



# Root Rot

## *Phytophthora cinnamomi*

### Are YOU killing our plants?

The answer may be right on your feet - the disease known as 'root rot' is carried in soil by unsuspecting humans.

An introduced plant pathogen called *Phytophthora cinnamomi* (pronounced *Fy-TOFF-thora*) is the cause of the deadly 'root rot' disease.

Similar to a fungus, it lives inside the plant's roots where it gradually consumes parts of its host. In the process, it blocks the uptake of water and nutrients within the plant. Some plants die rapidly, while others only show signs of disease during periods of stress such as drought. Root rot spreads between plants by root-to-root contact and by the release of microscopic spores that can move through the soil.

### Spring is the season for flowers

Spring is a great time of year to enjoy the dazzling beauty of Tasmania's forests, heaths and moorlands when plants of all colours, shapes and sizes burst into bloom. Sadly there are areas where such spring flowering displays have entirely disappeared. In these places, the diversity of plants has been much reduced by the impact of root rot, and only a few hardy shrubs and grass-like species remain.

### Humans as agents of death

When left alone, root rot spreads very slowly. However, it is easily spread by unsuspecting humans. People can give its deadly spores all kinds of opportunities to travel long distances and cross natural barriers. Hidden in mud, root rot can hitch a ride on vehicles, boots and foot wear, machinery, gaiters and tent pegs. Moving loads of soil or gravel can also spread root rot into new areas.

### What's at risk?

Root rot is most likely to infect relatively open vegetation such as moorland, heathland and dry forests. It requires warm, moist soils to survive and is largely restricted to those areas below 700 m elevation, where the annual rainfall is greater than 600 mm (refer to map over page, indicating the current known distribution of *Phytophthora* throughout out Tasmania).



Photo: Steve Johnson (PWS)

About 120 of Tasmania's native plant species are known to be susceptible to root rot damage. Many of these are woody shrubs in the heath, pea and protea families. Root rot is a serious danger to at least 35 rare and threatened plants. In addition to the death of plants - creatures such as the threatened New Holland mouse may be affected due to the loss of habitat and plants for food.

Root rot may also cause damage to private gardens, particularly those containing azaleas and rhododendrons.

***Phytophthora* is already widespread in lowland areas of Tasmania.**

The good news is that there are still some places where root rot is not present.

### Root rot refugia

Scientists with the Nature Conservation Branch have identified a number of root rot free areas in Tasmania. Many of these sites support plant communities that are highly susceptible to *Phytophthora* infections.

These areas have been targeted specifically to prevent the introduction of root rot. One such site is **Maria Island**, on the east coast of Tasmania.

Maria Island is a refuge for twelve endemic birds, and a number of unique plant communities.

It is vital when visiting Maria Island, and any of our reserved areas, that adequate hygiene precautions are taken to ensure the long term survival of Tasmania's unique flora.

Ensure that ALL your equipment, bikes, boots etc. are clean to reduce the risk of introducing this pathogen to the island or any of our national parks.

## A special plant in danger

There is only one place in the world where the attractive shrub *Epacris barbata* is found and that is Freycinet National Park on Tasmania's east coast.

This plant is in danger of extinction due to the spread of root rot from roads and walking tracks within the park. The fungus has wiped out 90 % of the plants in some monitored populations.

## What can you do to stop the rot?

### Before you leave home

- Always start your trip with clean, dirt free gear. Remove dirt from your machinery, boots, camping and bushwalking gear, horses' hooves and bike tyres.
- Obey track and road closed signs. These may have been closed to prevent the disease spreading.
- Keep to formed tracks. Moving off infected tracks into uninfected areas will spread the disease.
- Where tracks are designated as one way, always walk in the direction indicated.
- Clean your gear before you leave your campsite. Brush the soil off your tent floor, pegs, toilet trowel etc.
- Use wash down stations where provided.
- Avoid driving in areas when soils are wet and sticky.

## When you get home

- Clean mud and dirt from your gear, vehicles, bikes and animals. It is vital that soil is washed straight into your septic or sewerage systems, where root rot will die. You can do this by washing over a trough or drain.
- Protect your garden by not digging up bush plants that may be carrying the disease. It is illegal to remove plants from national parks and reserves.

## Further Information

[www.parks.tas.gov.au](http://www.parks.tas.gov.au) - follow links to 'quarantine, pests and diseases'.

A colour pamphlet *Phytophthora* is available from Nature Conservation Branch.

## Contact

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