

Fighting Plant Disease in Warby-Ovens National Park

Phytophthora cinnamomi (PC) or Fungal Root Rot has become wide spread in the Warby Range and is rapidly destroying large areas of understorey shrubs and affecting the health of many trees. Grasstrees (*Xanthorrhoea glauca*), the much loved icon species of the park, some more than 250 years old, are the most under threat.

All who work in, live beside, love and enjoy the park can help slow the spread of this devastating disease by employing these simple and basic practices.



Once the disease has moved through an area of vegetation the shrub layer virtually disappears leaving a severely depleted understory dominated by grasses and introduced weeds.

Susceptible overstorey trees are weakened and become prone to die back and death in drought years.



Above: Healthy Nodding Blue Lily
Below: Nodding Blue Lily affected by PC



There is no permanent treatment for PC however the plants ability to resist the disease can be enhanced with a fungicide Phosphonate applied to the foliage. This can give the plant protection for up to two years or more.

Aerial application has been used successfully in coastal heath lands in Victoria and may be useful in treating the heathy understory of the Warby Range.

Direct application is the recommended treatment for Grasstrees.

What is Phytophthora Cinnamomi?

Thought to be introduced to Australia *Phytophthora cinnamomi* (PC) effects both horticultural crops and native vegetation. It is most likely that PC was introduced into the Warby Range in nursery stock for orchards in the middle of last century.

PC is a plant disease that attacks root hairs preventing the plant from extracting water and nutrients from the soil causing the plant to die. Spores are able to move through soil water around two meters up slope and many meters down slope in wet years, randomly infecting nearby susceptible species.

Spores are spread in infected soil on machinery, vehicle tyres, footwear and tools. In the Warby Range PC is most active in wet areas and waterways associated with runoff from roads, tracks and fire breaks.

A few infestations occur away from roads and may derive from animal pads.

What can you do to stop the spread of PC?

Hygiene - the most important tool

Once PC has passed through a site there is no visual indication remaining of its presence.

Some areas are declared "No Entry" (Quarantine Areas) either because of the presence of PC or there are high value plants present that must be protected

Always assume

The area you are entering is both contaminated with disease or free of the disease.

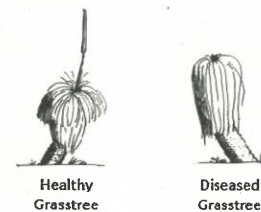
To avoid introducing or spreading PC within the park or to other locations ensure vehicles, tools and footwear are free of soil before entering and leaving the park or moving to new areas within the park.

Look for warning and advisory signs.

Quarantine Area NO ENTRY

Plants in this area are infected with the plant disease *Phytophthora cinnamomi*.

This disease is spread through infested soil or plant material and destroys native plants.



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Do Not Enter Quarantine Areas or Closed Tracks

If boot cleaning stations are present make sure you use the facilities, particularly if you are using the parks walking tracks and management tracks. Look out for warning signs and avoid quarantine areas.

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Plant Disease Control Hygiene

Code of Practice

For contractors, emergency services, park staff and visitors

At any time:

- Maintain vehicles, machinery and equipment free of soil
- Look for warning and advisory signs

When working or visiting plant disease infested or suspect areas:

- Stay on roads and tracks
- Avoid wet areas
- Work on infested sites last
- Construct fire control lines outside known infested sites
- During an emergency advise incoming crews and Incident Control of the presence of Phytophthora

Before leaving an infested site and the park:

- Clean soil from vehicles, tyres, footwear, tools and machinery
- Use the DSE/Parks Victoria mobile decontamination unit when available

At home base:

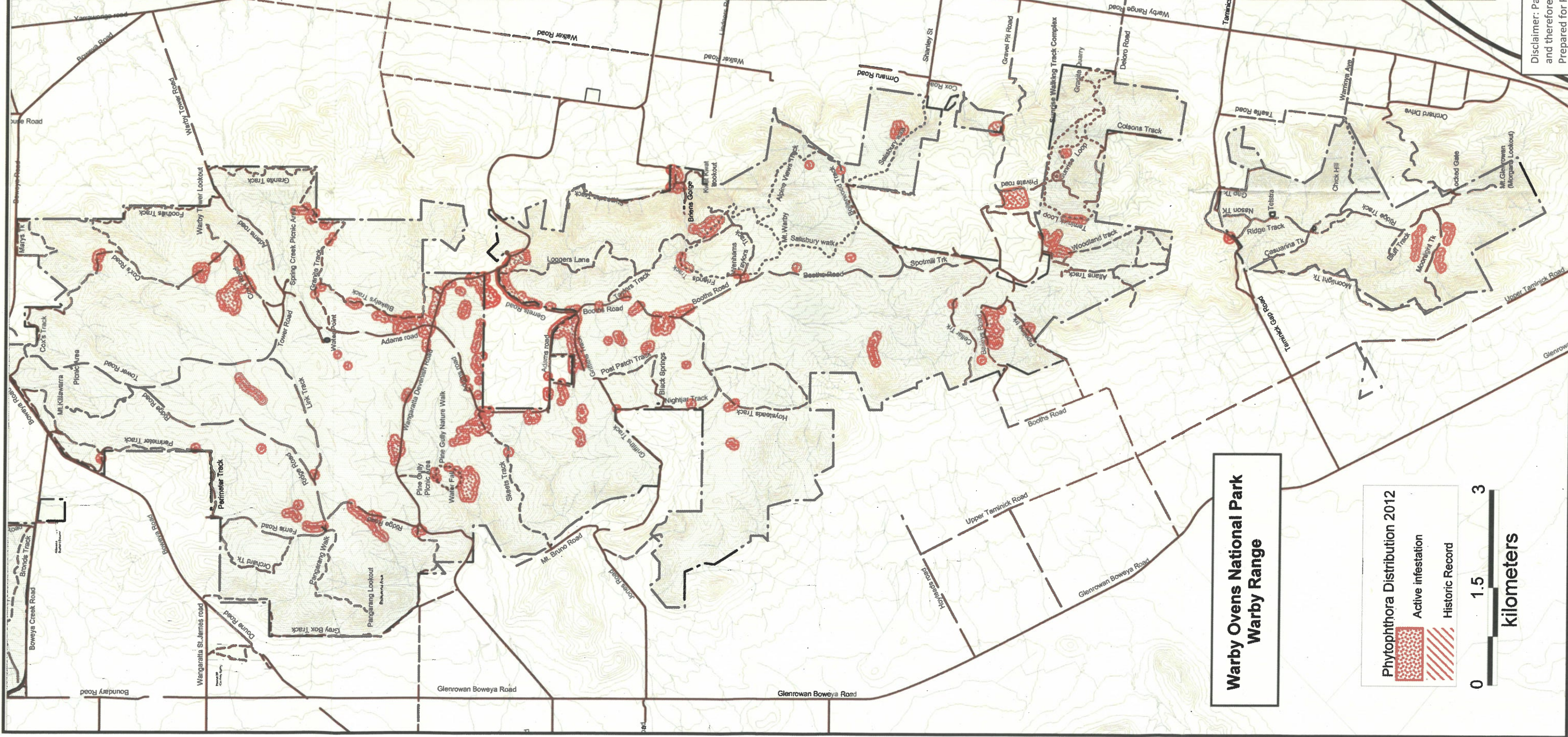
- Thoroughly clean equipment and tools with an approved phytocide (eg "Phytoclean")



Healthy Parks
Healthy People



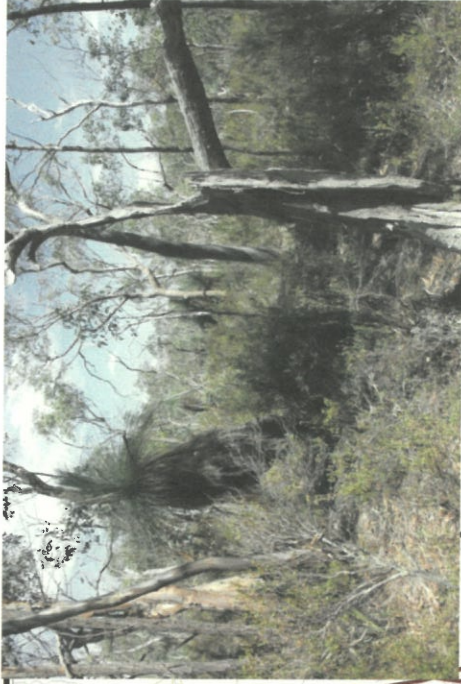
Known and suspected distribution of *Phytophthora cinnamomi* - January 2012



**Warby Ovens National Park
Warby Range**

Phytophthora Distribution 2012

- Active infestation
- Historic Record



Above: Healthy Dry Forest at Ridge Road
Below: After arrival of PC the forest becomes a Grassy Dry Forest



Daphne Heath killed by Phytophthora



Above: Healthy Grass trees



Below: Grass trees killed by Phytophthora

Disclaimer: Parks Victoria does not guarantee that this data is without flaw of any kind and therefore disclaims all liability which may arise from you relying on this information. Prepared for Parks Victoria by Tuan Ridge Environmental Enhancement Services 2012.