



Closing the door on dieback

by Ashley Tate Townsend

A little ingenuity and a brake cylinder from a van launched a community effort to save native plants from a devastating environmental threat. Dedicated members of community groups are working to guard local natural areas in the fight against dieback disease.



Facing page
Jarrah forest affected by dieback.
Photo – Marie Lochman/CALM

Above Alcoa employees Naomi Kerp, Peter Langlands and Melanie Norman (left to right) work as a team to inject a tree with phosphite at Ken Hurst Park in Leeming.
Photo – Peter Garside

Ten years ago Mike Beilby returned from a meeting at Roleystone District High School ready to tackle a new project. Using a hydraulic brake cylinder from a van, Beilby, a retired schoolteacher, welded together an apparatus to inject the fungicide phosphite into a tree.

Ian Colquhoun, Senior Consultant of Environmental Research for Alcoa, had brought a bulky tree injector to the meeting, requesting that someone design a better, cheaper model. Colquhoun and others at the meeting hoped to combat *Phytophthora cinnamomi*, commonly known as dieback disease, by injecting trees with phosphite. This soil-borne water mould attacks the roots of more than 2000 plant species native to the South West of Western Australia, and injection of the fungicide into uninfected trees ‘inoculates’ them against the disease.

As a result, seven concerned citizens, including Beilby and Colquhoun, formed the Roleystone Dieback Action Group (RDAG) in 1994. Colquhoun’s involvement in dieback research had brought his attention to the plight of Roleystone’s unprotected local reserves. He noticed that drainage from Roleystone District High School was spreading the disease

and killing an adjacent forest. The group’s first project was to use Beilby’s injectors to inoculate the infected forest’s surviving trees.

Today, the trees they injected remain alive and uninfected. A company in Walliston manufactures the injectors for \$300—much cheaper than the \$800–\$1500 other injectors cost. Mr Beilby improved his design several times before handing it over to the professionals, making the injectors lighter and using trailer brake cylinders that are easier to obtain.

The group continues to inject trees every summer. Colquhoun, the RDAG Chairperson, marks lanes with thread and volunteers then drill holes and inject phosphite into banksias and jarrah trees—highly susceptible to *Phytophthora*—along those lanes. They also spray phosphite onto vegetation, rehabilitate with native plants in the winter, lend their equipment to and mentor other community groups, and encourage community stewardship to control the disease on private land and local reserves.

The work of RDAG’s concerned citizens inspired community-based efforts to fight *Phytophthora* beyond Roleystone. In 1996, the RDAG joined other community groups, Perth

metropolitan area local government authorities, the Department of Conservation and Land Management (CALM) and other State government land management agencies to form the Dieback Working Group (DWG). Colquhoun also chairs the DWG, a group dedicated to increasing awareness of the disease in the South West of Western Australia.

The DWG gives regular presentations to local authorities and conservation groups to explain the threat and management of the disease. The group maps one or two reserves in a locality and develops example management plans for those reserves to illustrate the simplicity of the process. In 2000, the DWG used funding from the Natural Heritage Trust to produce a set of dieback management guidelines for local government, available on CALM’s NatureBase website (www.naturebase.net). Since

Phytophthora facts

- There is no cure for dieback disease.
- Preventing the disease's spread is the best way to manage it.
- The disease attacks the stems and roots of plants, preventing the uptake of water. Infected plants often appear to be dying from drought conditions.
- Forty per cent of plant species native to WA's South West are vulnerable to infection.
- Management practices include establishing cleaning stations to avoid transport of contaminated soil, phosphite tree injections and plant spraying, seasonal and permanent road and trail closures, and information signs.
- WWF predicts unmanaged dieback could cost the Australian economy about \$1.6 billion in the next 10 years.

the DWG formed, 25 local authorities have adopted policies and procedures for dieback management.

The timely release of the World Wide Fund for Nature's (WWF's) booklet, *Arresting Phytophthora Dieback – the Biological Bulldozer*, last October, coincided with the tenth anniversary of the formation of the RDAG. The booklet emphasises the importance of everything the RDAG embodies: community awareness and involvement to suppress the spread of dieback disease.

The booklet, developed in partnership with the State government's Dieback Consultative Council, highlights the efforts of the many groups aiming to stop the metaphorical bulldozer that is dieback disease. The publication lists the DWG and community groups, including the RDAG, as integral to halting the spread of this threat through south-western Australia's plant communities, wildlife and landscapes.

As well as advisory and research groups focused on dieback disease, organisations encouraging community involvement and awareness play an



Above DWG Dieback Project Officer Christopher Dunne demonstrates the phosphite injection technique at Alinjarra Primary School in Alexander Heights. Teachers, parents and students from the school participated in the dieback treatment effort.

Photo – Angie Michael

important role. The volunteers they recruit implement labour-intensive management practices that local governments often cannot afford, even if they have developed dieback management plans.

Colquhoun said a group of 20 volunteers could spend half a day injecting trees—protecting the trees from the disease for five years—while they enjoyed the bonding experience of participating in a hands-on conservation project.

As the WWF's booklet indicates, there is more to *Phytophthora* abatement than tree injection. However, RDAG's entrepreneurial

initiatives empowered the Roleystone community when it faced devastation of its natural areas due to dieback. Following Roleystone's lead, other communities taking an active role in dieback prevention are discovering the positive impact of their efforts on the health of the local environment.

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To obtain a copy of *Arresting Phytophthora Dieback – the Biological Bulldozer* contact Helen Pitman via email (hpitman@wwf.org.au). The booklet answers basic questions about dieback and describes how individuals can avoid spreading the disease and participate in prevention activities. Copies are limited.

For more information on managing dieback, visit CALM's Managing Dieback website at http://www.naturebase.net/projects/dieback_splash.html.

To find out how you can join community groups and participate in *Phytophthora* prevention, contact the Dieback Working Group on (08) 9257 9937.

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