DEPARTMENT OF CONSERVATION & LAND MANAGEMENT

POLICY STATEMENT NO. 3

PHYTOPHTHORA DIEBACK

Revised: January 1991

1. OBJECTIVE

To prevent the introduction, spread or intensification of the plant diseases caused by Phytophthora species throughout the state, with particular emphasis on the South-West (see Figure 1), and to monitor for Phytophthora activity in the remainder of the State, especially in tropical areas.

2. BACKGROUND

Fungi belonging to the genus Phytophthora are exotic to the Western Australian environment. Several species affect the native flora of Western Australia - *P. cinnamomi, P. citricola, P. cryptogea, P. megasperma var sojae, P. megasperma var megasperma, P. nicotianae var parasitica, P. drechsleri.*

These fungi are known to have a wide host range. There are at least 1,000 species of many different plant families that are susceptible to Phytopthora species. The Proteaceae (eg. Grevillia, Banksia), Myrtaceae (eg. Eucalyptus, bottlebrush, myrtles) and Epacridaceae (the heaths) in particular, are highly susceptible.

The impact of Phytophthora disease on the environment is extremely serious. It has the potential to damage rapidly entire ecosystems. Operations on or near all public lands must be planned and carried out to ensure that the introduction, spread and intensification of disease caused by Phytophtora species does not occur.

Phytophthora is also a threat to natural vegetation or susceptible crop species (such as avocados and wildflowers) on privately owned land.

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Also, the economic impact of the disease on industries using forest resources (water, timber, wildflowers, honey etc) can be substantial as it has the potential to kill part of the resource base and make it extremely difficult or costly to access the remainder or to rehabilitate affected areas.

Since the promulgation of the CALM Act in 1984, dieback protection plans, interim guidelines, area management plans and regional management plans have been produced for land entrusted to CALM. These documents, in conjunction with other procedural manuals and checklists (such as the Dieback Hygiene Manual, Code of Logging Practice, Manual of Logging Specifications, Fire Control Checklists, Guidelines to the 7-Way Test) guide officers of the Department to plan and implement operations.

Legislation:

Control on lands vested in the National Parks and Nature Conservation Authority and the Lands and Forest Commission is possible through Part VII (Sections 79-86) of the CALM Act. Regulations under Section 129 allow for road closure to occur.

Part VII of the Act can also be applied to any other Crown land with the permission of the vested authority.

There are also powers in other Acts such as the Mining Act and the Metropolitan Water Suppiy Act that provide for the control of access.

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3. POLICY

The Department will:

(1) Evaluate the following factors before any operation proceeds which is likely to introduce, spread or intensify the impact of Phytophthora species on land entrusted to CALM:

1. Whether the proposed activity needs to take place.
2. The vegetation/landform type.
3. The land uses for which the area is being managed.
4. The disease hazard.
5. The risk of introduction, spread, intensification of disease.
6. The consequences of infection.
7. The hygiene measures required.

This procedure is referred to as "the 7 Way Test". All operations are to be evaluated according to these criteria.

A decision to accept, reject or modify a proposed activity will be made only after an evaluation of all seven factors.

(2) Determine hygiene requirements before granting access to land entrusted to CALM. The degree of control exercised will relate to the risk of introducing Phytophthora species, the chance of any introduction surviving and the magnitude of the consequences.

(3) Minimise the construction of roads on lands entrusted to CALM. Where new roads are necessary they must be located and constructed so as to minimise the risk of introduction, spread or intensification of disease caused by Phytophthora species. All non-essential roads will be closed.

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(4) Control the use of roads on lands entrusted to CALM to minimise the risk of introduction of Phytophthora species.

(5) Monitor representative areas and operations across the lands entrusted to CALM to:

- determine the risk of introducing Phytophthora species;
- determine rates of spread;
- determine the effectiveness of hygiene measures used to prevent introduction and spread.

(6) Review the boundaries of Disease Risk Areas periodically.

(7) Give a high priority to determining the location and extent of Phytophthora species on public land. The highest priority will be given to those areas in which both hazard and the risk of introduction or spread by either natural or artifical means is the greatest.

(8) Undertake research into the diagnosis of the disease, the assessment of damage caused by the disease, disease dynamics, disease management and disease control. The research findings will be published and promoted.

(9) Give a high priority to collating and disseminating research and other data. These data are to be used for developing management prescriptions, training Departmental officers and promoting Phytophthora awareness in other land management organisations, land users and the public at large.

(10) Provide continuing training in disease biology and control to Departmental staff who carry out activities which have the potential to introduce, spread or intensify the impact of disease caused by Phytophthora species.

4. STRATEGIES

To accomplish the Department objective and policies, staff will:

(1) Use the 7-Way Test to evaluate all operations likely to introduce, spread or intensify the impact of Phytophthora species.

(2) Conform to the objectives and strategies contained in Dieback Protection Plans, Regional Management plans, Area Management plans and Interim Guidelines.

(3) Conform to standards and practices laid down in Departmental manuals and codes of practice. Eg: Hygiene manual, fire control checklists, guidelines to the 7-Way Test, Manual of Logging Specifications, Code of logging practice.

(4) Include disease management specifications in contract documents and job prescriptions.

(5) Incorporate sufficient lead time in planning operations to allow disease location, hazard and risk mapping.

(6) Plan to execute operations in time and space so that the risk of disease introduction and spread are minimised.

(7) Plan and implement a minimum strategic roading network.

(8) Control access and operations so as to protect secure areas which are Phytophthora free.

(9) Encourage self-policing of Phytophthora hygiene by Government, local authority, industry and other user bodies.

(10) Continue to develop practical systems for monitoring the effectiveness of hygiene in operations.

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(11) Continue research into site vegetation and Phytophthora impacts and apply new information appropriately.

(12) Implement the primary objectives of Research Division's plant diseases research programme (Appendix 1) by providing appropriate resources.

(13) Prepare and implement a communications plan to increase public awareness and understanding of the Phytophthora problem in Western Australia and to create public support and cooperation for initiatives to control and combat the problem.

(14) Continue to develop Phytophthora management expertise and awareness in CALM staff and in staff of other land management authorities and industry.

(15) Make available CALM policies, strategies and guidelines on disease control to other Government Departments, industry, local authorities, community groups, individuals and organisations dealing with management and use of natural lands.

(16) Assist other organisations with training.

(17) Encourage Government, local authority and industry bodies to make a formal committment to Phytophthora management.

(18) Refer enforcement matters concerning Part VII of the CALM Act and associated regulations to the Branch Manager of Environmental Protection Branch for consideration and prosecution where appropriate.

S. SHEA
EXECUTIVE DIRECTOR

DIST. LIST: A, B, D, E, L.

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APPENDIX 1

PRIMARY OBJECTIVES OF 5 YEAR RESEARCH PLAN

Diagnosis:

To recognize and assess the effects of disease in any situation of concern. To diagnose the causes of disease or damage in native communities, plantations and nurseries whether they are caused by abiotic factors or infectious agents. To identify pathogens.

Assessment of Damage:

To survey and assess the economic and conservation importance of diseases.

Disease Dynamics:

To understand the effect of environment on host, survival, increase and dispersal of pathogens, the infection of plants and expression of host resistance. To develop risk-rating systems where appropriate.

Disease Management:

To determine the effect of management practices, climate, site, and host susceptibility on consequence of diseases in plant communities, plantations and nurseries. To develop hazard-rating systems where appropriate.

Control:

To develop cost-effective and scientifically sound methods of controlling disease of woody plants. To advise as to how areas are to be best managed to maintain stable and helathy communities that are not predisposed to disease in the short and long term.

Communication:

To communicate the results of research in the form of educational literature, committee representation, training courses and seminars and to liaise and co-operate with the public, staff of other organizations and CALM personnel.

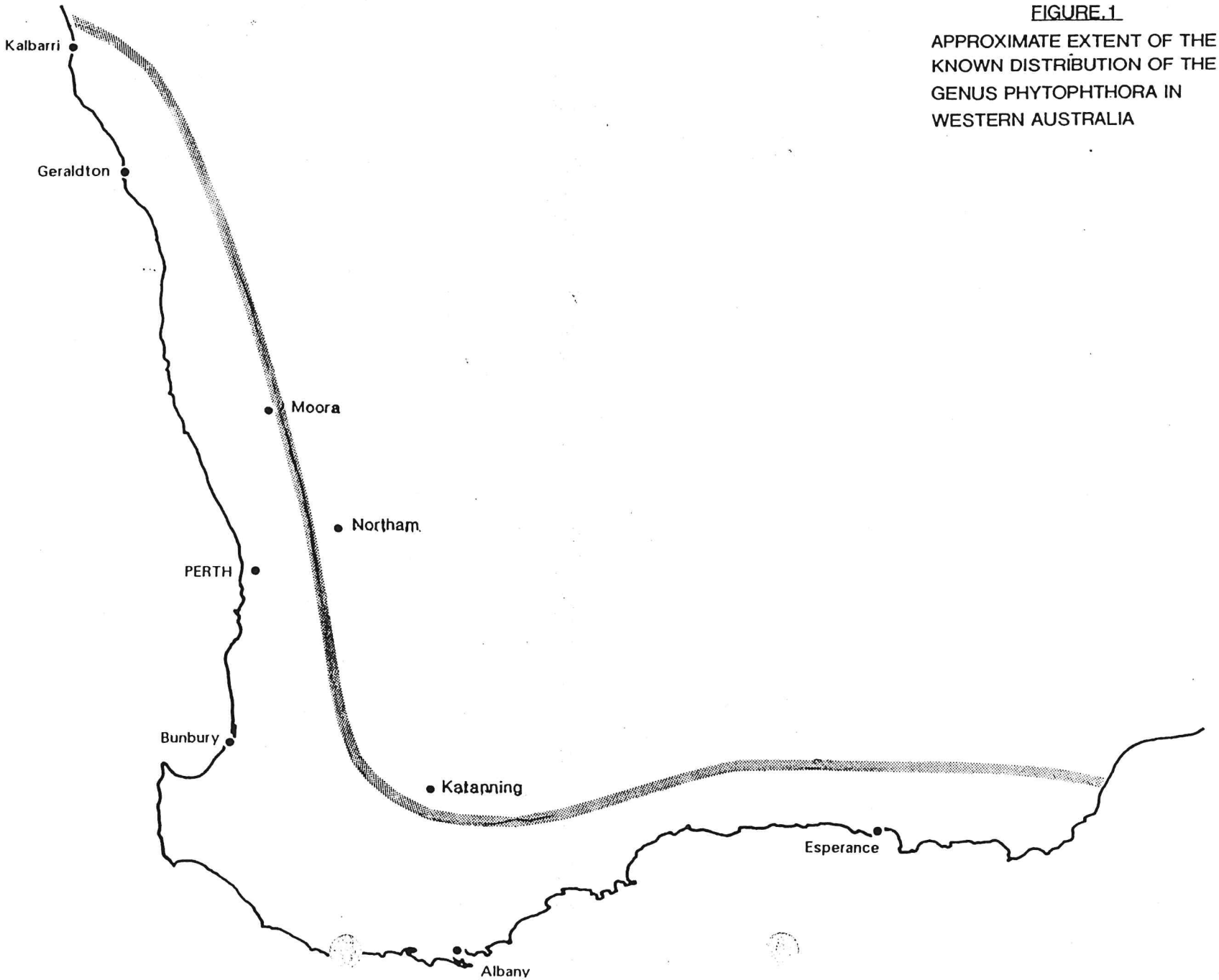

FIGURE 1

APPROXIMATE EXTENT OF THE KNOWN DISTRIBUTION OF THE GENUS PHYTOPHTHORA IN WESTERN AUSTRALIA