition of various species of flora and fauna was maintained. Surveys were undertaken to determine status and distribution of various flora and fauna species.

Surveys of various areas of land were carried out to determine conservation value.

Wildlife officers continued to provide advice to government and non-government bodies and members of the public in regard to requirements under the Act.

Guidance is provided in respect of dangerous fauna, fauna causing damage, and sick, derelict or injured fauna.



White Browed Scrub Wren

Red Winged Fairy Wren

# 7. Research and Planning

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## ECONOMICS

Work was initiated to develop a softwood afforestation scheme involving joint ventures between the State Government and private landowners.

Other work involved assisting various Federal and State organisations, including the Forest and Forest Products Industry Council and the Western Australian EXIM Corporation Ltd.

## WILDLIFE RESEARCH

The Wildlife Research branch conducts scientific research on a wide variety of subjects relevant to the conservation and management of the State's plants and animals and the protection and management of their habitat. Currently about 110 different research programs are underway and a survey of these is being prepared for Departmental use. The main areas of research are as follows:

### Biological Survey

The Nullabor region survey carried out in conjunction with the South Australian Department of Environment and Planning, and with support from the Australian National Parks and Wildlife Service, is in the writing. The Eastern Goldfields Biological and Desert Mammals Survey is also in the writing. Resource data collection is underway for the preparation of management plans for relevant areas within the wheatbelt shires and the islands between Lanocelin and Dongara.

### Flora Conservation

Work on the conservation of endangered flora continues.

Searches for supposedly extinct wheatbelt plants start again in the

spring. Taxonomic work on orchids and eucalypts is being carried out to elucidate the species boundaries of rare plants in these groups, and at the same time searches were made for presumed rare taxa.

### Endangered Animal Species

Detailed studies are underway on the Numbat, Black-slated and Rothschild's rock-wallabies, the Western Tortoise and Woylie, and the Tamar. Initial surveys have been carried out to clarify the status of the Yinnietharra Dragon Lizard, and the need for further work is under review.

### Waterbirds and Wetlands

Advice on waterbird and wetland management problems is provided by the branch and research is carried out in these areas.

### Plant Ecology

Work on fire ecology continued with detailed studies in the Mt Lesueur-Eneabba region, at Tutanning Nature Reserve, Two Peoples Bay Nature Reserve and Middle Island (Recherche Archipelago). South Eneabba Nature Reserve is the subject of much regeneration following mineral sand mining. A project is under way to design a biological monitoring procedure suitable for adaptation to land controlled by the Department.

### Dampier Archipelago

The research officer based at Karratha is involved in the preparation of a draft management plan for the Dampier Archipelago Nature Reserve. Studies necessary for the plan have included: Biological survey of the islands, turtle utilisation of beaches and feral animal and weed control. Work on other Pilbara islands is also in progress.

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## PRODUCTION AND PROTECTION RESEARCH

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The Production and Protection Research branch of the new Department is based at seven different centres - Wanneroo, Como, Dwellingup, Narrogin, Bunbury, Busselton and Manjimup. The stations primarily service the region in which they are located, but each also has wider responsibilities. For instance, dieback research has now expanded into the south coast region.

Production and Protection is a convenient breakup of the activities of the branch. Production research covers all aspects of production forestry; i.e. wood production from native hardwood forests, including both jarrah and karri, and from softwood plantations of *Pinus radiata* and *P. pinaster*. Protection research covers factors which affect land management, such as fire, dieback, insect attack, mining, etc. It also includes the effects that production forestry may have on other forest values; eg. on the conservation of flora and fauna or recreation, ecology, hydrology, catchment management, etc.

The bulk of the work carried out by the branch during the year has been reported in the final report of the Forests Department. The new initiatives undertaken since the creation of the Department of Conservation and Land Management are given below.

### Dieback

An investigating team comprising Production and Protection, Wildlife research and Inventory personnel inspected the south coast parks to report on the dieback situation. Four parks, Cape Arid, Cape Le Grand, Fitzgerald and the Stirling, were visited. Most of the time was spent at Cape Arid.

Their report indicates clearly that a serious situation exists. Dieback is widespread throughout many of the parks, occurring even in some areas remote from roads and walking tracks. A wide range of plant communities are affected on a number of different site types. In many cases a very high proportion of the flora on infected sites has been killed. The number of susceptible species is large.

The situation is serious as the south coast parks contain some of the highest concentrations of plant species within the State. Many of the plants are endemic, occurring only within these parks.

### *Pinus Radiata* Improvement Program

Major new initiatives to obtain the maximum benefit as quickly as possible from the *Pinus radiata* breeding program have started.

Firstly, a program to raise planting stock from selected cuttings commenced in the Manjimup nursery. This year 55,000 cuttings are being raised and it is intended to increase this to 1,000,000 per annum within the next few years.

Secondly, also at the Manjimup nursery a "hedge artificially pollinated seed orchard" (HAPSO) has been planted. This is a major initiative in the *P. radiata* improvement program, which will result in medium and long term benefits.

### Parrot Report

A report on damage to fruit orchards by parrots in the south-west has been completed. The report is a detailed account of the problem and an excellent summary of the available knowledge. It clearly indicates that the problem is one that occurs in cycles. The reason for the cyclical nature of the problem is not

apparent. Further research on the biology of the Red-capped Parrot (*Purpureicephalus spurius*) is recommended with a view to establishing the factors which influence the cycle, so that future problem years can be predicted.

#### Information Retrieval

A start has been made on computerisation of research data. All Research Working Plans for the past 30 years are being included in the system. A later phase of the project will be the inclusion of summaries of results for each of the many trials involved in these working plans. The system should allow easy access to all research data by manager.

#### PLANNING

The main function of this new branch is to prepare management plans according to the requirements of the Conservation and Land Management Act.

A major requirement is that draft management plans must be open to public submissions for a minimum of two months.

Work is in progress on the following management plans:

- Nature Reserves of the Shire of Toodyay
- Nature Reserves of the Shire of Wyalkatchem
- Nature Reserves of the Shires of York and Northam
- Mooradung Nature Reserve
- Shannon Forest -
  - D'Entrecasteaux Park
  - Lane-Poole Reserve
  - Ningaloo Marine Park

Assistance was given to the project team working on the Rottnest Island Management Plan, and to the City of Stirling in connection with a draft management plan for Star Swamp.

Public participation for people interested in the Lane-Poole Reserve was also catered for by four all-day workshops. This provides a means of contributing to the preparation of the draft plan itself and is in addition to the two months minimum public submission period.

Management plans are generally prepared by a project team of four people, at least one of whom is not a member of the Planning branch, but comes from the region concerned. This ensures that the plan will be implemented, and emphasises the strong link between a management plan and its implementation.

It takes about a year to prepare a detailed management plan. This includes the time taken to analyse public submissions, and to present the plan to the National Parks and Nature Conservation Authority, or the Lands and Forests Commission, who then forward it to the Minister for Conservation and Land Management for approval. With over 50 National Parks, over 1100 Nature Reserves and nearly two million hectares of State forest, the workload is formidable. In order to cover more ground, the emphasis over the next 12 months will swing towards regional management plans, covering National Parks, Nature Reserves and State forest areas in each administrative region.

The planning staff consists of five full-time planners, assisted by technical, clerical and contract or seconded staff.

# 8. Technical Services

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## RECREATION AND LANDSCAPE PLANNING

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The main function of this branch is to provide regional and district personnel with specialist advice and assistance on landscape management and recreation planning projects throughout the State.

The initial work of the branch has largely been directed at broadscale planning, where staff have been involved in the preparation of draft land use management plans for the D'Entrecasteaux National Park and the Shannon and Lane-Poole Reserves.

Detailed design and planning input has also been provided to service on-going Community Employment Programme funded recreation projects in State forest. Similar assistance has been provided in other regions including the Kimberleys and Pilbara, where plans have been prepared for the upgrading of several visitor use areas and park information facilities.

At the No. 1 Minesite near Jarrahdale, a self-guiding interpretative trail on jarrah forest ecology and bauxite mining rehabilitation was completed. Names in honour of Ken Jones, a well-known forest officer from the district. The trail was officially opened on 21 June 1985, by the Hon. Minister, Mr Davies.

Work has also been completed on the revision and publication of a Departmental sign manual. This document, which complements the recreation operation manual prepared last year, provides detailed design guidelines and specifications which will result in noticeable improvements in the standard of Departmental signs and information boards.

## FIRE PROTECTION

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In the south-west of W.A., the fire season was longer than normal due to an extension of dry autumn conditions which lasted until late May 1985. See Appendix 5 for summary of wildfires, caused of wildfires and summary of prescribed burns.

### Wildfires

During this report period, forestry crews attended 84 fires in or near State forest, covering 13,062 ha. Most of the area burnt in this period was due to one large 10,400 ha fire caused by local brigades carrying out protective burning on the south-eastern fringe of State forest.

Eight wildfires burnt 763 ha in National Parks and some seven wildfires burnt in or near Wildlife Reserves during the report period.

### Fuel Management

#### State Forest

Aerial prescribed burns affecting approximately 10,000 ha of State forest were completed during this period. In addition, 2,000 ha were burnt by ground crews. These areas were burnt for a variety of reason such as fuel reduction for fire protection; habitat management; disposal of logging debris; and site preparation for hardwood regeneration and pine plantation establishment.

#### National Parks

Eight burns totalling approximately 1,350 ha were carried out. Burning was carried out by Ranger staff with assistance in some areas from district employees, neighbours and local bush fire brigades.

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A trial to test the feasibility of establishing internal firebreaks was carried out in the Fitzgerald River National Park in June 1985. Ignition was effected from aircraft and an effective narrow firebreak about 500m wide and 5 km long was established without having to construct boundary tracks. The results are encouraging and further trials will be undertaken.

#### Wildlife Reserves

A number of prescribed fuel reduction buffer burns were carried out on Nature Reserves. Reserve management teams attended reduction burns on adjoining lands in support of local bush fire brigades and neighbouring landowners.

#### Detection

The Department's fleet of nine Piper Super Cub aircraft were flown for a total 1550 hours to provide aerial surveillance of State forest, nearby Crown lands and private property.

A new 500 metre airstrip was constructed near the Mundaring District Headquarters in May 1985 and will be available to provide surveillance to areas ranging from east of Gingin to east of Kelmscott.

Four lookout towers were used to maintain a continuous watch on important pine plantations, whilst another 20 towers were maintained as a back-up to spotter aircraft.

Structural supports to the observation platforms on top of the Gloucester Tree Lookout were completed in June 1985, as essential maintenance of this important fire lookout and tourist attraction.

#### SILVICULTURE

A new Silviculture branch was

created to provide silviculture input into the policies and management practices of the new Department.

The functions of the branch are to develop and improve silviculture systems for forest management, to monitor silviculture standards and to provide silviculture training for Departmental staff.

Silviculture guidelines are being prepared for the management of the wide range of hardwood forest types to provide appropriate treatment aimed at achieving satisfactory regeneration and maximising productivity.

In softwoods, the main issue is the thinning of the plantations to ensure that programmed production of pine sawlogs is achieved. Programs are being developed to ensure that the thinning of plantations is carried out; preferably by commercial operations or non-commercial operations if markets for thinnings cannot be found.

#### ENVIRONMENTAL PROTECTION

Implementation of the Government's 'Dieback Policy 1982' continued. All operations proposed within proclaimed Disease Risk Areas were evaluated.

The area of State forest and timber reserves proclaimed as Disease Risk Areas remained at 719,561 ha. Access to Disease Risk Areas is restricted and is controlled by permits and by patrols.

Twenty-four permits were issued and 62 patrols were carried out to assist enforcement of regulations. A total of 222 permits are currently in use. The results of monitoring of hygienic logging trials at Dwellingup, Nannup and Manjimup were collated, together

with those of a site-vegetation type survey of the Dwellingup trial areas.

Two major environmental schools involving over 50 Departmental staff were conducted at Busselton. Smaller training courses were held for staff and industry personnel.

Liaison continued with other authorities, such as the Public Works Department and the Agriculture Protection Board (APB) in respect to environmental protection. The Department of Conservation and Land Management and the APB co-operated in a research program into feral pig movements and control techniques near Dwellingup. Monitoring of trials to evaluate the effects of logging in stream reserves was completed.

An initial inspection was made of the National Parks and Nature Reserves of the South Coast region to determine environmental protection requirements in the region, with an emphasis on dieback disease management.

#### INFORMATION

Essentially, the Information branch retained the structure of its predecessor in the Forests Department, but was augmented by staff and resources from the National Parks Authority, and expanded by external appointments. Its consolidation to cope with the demands of the new Department was guided by recommendations of an external consultant. A new position of Manager was created and filled.

While the branch's central task is effective dissemination of information to the Department's many audiences, it is divided into six areas of responsibility:

- \* Advisory Services
- \* Publications
- \* Education

- \* Media
- \* Displays
- \* Public Participation

The new branch co-ordinates and services many other communication activities, particularly of a regional and district origin.

The staff establishment is 28 persons occupying 26 full-time positions.

#### Advisory Services

The six foresters in Advisory Service are responsible for extension programmes to rural areas, servicing farmers and private plantations, establishing and maintaining arboreta, conducting field trials and handling urban enquiries. Each services a region of the agricultural area.

The rural advisory service continued to be well patronised, reflecting the positive attitudes of farmers towards tree planting and the promotional activities of organisations such as Greening Australia. The service's aim is to achieve widespread adoption of effective tree planting techniques, for the prevention of soil erosion, provision of shelter, prevention of salinisation and for ecological and aesthetic reasons.

Individual servicing of farmers continued to be a most effective way of identifying on-farm problems and working towards their solution.

However, a wider range of influence was attained through consultation with other persons and organisations servicing the agricultural industry - Department of Agriculture officers, private nurseries, shire councils, schools and Greening Australia. Advisory officers were guest speakers at schools and other sponsored functions. They gave talks at seminars and field days, sometimes in co-operation with the Department of Agriculture. Other

times they were hosted by local community organisations. A 'tree establishment workshop' at Esperance was well attended.

Of particular note is the strong interest that the farming community is taking in the direct seeding of trees and shrubs. Many farmers consider seedlings too expensive to plant and too labour intensive to maintain. There has been sufficient success with direct seeding, to warrant further investigation.

The use of trees as windbreaks, often using agro-forestry systems, has attracted a lot of interest and with some large-scale plantings. A wind break design and management field day, held at Esperance, featured recent research findings and experience.

Servicing private plantations is the role of one advisory officer.

Expertise in this area was boosted by attendance at conferences of the Australian Forests Development Institute and the New Zealand Farm Forestry Association, combined with an agro-forestry study tour of the North Island, New Zealand.

#### Arboreta and Field Trials

Routine inspections, maintenance and some further plantings were carried out in the many wheatbelt arboreta. The Helms Arboretum, near Esperance, provides a major demonstration of eucalypts, other natives and various pine plantings. Failed plots were replanted to more appropriate species; plantation compartments were pruned to standard specifications; and one compartment was converted to an agro-forestry demonstration.

There was a significant increase in research activity with new trial planting in 1985. Of particular interest is the evaluation of seven

wattle species for their 'anti-grazing' qualities. Direct seeding trials and demonstrations were undertaken, particularly to evaluate land preparation and weed control techniques.

Pinaster pine establishment trials were put in at Walkaway, Eneabba and Esperance. While pinaster pine is more suited to lower rainfall areas than radiata, it has shown poor establishment on old pasture land. Solving this problem will extend the range for possible pine production.

Trials to evaluate establishment and management practices for fodder trees have also been planted, in conjunction with the Department of Agriculture.

Advisory officers are in great demand to answer metropolitan and town enquiries.

#### Publications

A major achievement of the Publications section was the first issue of *Landscape*, the new Departmental magazine to take the place of Forest Focus and SWANS. There has been an overwhelming public demand for *Landscape* and most comments have been highly complimentary.

Inaugural publication of CALM News soon followed the formation of the new Department. It is an in-house newspaper which features the work and achievements of Departmental officers, for the readership of other employees, and has gone a long way to fostering unity in a new, diverse and larger government department.

New demands for publications have arisen from the amalgamation; for instance, the editing and printing of draft and final management plans as required under the Conservation and Land Management Act, and the urgent need for procedures manuals



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and organisational directories.

A program of revision and rationalisation of past publications has been initiated, starting with research and technical reports. Plans for a much greater output of parks, reserves and recreation guides were put into place.

Appendix 7 provides a list of Departmental publications produced for the period March 22 to June 30, 1985, as well as articles published by Departmental officers in scientific journals.

#### Education

The objectives of the Education section are to create awareness and facilitate understanding of forest and natural ecosystems, and this is achieved through co-operative programs with educational institutions, through community education activities and interpretive projects.

Three courses in "expedition skills" were conducted for 70 student teachers, teachers and community people, in conjunction with the Department of Sport and Recreation, and the Education Department. The six day courses gave the participants an introduction to planning and executing bushwalks in the south-west forests, and were judged to be highly successful.

A "field ecology" course, introducing teachers to observation and measuring techniques for flora and fauna, was conducted at the Perup Field Study Centre near Manjimup. As in most of these courses other Departmental officers were involved as instructors or leaders.

Education officers contributed on "forest awareness" topics to the special holiday program for gifted and talented students, held at Churchlands College. Students from local high schools used the

Mundaring Field Study Centre to learn observation and trapping of mammals and birds in the jarrah forest. Many Arbor Day planting projects, talks, tours and displays were organized or delivered by Departmental officers, including a library poster display in conjunction with the W.A. Week, Trees Committee.

The very popular Forest Packs were reprinted. These are a teaching resource designed for three levels in primary schools. Large wall hangings depicting forest flora and fauna were produced for distribution to teacher resource centres and field study centres.

During the March to June period 30 requests for talks, slides and films from school and community groups were serviced.

#### Displays and Publicity

W.A. Garden Week, which occurred in the last week of March, provided an opportunity to "launch" the new Department to the public. A display, housed in a large pergola area designed by the Landscape and Recreation Branch, provided details about the department as well as an informative display on urban forestry. Greening Australia shared the facilities. The display proved very popular with the public.

A poster produced to publicise Arbor Day was distributed by four main methods: 3,000 through the Education Department, 3,000 through a retail nursery chain, 4,000 to Garden Week display visitors and 4,000 over the front counter of A.B.C. radio.

The Information Liaison officer co-ordinated the department's involvements in upgrading the Manjimup Timber Museum. Audio-visual equipment was installed and one video program produced and another initiated on the museum's

behalf. A set of three historical posters were printed and are on sale through the museum.

Available information on direct-seeding of eucalypts on farms was collated into a brochure for distribution to farmers through the Department of Agriculture's direct mailing system.

A display on agroforestry was prepared for a field day at Esperance.

Another task has been to co-ordinate materials for 24 information shelters being erected in National Parks in the Kimberley, Pilbara and South Coast Regions. Research and collation of this material has begun.

#### Public Participation

While there are formal requirements in the Conservation and Land Management Act to involve the public in land management planning and decisions, the Department has placed a very high priority on a comprehensive program of informal and local input into on-going management of State forest areas and National Parks. This will be achieved through advisory committees, meetings, workshops, and fostering voluntary works projects.

The public participation program will be regionally or district based. Meanwhile, a projects officer was appointed to investigate the strategies and procedures for public involvement, and to assist in starting the program.

#### INVENTORY, MAPPING AND COMPUTING

##### Inventory

The Inventory Section is responsible for the collection of natural resource data and the processing of the data to provide management information on which policies, strategic plans and management plans are based.

In the Central forest region 127 ha of jarrah forest were assessed to provide an estimate of the SEC pole resource on 2,500 ha. Six plots were established to monitor the growth rate of mallet at various levels of stocking in Dryandra State forest.

Two hundred and eighteen existing permanent plots and 83 temporary plots were measured throughout softwood plantation areas for the purpose of updating the data base from which prediction of yield can be obtained.

Large scale, shadowless, aerial photographs for mapping jarrah dieback were taken over 15,000 ha of forest. Previously acquired film covering 9,800 ha of forest was interpreted during the period of this report. Individual dieback free, hygiene and impact maps were produced over 40 per cent of the area interpreted.

A hardwood logging plan for sawlogs in the Dwellingup district in 1986 and a five year softwood logging plan for Northern region plantations were prepared.

Computer programs have been developed to enable management level inventory of hardwood forest to be processed at regional inventory offices.

A trial was run to test the suitability of 230 mm format colour photography as an alternative to the existing 70 mm system. Favourable results were obtained.

Staff from the section have conducted information and training sessions for district and regional staff on the Forest Management Information System (FMIS), the Hardwood Operations Control System (HOCS), and many aspects of dieback recognition, mapping and management. Assistance has also been provided for demarcation of dieback in the field. Personnel from

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other government departments, both locally and interstate, have been briefed on the features and capabilities of FMIS.

### Mapping

Two lithographs, Mt Barker and Redmond, were revised and published as second Editions. A further three maps, Pemberton, Manjimup and Northcliffe were reprinted without amendment to help overcome the current shortage of maps.

The Topographical Section compiled seven new 1:25,000 scale topo/cadastral maps and revised a further four. This section also maintains the 860 aerial surveillance maps used by the spotter aircraft pilots.

Thirteen new tenure plans were prepared by the Drafting Section and another thirty-eight were revised. The section also prepared twenty-five aerial boring plans, one tower board and one wall map. Relief models based on the 1:25,000 scale topo maps were constructed and supplied to the district office for use as an aid in management and planning.

The Photogrammetric Section completed three dieback free maps, one hygiene map and three impact maps. Clearing for bauxite was mapped from aerial photograph and plantation plans amended to show new planting and clear felling.

The Mapping Branch staff have received an introductory course on the Intergraph Work Station and a number are now gaining further experience in computer aided mapping.

### Computing

The computing facilities brought to the Department were compatible and required minimal changes. The computers used by the Department

are its own Perkin-Elmer 3240, the Cyber at the W.A. Regional Computing Centre and the VAX 780 at the Land Information System Support Centre. It is intended to rationalise the use of these in the coming year.

The data communications network has been extended to connect the previously existing equipment. It also gives staff at new Departmental offices at Kelmscott, Crawley and Mt. Pleasant access to all computing facilities.

Work to install the Records Management System on the Perkin-Elmer computer was commenced. This system will assist staff to locate files and correspondence held by the Department.

An electronic mail package was purchased to allow memos to be sent between offices with a computer terminal. A plan is being implemented to purchase micro computers to be used for office automation. These will be used primarily for word processing but can also use the electronic mail and Records Management System mentioned previously.

Consultants were employed to make changes to the mailing list program. This allows better management of the subscriber list for the new Landscape magazine and other publications.

The Department has adopted the strategy of collecting field data using electronic devices. Fifteen data loggers have been purchased for the Research Division to record environmental conditions. These have greatly increased the productivity of staff performing field experiments. Two data recorders have also been purchased for staff to key in observations as they are made in the field.

## LIBRARY

It was placed under the Research and Planning Division but caters for the information needs of the whole Department. The collection is available to members of the public on a reference basis with loan access through inter-library loans.

The collection covers such fields as botany, forestry, national parks and reserves, planning and wildlife. The library aims to provide up-to-date reference services, including inter-library-loan scheme and computerised data base searches.

The present library staff consists of four permanent and one temporary staff. These include Senior Librarian, Librarian, Library Assistant, Clerk and Temporary Clerk.

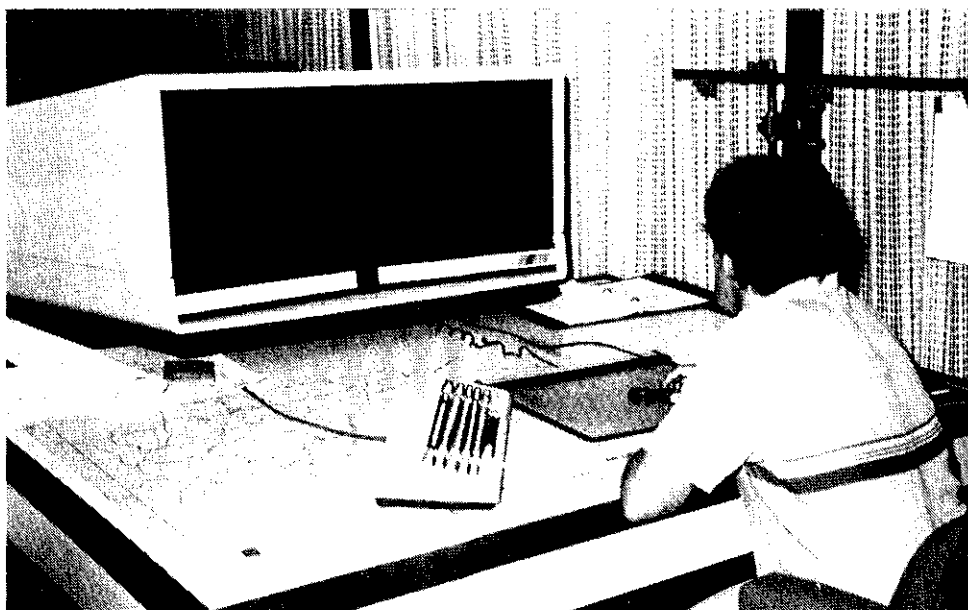
The library consists of Librarian's Office, Staff Workroom, Storeroom, toilet facility and the main library area. Reading and study areas are provided together with a photocopying machine for Departmental use.

## RADIO COMMUNICATIONS

The main thrust of the Communications Branch since amalgamation has been the installation of V.H.F. transceivers and the modification of H.F. transceivers. Twenty-three V.H.F. transceivers have been installed in park ranger vehicles and fourteen have been installed in wildlife officer vehicles. Some sixty other various types of vehicles in the three southern forest regions were wired for V.H.F. operations.

Communications requirements and maintenance checks were carried out in the South Coast, Kimberley and Pilbara Regions were necessary. The H.F. transceivers in these Regions were modified to allow improved communications between the three former agencies.

The responsibilities of the Branch have increased significantly as a result of the amalgamation. The staff of Communications Branch was increased by one following the appointment of a full-time vehicle radio installer. The staff now consists of eight technicians, one vehicle installer, one storeman and two apprentices.



The Intergraph Work Station in Mapping Branch.



The first issue of *Landscape*, the new Departmental magazine, rolls off the press at Government Print.



The new Library at Woodvale

# 9. Administration and Finance

## LAND AND WILDLIFE ADMINISTRATION

### Offences

Various offences against the Wildlife Conservation Act and Regulations occurred during the year. Verbal warnings and advice was given by wildlife officers in many instances. In less serious offences, sixty-two warning letters were issued.

Action is pending in regard to forty-three offences. Sixty-three prosecutions have been initiated of which twenty-seven cases are pending. The remaining thirty-six

### Public Service Act

Dr WILSON B R	Director Nature Conservation	Appointed
Mr HAYNES C D	Director National Parks and Recreation	Appointed
Dr MCKINNELL F H	Divisional Manager Services	Promoted
Mr HAVEL J J	Director of Research and Planning	Promoted
Mr UNDERWOOD R J	General Manager	Promoted
Mr HEWETT P N	Director of Forests	Promoted
Dr SHEA S R	Executive Director	Promoted
Mr ERRINGTON A G	Divisional Manager Administration and Finance	Promoted
Mr QUAIN S J	Divisional Manager Operations	Promoted
Dr PEARCE C J	Senior Research Officer	Reclassified
Mr McNAMARA P J	Director - transferred to Timber Bureau	Transferred
Mr CAMPBELL J B	Assistant Director - transferred to Timber Bureau	Transferred
Ms LACZO E	Librarian in Charge	Promoted
Mr COOPER R G	Assistant Manager Personnel	Transferred from Premier and Cabinet
Mr MARRABLE L W	Chief Clerk Flora and Fauna	Promoted
Mr JOHNSTON D B	Manager Policy Directorate	Promoted
Mr GOSS K F	Manager Information	Promoted
Mr SHARP J R	Scientific Adviser	Promoted
Mr ASHCROFT	Transferred to the PSB	Transferred
Mr SANDERS C C	Regional Manager Metropolitan	Promoted

### CALM Act

Mr NICOL L	Chief Utilization Officer	Retired
------------	---------------------------	---------

cases have resulted in fines totalling \$4,415.00 with \$1,755.56 costs.

There was one breach of Forest Disease Regulations under the Conservation and Land Management Act reported. In this case the offenders were prosecuted and fined \$40.00 each.

### PERSONNEL

Since the formation of the Department of Conservation and Land Management the following staff appointments, promotions, transfers, reclassifications and retirements have taken place.

Employment figures for the Department of Conservation and Land Management and forest based industries are given in Appendix 6.

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## TRAINING

### Training Policy and Organisation

The Training Policies and procedures of the three component agencies of the Department of Conservation and Land Management were co-ordinated.

A training calendar and catalogue for the forthcoming year was prepared by the Training Committee.

### Field Cadets

The twelve cadets who completed their two year course in December 1984 received their certificates and awards at a Graduation Ceremony at Regional Headquarters Bunbury on 12 April 1985. The function was a combination of the Forest Department tradition and the inaugural ceremony under the Departmental banner.

Awards and Certificates were presented by Mr Phillip Smith MLA on behalf of the Hon. H.D. Evans MLA, Minister assisting the Minister for Conservation and Land Management. The Keynes Memorial Prize for the best student of the course was won by Mr John Carter.

The Conservator's prize for the runner-up was won by Mr Stephen Davis.

### Professional Cadets

Currently eight Forestry Cadets are studying at the Australian National University Canberra and one at Melbourne University.

### General Training

During the year staff and employees received training in a number of areas relevant to sound land management practice.

### Conferences, Study Tours and Awards

During the period of the report, fourteen officers visited the Eastern States to attend various Seminars, Conferences, Study Tours and Meetings, covering a wide range of topics relevant to Land and Natural Resource management.

## SAFETY, HEALTH AND WELFARE

The amalgamation did not present any major problems in the safety and health areas, however new challenges had to be faced and tackled.

The majority of Park Rangers and Wildlife Officers had not been previously exposed to a safety programme, and an induction plan was prepared and put into action. This is aimed at providing basic safety training and building up safety awareness amongst this staff, many of whom work in isolated areas and often on their own.

An Occupational Safety and Health Policy, based on the Forests Department's previous policy was adopted. It was also decided that the Forests Department's safety program as a whole would be continued in the new Department.

The Department's Safety Committee continued to function well, assisted by a number of specialist committees : the RSI Task Force, the Chemicals Committee and the Hearing Conservation Committee.

Five safety training schools lasting two days each were conducted for 76 personnel during May, 1985. Nominated staff attended specialist courses in first aid training, noise abatement, shotfiring, chainsaw operation and tree felling. A large number of departmental employees participated in manual handling

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training sessions. There is an ongoing need for these sessions because the highest proportion of lost time accidents in the Department are from back injuries. Last year this proportion was 30 per cent.

Good progress was made towards implementing the Noise Abatement (Hearing Conservation in Workplaces) Regulations 1983. Noise level surveys continued to be carried out in noisy work places and on power tools and various machinery. Arrangements are well in hand towards establishing facilities for audiometric hearing tests.

#### ENGINEERING SERVICES

This Branch provided Fleet Management and engineering services appropriate to Departmental needs.

##### Vehicle Fleet

A fleet management system was established to incorporate all vehicles from the former Wildlife, National Parks Authority and Forests Department fleets.

A replacement program was formulated to upgrade the older and more unreliable vehicles in the fleet.

Heavy emphasis was placed on the upgrading of the National Parks vehicles, most of which are utilised in fire control operations.

Action commenced on the replacement of seven of the National Parks heavy duty fire trucks which were all over 15 years old. An additional 34 vehicles were purchased for use by additional staff appointed to the new Department.

##### Workshops

Regional workshops are located at Manjimup, Collie and Mundaring where major plant repair, development and fabrication of

special equipment is carried out for Department operations. There are 14 tradespersons and 8 apprentices employed in these facilities.

##### Buildings

Major capital improvements on housing for staff were provided at Dwellingup, Margaret River and Northcliffe. Four additional staff houses were purchased in Esperance and Moora.

New housing and service facilities were built for the Hamersley Range National Park and a new house was constructed in Kununurra for the East Kimberley National Parks.

Other major projects undertaken were the construction of the Millstream Aboriginal Ranger Training Complex and refurbishing of offices at Matilda Bay and Kelmscott.

#### FINANCE

All Departmental Revenue is paid into the Consolidated Revenue Fund apart from certain moneys which by virtue of Part VI of the Conservation and Land Management 1984 are retained to the credit of the Conservation and Land Management Fund. Incorporated within the Fund in the Nature Conservation and National Parks Trust Account to which specific revenues are applied. The Fund receives allocations from the Consolidated Revenue Fund augmented by loan borrowings and other internal funds and balances to support expenditure programs.

All expenditure is met from the Fund being costed against the appropriate revenue source. Consolidated Revenue Fund allocations and certain parks revenues are used for ongoing maintenance activities whereas loan borrowings and other internal funds and balances support development and capital works proposals. The



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specific revenues applied to the Nature Conservation and National Parks Trust Account are used for research or any other purpose relating to the conservation of flora and fauna or the management of national parks, nature reserves, marine nature reserves or marine parks.

SEED STORE

Returns from the sale of seeds during the period 22nd March 1985 to 30th June 1985 amounted to \$13,594.

TIMBER INDUSTRY REGULATION ACT -

The cost of administering the Timber Industry Regulation Act during the period 22 March 1985 to 30 June 1985 was as follows:-

Salaries	\$20,161
Travel Allowances, Plant Costs and Sundries	<u>\$11,596</u>
	<u>\$31,757</u>

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

COLLECTIONS PAID TO CONSOLIDATED REVENUE FUND

MARCH 22 1985 to JUNE 30 1985

<u>Royalties</u>	1984-85 \$
Logs	2 824 635
Chip Logs	437 568
Sleepers	-
Poles and Piles	205 703
Mining Timber	7 847
Firewood	4 785
Posts	21 828
Sandalwood	20 617
Miscellaneous	15 396
	<u>3 538 379</u>
 <u>Pine Conversion</u>	
Pine Logs	1 408 141
Sawn Pine	-
	<u>1 408 141</u>
 <u>Hardwood Conversion</u>	
Logs	<u>197 326</u>
	197 326
 <u>Other Sales, Fees and Recoups</u>	
Seeds and Trees	241 719
Inspection Fees	30 276
Rents and Leases	26 000
Wildlife Licence Fees	12 580
Sale of Tags	13 700
Miscellaneous	555 983
Workers' Compensation Recoups	39 214
	<u>919 472</u>
 <u>Commonwealth Revenue</u>	
Community Employment Programme	<u>149 562</u>
	149 562
	<u>6 212 880</u>
	=====

CONSERVATION AND LAND MANAGEMENT TRUST FUND  
STATEMENT OF RECEIPTS AND PAYMENTS  
FOR THE PERIOD MARCH 22 1985 to JUNE 30 1985

	\$	\$
<u>Receipts</u>		
Balances transferred on March 22 1985 -		
Forestry Fund	7 435 824	
National Parks Authority Funds	749 474	
Wildlife Conservation Trust Fund	<u>113 757</u>	<u>8 299 055</u>
Consolidated Revenue Fund		12 000 000
Mining Compensation		96 242
Commonwealth Grants and Subsidies - States Grants (Roads) Act 1977		223 147
Sale of Assets		257 773
Other		324 202
Trust Receipts		
Nature Conservation and National Parks Account (1)	4 321	
Recoupable Projects Account	<u>368 610</u>	<u>372 931</u>
		13 274 295
		<u>21 573 350</u>
 <u>Payments</u>		
Capital -		
Hardwood Forests - Establishing and Tending (2)		649 307
Softwood Forests - Establishing and Tending (2) (3)		1 741 938
Access Roads - Construction (2)		468 816
Land Purchase		577 153
Housing and Buildings (2)		1 435 391
Plant and Equipment (2)	1 461 718	
Less Depreciation	<u>288 300</u>	1 173 418
Sawmilling and Seasoning Plant		<u>5 198</u>
		6 051 221
Plant Workshop - Operating Costs - Variation		112 512
Recurrent Expenditure -		
Salaries	5 405 741	
Less - Charged to Capital Works (2)	<u>375 100</u>	5 030 641
Central Administration	4 105 079	
Less - Charged to Capital Works (2)	<u>203 100</u>	3 901 979
Environmental Protection		1 350 853
Engineering Services		577 790
Recreation and Touring Services		493 588
Research and Planning		532 744
Commercial Operations		1 081 942
Information Services		87 961
Trust Expenditure -		
Nature Conservation and National Parks Account (1)	70	
Recoupable Projects Account	<u>259 520</u>	259 590
Cash Order Balance		<u>446 850</u>
		19 927 671
Balance June 30 (4)		<u>\$ 1 645 679</u>

NOTES:

- (1) Nature Conservation and National Parks Trust Account - Section 68 of the Conservation and Land Management Act 1984 provides that there shall be established in the Conservation and Land Management Fund a trust account called the Nature Conservation and National Parks Trust Account. The account is to be credited with moneys derived under the Wildlife Conservation Act 1950 and income from investments, gifts, devises, bequests and donations. Moneys in the account may be applied to research or any other purposes relating to the conservation of fauna and flora, or the management of national parks, nature reserves, marine nature reserves or marine parks, subject to compliance with any conditions imposed in connection with any gift or bequest. The balance of the Wildlife Conservation Trust Fund taken over from the Fisheries Department at March 22 1985 was \$113 757. Receipts, being mainly from game licence fees to take ducks and quail, totalled \$4 321 and payments amounted to \$70 leaving a balance of \$118 008 at June 30 1985.
- (2) Salaries and Central Administration Expenses are allocated to capital works on a predetermined basis calculated by the Department after analysis of resources applied to capital works. The following allocations were made during the period:

	<u>Salaries</u>	<u>Administration</u>
	\$	\$
Hardwood Forests	77 900	42 000
Softwood Forests	226 900	123 000
Access Roads - Construction	16 900	9 000
Housing and Buildings	19 000	14 400
Plant and Equipment	<u>34 400</u>	<u>14 700</u>
	<u>\$375 100</u>	<u>\$203 100</u>

- (3) Softwood Forests - Softwood Forests activity had been undertaken by the Forests Department with establishment costs, including tending, being met from General Loan Fund allocations and private borrowings and, between the years 1966-67 to 1982-83, from loans provided by the Commonwealth under Softwood Forestry Agreements. The outstanding principal on loans provided by the Commonwealth was \$9 487 893 at June 30, 1985. The 1984-85 principal repayments (\$148 997) and interest (\$658 951) had been met from the Forestry Fund prior to the Department of Conservation and Land Management coming into operation.
- (4) Includes -
- |  |           |
|--|-----------|
| Nature Conservation and National Parks Trust Account | \$118 008 |
| Recoupable Projects Account                          | \$109 091 |
- (5) Private Borrowings - Under the Conservation and Land Management Act 1984 all rights, obligations and liabilities of the former authorities existing immediately before the commencement of the Act were vested in or imposed on the Executive Director. The outstanding principal on private borrowings at March 21, 1985 was \$20 980 670 and sinking fund balances totalled \$307 272. During the period from March 22, 1985 interest, principal repayments and sinking fund instalments amounted to \$761 614, \$45 230 and \$162 860 respectively. The outstanding principal at June 30, 1985 was \$20 935 440. Sinking funds held at Treasury and private banks totalled \$477 407 partially offsetting the debt outstanding.

*Syd Shea*

Syd Shea  
(Executive Director)

*B.J. Hodge*

B.J. Hodge  
(Accountant)

*12/11/85*

(Date)

*12. 11. 85.*

(Date)



## AUDIT DEPARTMENT

State Insurance House, 815-823 Hay Street,  
Perth. W.A. 6000. Telephone 321 9256

IN REPLY PLEASE QUOTE  
0317001

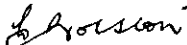
### REPORT OF THE AUDITOR GENERAL FOR WESTERN AUSTRALIA

#### DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT - AUDIT OF ACCOUNTS

The accounts of the Department of Conservation and Land Management have been audited for the period March 22, 1985 - the inception of the Department - to June 30, 1985 and except for a comprehensive asset register not having yet been developed, were found to be in order.

In my opinion the Statement of Collections Paid to The Consolidated Revenue Fund and the Statement of Receipts and Payments of the Conservation and Land Management Trust Fund are based on proper accounts and records and fairly present the financial transactions for the period.

The controls exercised by the Executive Director are adequate to provide reasonable assurance that the receipt and expenditure of moneys and the acquisition and disposal of assets have been in accordance with the Conservation and Land Management Act, 1984.

  
W.F. ROLSTON  
AUDITOR GENERAL

November 13, 1985

# 10. Appendices

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1. Forest Management Statistics
2. Wood Production Statistics
3. Declared Fauna
4. Fauna
5. Prescribed Burns and Wildfires
6. Employment Statistics
7. Publications
8. Safety

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APPENDIX 1

FOREST MANAGEMENT 1 JULY 1984 - 30 JUNE 1985

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FOREST TREATED 84/85

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Forest Type	Area and Treatment
Jarrah forest	46 ha disease killed forest replanted. 3 829 ha treated under the Forest Improvement and Rehabilitation Scheme (FIRS).
Karri forest	2 184 ha of cut-over forest regenerated, of which 493 ha was from natural seedfall. 497 ha of regrowth was commercially thinned.
Wandoo forest	177 ha regenerated.
Mallett forest	166 ha thinned.
Tuart forest	70 ha regenerated.
Pine forest	143 ha clearfelled. 1 032 ha thinned commercially.
Private forest	428 ha pine planted 211 ha eucalypts planted

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## LAND ALIENATION AND LEASES

	<u>No. Applications</u>	<u>Area (ha)</u>
Alienations	11	1 304
Leases	52	5 014

The Department agreed to the following:

(a) *Alienations*

	<u>Number</u>	<u>Area (ha)</u>
State forest	1	1
Crown land	2	80

(b) *Leases*

State forest	39	3 483
Crown land	9	1 356

## PINE FOREST ESTABLISHMENT

Area planted with pines 1984

Radiata	1 996 ha
Pinaster and other species	538 ha
	2 534 ha

Total area pine forests at 31 December 1984

Radiata	31 431 ha
Pinaster and other species	27 658 ha
	59 089 ha

## PINE FOREST TENDED

Scrub Control	5 610 ha
Legume establishment at planting	822 ha
Fertilized at Planting	1 517 ha
Refertilization	8 424 ha
Low pruning	2 917 ha
High pruning	1 593 ha
Coppice control	882 ha

## FOREST REHABILITATION

<u>Type of Rehabilitation</u>	<u>Area (ha)</u>
Hardwood forest	2 044
Catchments	850
Dieback killed	45
MINING:	
Bauxite	324
Mineral sands	128
Tin	11
Coal	21
Gravel pits	157
Other	12

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APPENDIX 2

WOOD PRODUCTION STATISTICS 1 JULY 1984 - 30 JUNE 1985

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Note: For more comprehensive statistics, refer to the 1984/85 Forest Department Annual Report.

The allowable cut from State forest for 1984/85 was 762, 866 m<sup>3</sup>.

LOG PRODUCTION

Production of log timber (from all sources), including sawlog and logs used for production of veneer, not including chip logs, mining timber, firewood, poles and piles -

	1984/85		
	Crown Land m <sup>3</sup>	Private Property m <sup>3</sup>	Total
Jarrah	546 580	44 111	590 691
Karri	228 045	25 978	254 023
Wandoo	2 152	3 197	5 349
Blackbutt	2 601	826	3 427
Sheoak	228	175	403
Marri	13 093	2 834	15 927
Other	432	1 110	1 542
<b>TOTAL (Hardwood)</b>	<b>793 131</b>	<b>78 231</b>	<b>871 362</b>
Pine	61 928	8 245	70 173
<b>TOTAL</b>	<b>855 059</b>	<b>86 476</b>	<b>941 535</b>
Other log materials*			
Hardwood	496 880	91 702	588 582
Softwood	164 017	9 797	173 814
<b>TOTAL LOG TIMBER</b>	<b>1 515 956</b>	<b>187 975</b>	<b>1 703 931</b>

\* Includes chip log and particleboard material.

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SAWN TIMBER PRODUCTION FROM CROWN LAND AND PRIVATE PROPERTY

	1984/85 m <sup>3</sup>	1983/84 m <sup>3</sup>
Sawn Timber Production		
Crown land	259 318	223 037
Private property	25 834	22 532
Sawn Sleeper Production		
Crown land	24 984	18 521
Private property	3 179	3 243
Total	313 315	273 333

VENEER LOG PRODUCTION

	1984/85 m <sup>3</sup>	1983/84 m <sup>3</sup>
Karri	3 191	
Jarrah	68	Nil
Pine	4 097	

SANDALWOOD

	1984/85 t	
From Crown land		
Green sandalwood	933	905
Dead sandalwood	917	665
From private property	8	2
Total	1 858	1 572

WOODCHIP PRODUCTION

<u>Area</u>	<u>Quantity</u>
State forest	496 880 m <sup>3</sup> (81% marri, 18% karri)
Private forest	91 702 m <sup>3</sup>
Sawmill residue	88 297 tonnes

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## APPENDIX 3

### FLORA

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All flora within the State of Western Australia in the classes:

- \* Pteridophyta
- \* Gymnosperms
- \* Angiosperms

are protected against being taken from the wild.

#### Licence

The taking of flora from the wild is controlled with the issue of a licence.

This year, 1 397 licences were issued for purposes which include:

- \* Commercial operations on Crown land
- \* Commercial operations on private land
- \* Scientific
- \* Educational
- \* Personal enjoyment

The following classes of flora are declared to be protected flora  
(Government Gazette 18 April 1980):

<i>Pteridophyta</i>	(ferns and fern allies)
<i>Gymnosperms</i>	(conifers and cycads)
<i>Angiosperms</i>	(flowering plants)

Protected flora of the taxa listed below, growing in a natural state and not in a domesticated or cultivated state, are declared to be rare throughout Western Australia. (Government Gazette 12 March 1982)

<i>Acacia anomala</i>	Chittering Grass Wattle
<i>Acacia aphylla</i>	Leafless Rock Wattle
<i>Acacia argutifolia</i>	East Barrens Wattle
<i>Acacia depressa</i>	Echidna Wattle
<i>Acacia guinetii</i>	Guinet's Wattle
<i>Acacia simulans</i>	Barrens Kindred Wattle
<i>Adenanthos cunninghamii</i>	Albany Woollybush
<i>Adenanthos detmoldii</i>	Yellow Jugflower
<i>Adenanthos dobagii</i>	Fitzgerald Woollybush
<i>Adenanthos ellipticus</i>	Oval-leaf Adenanthos
<i>Adenanthos eyrei</i>	Toolinna Adenanthos
<i>Adenanthos ileticos</i>	Club-leaf Adenanthos
<i>Adenanthos pungens</i>	Spiky Adenanthos
<i>Adenanthos velutinus</i>	Velvet Woollybush
<i>Aponogeton hexatepalus</i>	Stalked Water-Ribbons
<i>Asplenium obtusatum</i>	Shore Spleenwort
<i>Baeckea arbuscula</i>	Albany Baeckea
<i>Banksia brownii</i>	Feather-leaf Banksia
<i>Banksia chamaephyton</i>	Fishbone Banksia
<i>Banksia cuneata</i>	Quairading Banksia
<i>Banksia goodii</i>	Good's Banksia
<i>Banksia meisneri</i>	Meisner's Scott River
var. <i>ascendens</i>	Banksia
<i>Banksia sphaerocarpa</i>	Ironcap Banksia
var. <i>dolichostyla</i>	
<i>Banksia tricuspis</i>	Pine Banksia
<i>Boronia tenuis</i>	Blue Boronia
<i>Caladenia bryceana</i>	Dwarf Spider Orchid
<i>Caladenia gemmata</i>	
forma <i>lutea</i>	Yellow China Orchid
<i>Caladenia lavandulacea</i>	Lavender Spider Orchid
<i>Caladenia triangularis</i>	Shy Spider Orchid
<i>Casuarina fibrosa</i>	Woolly Sheoak
<i>Conostylis misera</i>	Grass Conostylis
<i>Conostylis pauciflora</i>	Dawesville Conostylis
<i>Cooperhooikia georgei</i>	Mauve Cooperhooikia

declared rare flora (continued)

<i>Darwinia acerosa</i>	Fine-leaved Darwinia
<i>Darwinia carnea</i>	Mogumber Bell
<i>Darwinia collina</i>	Yellow Mountain Bell
<i>Darwinia macrostegia</i>	Mondurup Bell
<i>Darwinia masonii</i>	Mason's Darwinia
<i>Darwinia meeboldii</i>	Cranbrook Bell
<i>Darwinia oxylepis</i>	Gillham's Bell
<i>Darwinia squarrosa</i>	Fringed Mountain Bell
<i>Darwinia wittwerorum</i>	Wittwer's Mountain Bell
<i>Daviesia euphorbioides</i>	Wongan Cactus
<i>Diuris purdiei</i>	Purdie's Donkey Orchid
<i>Dodonaea hackettiana</i>	Perth Hop Bush
<i>Drosera occidentalis</i>	Minute Pygmy Sundew
<i>Drummondita ericoides</i>	Moresby Range Drummondita
<i>Drummondita hassellii</i>	Peak Charles Drummondita
<i>var. longifolia</i>	
<i>Eremophila denticulata</i>	Fitzgerald Eremophila
<i>Eremophila inflata</i>	Swollen-flowered Eremophila
<i>Eremophila merrallii</i>	Bruce Rock Eremophila
<i>Eremophila microtheca</i>	Heath-like Eremophila
<i>Eremophila resinosa</i>	Resinous Eremophila
<i>Eremophila serpens</i>	Snake Eremophila
<i>Eremophila virens</i>	Campion Eremophila
<i>Eremophila viscida</i>	Varnish Bush
<i>Eucalyptus aquilina</i>	Mt Le Grand Mallee
<i>Eucalyptus bennettiae</i>	Bennett's Mallee
<i>Eucalyptus brachyphylla</i>	Binyarinrinna Mallee
<i>Eucalyptus burdettiana</i>	Burdett Gum
<i>Eucalyptus caesia</i>	Caesia
<i>Eucalyptus calcicola</i>	Hamelin Bay Mallee
<i>Eucalyptus carnabyi</i>	Carnaby's Mallee
<i>Eucalyptus coronata</i>	Crowned Mallee
<i>Eucalyptus desmondensis</i>	Desmond Mallee
<i>Eucalyptus exilis</i>	Boyagin Mallee
<i>Eucalyptus insularis</i>	Twin Peak Island Mallee
<i>Eucalyptus johnsoniana</i>	Johnson's Mallee
<i>Eucalyptus kruseana</i>	Bookleaf Mallee
<i>Eucalyptus pendens</i>	Badgingarra Mallee
<i>Eucalyptus rhodantha</i>	Rose Mallee
<i>Eucalyptus steedmanii</i>	Steedman's Gum
<i>Franklandia triaristata</i>	Plumed Lanoline Bush
<i>Gastrolobium appressum</i>	Scale Leaf Poison
<i>Gastrolobium glaucum</i>	Wongan Poison
<i>Grevillea baxteri</i>	Cape Arid Grevillea
<i>Grevillea cirsiifolia</i>	Varied-leaf Grevillea
<i>Grevillea drummondii</i>	Drummond's Grevillea
<i>Grevillea dryandroides</i>	Phalanx Grevillea
<i>Grevillea inconspicua</i>	Cue Grevillea
<i>Grevillea infundibularis</i>	Fan-leaf Grevillea

declared rare flora (continued)

<i>Grevillea involucrata</i>	Lake Varley Grevillea
<i>Grevillea prostrata</i>	Pallarup Grevillea
<i>Grevillea ripicola</i>	Collie Grevillea
<i>Grevillea saccoata</i>	Pouched Grevillea
<i>Hakea aculeata</i>	Column Hakea
<i>Hakea megalosperma</i>	Lesueur Grevillea
<i>Halosarcia bulbosa</i>	Large-articled Samphire
<i>Halosarcia entrichoma</i>	Eyelash Samphire
<i>Hibbertia bracteosa</i>	Porongurups Hibbertia
<i>Hibbertia miniata</i>	Orange Hibbertia
<i>Hydrocotyle lemnoides</i>	Aquatic Pennywort
<i>Kennedia beckxiana</i>	Cape Arid Kennedia
<i>Kennedia glabrata</i>	Northcliffe Kennedia
<i>Kennedia macrophylla</i>	Augusta Kennedia
<i>Lambertia echinata</i>	Prickly Honeysuckle
<i>Lambertia orbifolia</i>	Round-leaf Honeysuckle
<i>Lambertia rariflora</i>	Green Honeysuckle
<i>Lasiopetalum bracteatum</i>	Helena Velvet Bush
<i>Lechenaultia pulvinaris</i>	Cushion Lechenaultia
<i>Lechenaultia superba</i>	Barrens Lechenaultia
<i>Leucopogon obtectus</i>	Hidden Beard-heath
<i>Myoporum salsoloides</i>	Jerramungup Myoporum
<i>Pityrodia augustensis</i>	Mt Augustus Foxglove
<i>Pomaderris bilocularis</i>	Tutanning Pomaderris
<i>Pomaderris grandis</i>	Large Pomaderris
<i>Prasophyllum lanceolatum</i>	Brown Leek Orchid
<i>Prasophyllum triangulare</i>	Dark Leek Orchid
<i>Ptychosema pusillum</i>	Dwarf Pea
<i>Pultenaea skinneri</i>	Skinner's Pea
<i>Rhizanthella gardneri</i>	Underground Orchid
<i>Ricinocarpus trichophorus</i>	Barrens Wedding Bush
<i>Roycea pycnophylloides</i>	Saltmat
<i>Sowerbaea multicaulis</i>	Many-stemmed Lily
<i>Spirogardnera rubescens</i>	Spiral Bush
<i>Stachystemon axillaris</i>	Leafy Stachystemon
<i>Stawellia dimorphantha</i>	Arrowsmith Stilt-lily
<i>Stylidium coroniforme</i>	Wongan Triggerplant
<i>Stylidium expeditionis</i>	Tutanning Triggerplant
<i>Stylidium galioides</i>	Yellow Mountain Triggerplant



declared rare flora (continued)

<i>Synaphea pinnata</i>	Helena Synaphea
<i>Tegicornia uniflora</i>	Mat Samphire
<i>Thelymitra fuscolutea</i> var. <i>stellata</i>	Star Orchid
<i>Thelymitra macmillanii</i>	Salmon Sun Orchid
<i>Thelymitra psammophila</i>	Sandplain Sun Orchid
<i>Urocarpus niveus</i>	Bindoon Starbush
<i>Urocarpus phebalioides</i>	Gairdner Range Starbush
<i>Verticordia helichrysantha</i>	Barrens Feather Flower
<i>Verticordia staminosa</i>	Wongan Feather Flower
<i>Villarsia calthifolia</i>	Mountain Villarsia
<i>Wurmbea humilis</i>	Wongan Dwarf Nancy
<i>Wurmbea tubulosa</i>	Long-flowered Nancy

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## APPENDIX 4

### FAUNA

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#### Contents

Number of indigeneous species

Protected fauna

Unprotected fauna

Rare fauna

Open seasons

Importation

Species declared fauna

Fauna licences

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Number of Indigeneous Species

Amphibia	66
Birds	486
Mammals	
Marsupials	69
Other land mammals	60
Marine	37
Reptiles	395
	<u>1,113</u>

Protected Fauna

All fauna in the State of Western Australia is protected with the exception of those contained in 12.3 below.

No protected fauna will be taken from the wild without a licence.

Unprotected Fauna

Mammals

Wild dog (Dingo)                      Canis Familiaris dingo

Invertebrate fauna

Other than Jewel beetles              family, Bupestidae  
Ants    genus, Nothomyrmecia

Rare/Special Fauna

<u>Scientific Name</u>	<u>Common Name</u>	<u>Government Gazette</u>
<u>Amphibians</u>		
<i>Arenophyrne rotunda</i>	Round Frog	8/4/83
<u>Birds</u>		
<i>Accipiter radiatus</i>	Red Goshawk	8/4/83
<i>Amytornis textilis</i>	Thick-billed Grass-wren	"
<i>Anous tenuirostris</i>	Lesser Noddy	"
<i>Atrichornis clamosus</i>	Noisy Scrub-bird	"
<i>Aviceda subcristata</i>	Crested Hawk	"
<i>Cereopsis novaehollandiae</i> <i>grisea</i>	Cape Barren Goose	"
<i>Cacatua leadbeateri</i>	Major Mitchell's Cockatoo	"
<i>Chalcophaps indica</i>	Green-winged Pigeon	"

<u>Scientific Name</u>	<u>Common Name</u>	<u>Government Gazette</u>
<u>Birds</u>		
<i>Coracina tenuirostris</i>	Cicadabird	8/4/83
<i>Dasyornis brachypterus</i>	Brown Bristle-bird	"
<i>Dasyornis broadbenti</i>	Rufus Bristle-bird	"
<i>Emblema oculatum</i>	Red-eared Firetail	"
<i>Falco hypoleucos</i>	Grey Falcon	"
<i>Falco peregrinus</i>	Peregrine Falcon	"
<i>Falcunculus frontatus</i>	Crested Shrike-tit	"
<i>Geophaps smithii</i>	Partridge Pigeon	"
<i>Geopsittacus occidentalis</i>	Night Parrot	"
<i>Halcyon chloris</i>	Mangrove Kingfisher	"
<i>Jacana gallinacea</i>	Comb-crested Jacana	"
<i>Lonchura flaviprymna</i>	Yellow-rumped Mannikin	"
<i>Malurus coronatus</i>	Purple-crowned Fairy-wren	"
<i>Malurus leucopterus edouardi</i>	Black and White Fairy-wren (Barrow I)	"
<i>Malurus leucopterus leucopterus</i>	Black and White Fairy-wren (Dirk Hartog I)	"
<i>Megapodius reinwardt</i>	Scrub Fowl	"
<i>Microeca flavigaster</i>	Lemon-breasted Flycatcher	"
<i>Microeca tormenti</i>	Brown-tailed Flycatcher	"
<i>Ninox rufa</i>	Rufous Owl	"
<i>Pezoporus wallicus</i>	Ground Parrot	"
<i>Phaethon rubicauda</i>	Red-tailed Tropic-bird	"
<i>Pitta iris</i>	Rainbow Pitta	"
<i>Platycercus haematogaster narethae</i>	Naretha Bluebonnet	"
<i>Poecilodryas superciliosa</i>	White-browed Robin	"
<i>Polytelis alexandrae</i>	Alexandra (Princess) Parrot	"
<i>Psophodes nigrogluaris</i>	Western Whip-bird	"
<i>Ptilinopus regina</i>	Red-crowned Pigeon	"
<i>Rallus pectoralis clelandi</i>	Lewin's Water Rail	"
<i>Rhipidura rufifrons</i>	Rufous Fantail	"
<i>Stictonetta naevosa</i>	Freckled Duck	"
<i>Tadorna radjah</i>	Burdekin Duck	"
<i>Tyto capensis</i>	Grass Owl	"

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AUSTRALIA-JAPAN AGREEMENT

Birds required to be given special protective measures under Article III of the Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Government Gazette</u>
<i>Amytornis dorotheae</i>	Dorothy's Grass-wren	8/4/83
<i>Cyanoramphus novaezelandiae cookii</i>	Norfolk Island Parrot	"
<i>Cyclopsitta diophthalma coxeni</i>	Coxens Fig Parrot	"
<i>Drymodes superciliaris colcloughi</i>	Northern Scrub Robin	"
<i>Fregata andrewsi</i>	Christmas Island Frigatebird	"
<i>Lichenostomus melanops cassidix</i>	Helmeted Honeyeater	"
<i>Manorina flavigula melanotis</i>	Black-eared Miner	"
<i>Neophema crysogaster</i>	Orange-bellied Parrot	"
<i>Ninox novaeseelandiae rayana</i>	Norfolk Island Boobook Owl	"
<i>Ninox squamipila natalis</i>	Christmas Island Owl	"
<i>Pardalotus quadragintus</i>	Forty-spotted Pardalote	"
<i>Pedionomus torquatus</i>	Plains Wanderer	"
<i>Podargus ocellatus plumiferus</i>	Plumed Frogmouth	"
<i>Psephotus chrysopterygius</i>	Golden-shouldered Parrot	"
<i>Psephotus dissimilis</i>	Hooded Parrot	"
<i>Psephotus pulcherrimus</i>	Paradise Parrot	"
<i>Pterodroma leucoptera leucoptera</i>	Coulds Petrel	"
<i>Pterodroma solandri</i>	Providence Petrel	"
<i>Strepera graculina crissalis</i>	Lord Howe Island Currawong	"
<i>Sula abbotti</i>	Abbott's Booby	"
<i>Tricholimnas sylvertris</i>	Lord Howe Island Woodhen	"
<i>Zosterops albogularis</i>	Norfolk Island Silvereye	"

<u>Scientific Name</u>	<u>Common Name</u>	<u>Government Gazette</u>
<u>Mammals</u>		
<i>Antechinus apicalis</i>	Dibler	8/4/83
<i>Arctocephalus forsteri</i>	New Zealand Fur Seal	"
<i>Balaenoptera musculus</i>	Blue Whale	"
<i>Bettongia lesueur</i>	Boodie	"
<i>Bettongia penicillata</i>	Woylie	"
<i>Chaeropus ecaudatus</i>	Pig-footed Bandicoot	"
<i>Dasyercus cristicauda</i>	Mulgara	"
<i>Dasyurus geoffroii</i>	Western Native-Cat	"
<i>Dugong dugon</i>	Dugong	"
<i>Eubalaena gracilis</i>	Southern Right Whale	"
<i>Isodon curatus</i>	Golden Bandicoot	"
<i>Lagorchestes conspicillatus</i>	Spectacled Hare-Wallaby	"
<i>Lagorchestes hirsutus</i>	Western Hare-Wallaby	"
<i>Lagostrophus fasciatus</i>	Banded Hare-Wallaby	"
<i>Leporillus apicalis</i>	White-tipped Stick-nest Rat	"
<i>Leporillus conditor</i>	Stick-nest Rat	"
<i>Macropus eugenii</i>	Tammar	"
<i>Macropus robustus isabellinus</i>	Barrow Island Euro	"
<i>Macrotis lagotis</i>	Dalgyte	"
<i>Megaptera novaeangliae</i>	Humpback Whale	"
<i>Mesembriomys gouldii</i>	Black-footed Tree Rat	"
<i>Myrmecobius fasciatus</i>	Numbat	"
<i>Notomys fuscus</i>	Dusky Hopping-Mouse	"
<i>Notomys longicaudatus</i>	Long-tailed Hopping-Mouse	"
<i>Notomys macrotis</i>	Big-eared Hopping-Mouse	"
<i>Onychogalea lunata</i>	Crescent Nail-tailed Wallaby	"
<i>Perameles bougainville</i>	Barred Bandicoot	"
<i>Perameles eremiana</i>	Orange or Desert Bandicoot	"
<i>Petrogale burbidgei</i>	Warabi	"
<i>Petrogale penicillata</i>	Brush-tailed Rock-Wallaby	"
<i>Phascogale calura</i>	Red-tailed Wambenger	"
<i>Potorous platyops</i>	Broad-faced Potoroo	"
<i>Potorous tridactylus gilberti</i>	Gilbert's Potoroo	"
<i>Pseudocheirus dahli</i>	Rock-hunting Ringtail Possum	"
<i>Pseudocheirus peregrinus occidentalis</i>	Western Ringtail Possum	"
<i>Pseudomys chapmani</i>	Pebble-mound Mouse	"
<i>Pseudomys gouldii</i>	Gould's Native Mouse	"
<i>Pseudomys occidentalis</i>	Western Mouse	"
<i>Pseudomys praeconis</i>	Shark Bay Mouse	"
<i>Pseudomys shortridgei</i>	Shortridge's Native Mouse	"
<i>Sminthopsis butleri</i>	Carpentarian Dunnart	"
<i>Sminthopsis longicaudata</i>	Long-tailed Dunnart	"
<i>Wyulda squamicaudata</i>	Scaly-tailed Possum	"

<u>Scientific Name</u>	<u>Common Name</u>	<u>Government Gazette</u>
<u>Reptiles</u>		
<i>Aspidites ramsayi</i>	Woma	8/4/83
<i>Crocodylus johnstone</i>	Fresh-water Crocodile	"
<i>Crocodylus porosus</i>	Salt-water Crocodile	"
<i>Ctenophorus yinnietharra</i>		
<i>Ctenotus delli</i>		
<i>Ctenotus lancelini</i>	Lancelin Island Skink	"
<i>Ctenotus youngsoni</i>		
<i>Denisonia atriceps</i>		
<i>Dermochelys coriacea</i>	Leathery Turtle	"
<i>Ergernia stokesii</i>	Spiny-tailed Skink	
<i>aethiops</i>	(Baudin I)	"
<i>Ergernia stokesii</i>	Spiny-tailed Skink	
<i>stokesii</i>	(Houtman Abrolhos)	"
<i>Lerista christinae</i>		
<i>Lerista humphriesi</i>		
<i>Lerista lineata</i>	Lined Skink	"
<i>Liasis olivaceus barroni</i>	Pilbara Olive Python	
<i>Menetia amaura</i>		
<i>Pseudemydrua umbrina</i>	Western Swamp (Short-necked) Tortoise	"
<i>Python carinatus</i>		
<i>Python spilopus</i>	Carpet Snake	"
<i>Vermicella calonotos</i>		

#### Open Seasons

<u>Open Seasons Declared in 1983/84</u>	<u>Government Gazette</u>
Finch Trapping Season 1 September to 15 November 1985	12/7/85
Waterfowl Hunting Season (Kimberley, North-West and Eastern Land Divisions) 1 January 1985 to 31 December 1985	14/12/84
Waterfowl Hunting Season (South-West and Eucla Land Divisions) 14 January 1985 to 25 March 1985	14/12/84
Waterfowl Population Management (South-West and Eucla Land Divisions) (Mountain Duck) 1 January 1985 to 11 January 1985 and 25 March 1985 to 31 December 1985	14/12/84

<u>Open Seasons Declared in 1983/84</u>	<u>Government Gazette</u>
Management of certain species of birds of prey, parrots, cockatoos, crow species and Silvereyes in various Shires	9/9/83
Management of the Red-capped (or Western King) Parrot, the Ring-necked (or Twenty-eight or Port Lincoln) Parrot and the Western Rosella in various Shires	16/3/84
Open Season on various venomous front-fanged land snakes and all Sea Snakes of the family <i>Hydrophiidae</i> when they constitute an immediate danger to human life, farm stock or domestic animals and birds	22/6/84
<u>Existing Open Seasons</u>	
Management of Populations of Red Kangaroo ( <i>Megaleia rufa</i> ) and Euro ( <i>Macropus robustus</i> )	21/11/80
Management of Populations of Emu ( <i>Dromaius novaehollandiae</i> )	21/11/80
Management of Agile Wallabies ( <i>Marcopus agilis</i> )	21/11/80
Management of Populations of Grey Kangaroo ( <i>Macropus fuliginosus</i> )	21/11/80
Management of Populations of White-tailed Black Cockatoos spp. - <i>Calyptorhynchus baudinii</i> and <i>Calyptorhynchus latirostris</i>	17/7/81
Management of Populations of Black Cormorant ( <i>Phalacrocorax carbo</i> ) and Pied Cormorant - ( <i>Phalacrocorax varius</i> )	20/11/81
Hunting Season - Brown Quail ( <i>Synoicus ypsilophorus</i> ) and Stubble Quail ( <i>Coturnix pectoralis</i> ) 1 January to 30 June each year	10/6/83
<u>Importation of Monkeys</u>	
The import into and/or keeping in Western Australia of any animal of the order "Primates" is prohibited, unless specific authorisation is obtained.	5/1/79



Species Declared to be Fauna

White Swan ( <i>Cygnus olor</i> )	23/11/79
Peafowl and Pheasants of the genera <i>Pavo</i> and <i>Phasianus</i> respectively on Rottneest Island.	"

Fauna Licences

Licences Issued

1.	<u>Scientific</u>		152
2.	<u>Educational and Public</u> (to take) (Reg 15)		28
	<i>Purpose</i>		
	Care of derelict fauna	4	
	Collection and study	5	
	Display and study	6	
	Education	1	
	Miscellaneous	2	
	Photography	10	
3.	<u>Education and Public</u> (to hold) (Reg 16)		41
4.	<u>Avian Fauna</u>		4,408
	<i>Purpose</i>		
	Keep and breed in captivity (Reg 12)	4,295	
	Deal (Reg 13)	102	
	Trap (Reg 11)	11	
	<i>Species Trapped: Parrots</i>		
	Western Rosella	917	
	Red-capped (WA King)	900	
	White-tailed Black Cockatoo	68	
	Twenty eights	2,380	
	<i>Finches:</i>		
	Long-tailed Black	6,336	
	Masked	3,118	
	Star	5,221	
	Crimson (Blood)	1,549	
	Double-barred Mannikin	3,054	
	Chestnut-breasted Mannikin	4,763	
	Pictorella Mannikin	1,868	
5.	<u>Fauna</u>		
	<i>Purpose</i>		
	Keep in captivity (Reg 12A)		160
6.	<u>Game</u>		5,805
	Duck	5,715	
	Quail	90	

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Licences Issued

7. <u>Kangaroos</u>		167
<i>Purpose</i>		
Take kangaroos for sale		106
Deal in carcasses		26
Deal in skins		16
Process		19
8. <u>Exports</u>		
<u>Interstate</u>		
<i>Birds:</i>		
<i>Finches:</i>		
Crimson (Blood)	970	
Chestnut-breasted Mannikin	2,770	
Double-barred Mannikin	1,948	
Gouldian	1	
Long-tailed (Black-heart)	2,507	
Masked	1,554	
Pictorella Mannikin	739	
Star	3,808	
Yellow rumped	14	
<i>Parrots:</i>		
Ringneck	2,384	
Western Rosella	1,007	
Red-capped (W.A. King)	1,030	
Red-collared Lorikeet	10	
Purple-crowned Lorikeet	15	
Elegant	32	
Mulga	18	
Northern Rosella	3	
Regent	62	
Alexandra's (Princess)	16	
Superb	13	
Cockatiel (Weero)	5	
Red-tailed Black Cockatoo	6	
White-tailed Black Cockatoo	35	
Galan	27	
Little Corella	5	
Long-billed Corella	4	
Sulphur-crested Cockatoo	5	
Major Mitchell	6	
Rainbow Lorikeet	2	
Red-rumped Parrot	5	
Musk Lorikeet	3	
Eclectus	2	
Varied Lorikeet	3	
Little Lorikeet	4	
Rock Parrot	6	
Bourke Parrots	11	
Red-winged Parrot	6	

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Licences Issued

*Birds:*

*Other Species:*

Little Quail		8
Splendid Wren		2
White-breasted Robin	(Preserved)	5
Western Spinebill	"	5
Little Wattlebird	"	4
Rufous Treecreeper	"	1
Brown Honeyeater	"	1
Yellow-throated Miner	"	1
Yellow-plumed Honeyeater	"	1
Charadriidae )		
Scolopacidae )	(5 specimens of each	
Phalaropidae )	of these families)	
Glareolidae )		
Plumed Pigeon		3
Australian Bustard		1
Barn Owl		1
Square-tailed Kite		3
Spotted Harrier		1
Banded Land Rail		8
Torres Strait Pigeon		6
Black Falcon		2
Taway Frogmouth		2
Blue-winged Kookaburra		2
Little Eagle		2
Peregrine Falcon		2

*Mammals:*

Quokka		11
Goodfellows Tree Kangaroo		3
Rufous Rat Kangaroo		2
Matschies Tree Kangaroo		2

*Reptiles:*

Ornate Dragoon		2
Inland Taipan		1
Death Adder		2
King Brown Snake		1
Woma Python		2
Water Python		2
Dugite		3
Western Tiger		4
Gwarda		1

Overseas

*Birds:*

Budgerigar		2
Galah		14
Little Corella		1
Sulphur-crested Cockatoo		1

	<u>Licences Issued</u>
<i>Mammals:</i>	
Short-tail Mouse	1
Western chestnut Mouse	1
Ash grey Mouse	1
Western Mouse	1
Hopping Mouse	1
Spinifex Hopping Mouse	1
Pretty faced Wallaby	3
Western Euro	2
Agile Wallaby	6
Eastern Grey Kangaroo	6
Antelopine Kangaroo	6
<i>Reptiles:</i>	
Black headed Python	2
9. <u>Imports</u>	
Interstate	
<i>Birds:</i>	
<i>Finches:</i>	
Chestnut breasted	6
Crimson	1
Gouldian	160
Blue-faced	30
Star	8
Painted	114
Parson	16
Masked	24
Long-tail (Black heart)	1
Double-barred	7
<i>Parrots:</i>	
Blue-winged	4
Alexandra's (Princess)	6
Blue-bonnet	3
Cockatiel (Weero)	89
Eastern King	38
Regent	2
Ringneck	18
Red-rumped	9
Adelaide Rosella	4
Crimson Rosella	50
Eastern Rosella	60
Pale-headed Rosella	13
Turquiosine	16
Yellow Rosella	9
Gang Gang	11
Eclectus	15
Scaly-breasted Lorikeet	13
Scarlet-chested	82

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Licences Issued

*Parrots:*

Bourke's	40
Rainbow Lorikeet	20
Little Corella	319
Galah	1,088
Sulphur-crested Cockatoo	7
Major Mitchell	8
Little Lorikeet	2
Golden shouldered Parrot	2
Red-winged Parrot	25
Green Rosella	4
Yellow-tailed Black Cockatoo	2

*Other Species:*

Diamond Dove	26
Brown Quail	31
Bar-shouldered Dove	4
Flock Pigeon	2
Top Knot Pigeon	4
Peaceful Dove	26
Stubble Quail	17
Wonga Pigeon	5
Painted Quail	3
Crested Pigeon	2
Brown Pigeon	8
Regent Bower Bird	2
Red-chested Quail	8
Australian Bush Turkey	1
Satin Bower Bird	2
Green Cat Bird	2
Squatter Pigeon	5
Plumed Tree Duck	2

*Exotics:*

Melba Finch	80
Cordon-bleu Finch	134
Aurora Finch	104
Orange-breasted Waxbill	76
Cuban Finch	18
Jacarine	61
Blue-breasted Waxbill	3
Hooded Siskis	14
Alexandrine Parakeet	7
Kalij Pheasant	18
Namaque Dove	2
Masked Dove	16
Peach-faced Lovebird	30
Masked Lovebird	12
Cut-throat Finch	20
Lavender Finch	6
Blue-capped Cordon-bleu Finch	10
European Siskin	10
Siskin	10

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		<u>Licences Issued</u>
<i>Mammals:</i>		
	Brown Bandicoot	6
	Quokka	3
	Kowari	2
	Leadbeater Possum	2
	Yellow footed Rock Wallaby	QTY
	Matschies Tree Wallaby	1
	Eastern Quoll	6
 <i>Reptiles:</i>		
	Blind Snake	1
 <i>Exotic Animals:</i>		
	Bantan Cattle	2
10.	<u>Emus</u>	(Reg 7)
	<i>Process</i>	
	emu eggshells	2

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APPENDIX 5  
PRESCRIBED BURNS AND WILDFIRES 1 JULY 1984 - 30 JUNE 1985

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SUMMARY OF PRESCRIBED BURNING (HA)

	1984/85	Annual average past 5 years
<hr/>		
State Forest Hardwood		
By aerial ignition	227 012	227 663
By hand methods	40 380	36 312
	<hr/>	
Total	267 392	263 975
Advance, top disposal, regeneration	6 916	7 197
<hr/>		
State Forest Softwood		
Hazard reduction burning	4 720	3 295
Clearing burns for pine establishment	3 028	3 323
	<hr/>	
Total	282 056	277 790
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National Parks	2 900 approx.	Not Available
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NOTE: Areas prescribed burnt on Nature Reserves not available.

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CAUSES OF WILDFIRE

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Classification	State forest and adjacent lands			National Parks and adjacent lands		
	1984/85 number	%	last 5 years %	1984/85 number	%	last 5 years %
1. Deliberately and illegally lit	94	35	30	10	25	30
2. Escapes from CALM burns	37	14	13	2	5	6
3. Escapes from other burning off	43	16	21	6	15	15
4. Accidental by timber industry	3	1	2	-	-	-
5. Accidental by other industries	11	4	5	1	2	2
6. Accidental by recreational visitors	17	7	6	2	5	6
7. Lightning	30	11	8	6	15	24
8. Unknown	19	7	11	13	33	16
9. Causes not listed in 1 to 8	13	5	4	-	-	1
<b>Totals</b>	<b>267</b>	<b>100</b>	<b>100</b>	<b>40</b>	<b>100</b>	<b>100</b>
<b>Number of fires</b>			<b>1 113</b>			<b>223</b>

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Note: Data on Nature Reserves not available.



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SUMMARY OF WILDFIRES ATTENDED

Number of fires and areas burnt.

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Land Category	1984/85		Annual average past 5 years	
	No.	Area	No.	Area
State Forest* Hardwood	145	12 624	114	5 800
State Forest* Softwood	25	25	17	44
Adjacent Private Property and Crown Land	97	4 302	91	6 690
Sub Total	267	16 951	222	12 534
National Parks	33	25 856	36	118 324
Adjacent Lands	7	N/A	9	N/A
Sub Total	40	25 856	45	118 324
Nature Reserves	17	9 482	N/A	N/A
Adjacent Lands	15	7 235	N/A	N/A
TOTAL	32	16 717	N/A	N/A

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\* Includes State forest, Timber Reserves and lands formerly registered in the name of the Conservator of Forest and now vested in the Executive Director.

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APPENDIX 6  
EMPLOYMENT STATISTICS

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EMPLOYMENT IN CONSERVATION AND LAND MANAGEMENT

Administration	:	16	
Professional Officers	:	115	
General Field Staff	:	421	(including General Division Wildlife officers)
Clerical and Mapping	:	150	
Professional Cadets	:	9	
Field Cadets	:	24	
Full time wages employees	:	654	(including National Park Rangers)
*Contract Personnel (est)	:	<u>150</u>	
		1539	

\* Contractors are employed periodically for clearing, road building, softwood and hardwood logging. The figure provided is an estimate of average employment over the period of the report.

EMPLOYMENT IN FOREST BASED INDUSTRIES

Sawmilling employees, including bush workers Includes employees of registered sawmills only and excludes persons employed in associate years in metropolitan and country areas	1 824
Other wood reprocessing industries (est.) Includes employees "working in wood" as defined under the Factories and Shops Act (1963)	3 000
Firewood, mining timber and pole cutters working under licence (est.)	56
Sandalwood workers	74
Apiarists est. (2,174 sites registered)	<u>177</u>
	5 131

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## APPENDIX 7

### PUBLICATIONS PRODUCED BY THE DEPARTMENT FROM 22 MARCH TO 30 JUNE 1985

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- LANDSCOPE NO. 1 - Rediscovering Mountain Bells  
The Hamersley Range  
The Lane-Poole Jarrah Reserve  
The Search for the Western Bristlebird
- CALM NEWS - Monthly staff newspaper
- TECHNICAL PAPER 14 - Growth and Potential of Coniferous species  
in the South West of Western Australia -  
a report on the progress of three arboreta  
by R.A. Fremlin, J.W. Kruger and R.A. Hingston

#### EXTERNAL JOURNALS

1. Influence of Some Environmental Factors on Indigenous Earthworms in the Northern Jarrah Forest of Western Australia by Dr I. Abbott.
2. *Dasypogonaceae* by H.T. Clifford and G.J. Keighery.
3. The Flora and Vegetation of the Crown Land South of Eneabba by E.A. Griffin and A.J. Hopkins.
4. Fire in the Woodlands and Associated Formations of the Semi-arid Region of South-Western Australia by A.J. Hopkins.
5. Planning the use of Fires on Conservation Lands in South-Western Australia: Some Problems, Some Solutions by A.J. Hopkins.
6. Geographical Variation, Sub-species Discrimination and Evolution in Fruits, Leaves and Buds of *Eucalyptus caesia* (Myrtaceae) by S.D. Hopper, N.A. Campbell and N. Caputi.
7. A Review of the Genus *Burchardia* (Liliaceae) in Western Australia by G.K. Keighery.

#### LAND MANAGEMENT PLANS

- . Rottnest Island Draft Management Plan.
- . Lane-Poole Reserve - A Guide Towards an Environmental and Recreational Management Plan.

### INTERNAL MANUALS

- . Staff Training Courses 1985/86.
- . Foresters Manual - amendments

### DIRECTORIES

- . Department of Conservation & Land Management
- . Timber Bureau.

### PUBLICITY & ADVISORY MATERIAL

- . Fauna Series - A guide to Australian Water Fowl.
- . Tree Care Series - Direct Seeding of Eucalypts - Cheap trees for Farms.
- . Recreation Guides
  - Fred Jacoby Park
  - Yanchep National Park
  - Bibbulmun Walking Track Guide Book.

APPENDIX 8  
SAFETY STATISTICS OVER THE LAST 19 YEARS

Year	M H W	L T A	M T A	Total Accidents	Frequency		Rate		Man Days Lost	Duration Rate (days)
					L T A	M T A	L T A M T A	L T A M T A		
1966-67	-	185	-	-	100+	-	100+	2 896	-	
1967-68	1 895 600	124	312	436	65	164	230	1 701	14	
1968-69	2 019 568	96	155	251	48	76	124	1 738	18	
1969-70	1 901 020	70	129	199	37	67	104	721	10	
1970-71	1 808 406	48	158	206	27	76	110	458	9	
1971-72	1 759 888	40	128	168	23	72	95	275	6	
1972-73	1 728 577	45	112	157	26	64	90	414	9	
1973-74	1 651 621	45	119	164	27	72	99	359	8	
1974-75	1 748 219	55	127	182	31	72	104	634	11	
1975-76	1 762 693	31	113	144	17.5	64	82	383	12	
1976-77	1 707 635	32	157	189	19	92	111	620	19	
1977-78	1 764 519	26	151	177	15	86	100	731	28	
1978-79	1 835 917	44	143	187	24	76	100	810	18	
1979-80	1 826 452	32	125	157	17.5	68	86	938	14	
1980-81	1 897 463	24	135	159	13	71	84	490	15	
1981-82	1 915 184	19	141	160	10	74	84	459	18	
1982-83	1 931 192	27	134	161	14	69	83	849	22	
1983-84	2 144 995	43	198	241	20	92	112	819	14	
* 1984-85	2 093 453	30	189	219	14	90	104	**1 206	#26	

M.H.W. - Man Hours Worked

L.T.A. - Lost Time Accidents

M.T.A. - Medical Treatment Accidents

\* Period from 1st July 1984 to 30th June 1985 inclusive.

\*\* Of 1206 days lost 430 were carried over from seven accidents sustained during the previous year.

# The Duration Rate for the 30 L.T.A. this year is 26 days. If the 430 days lost from the 7 carry over accidents are taken into account, the Duration Rate is 33 days.