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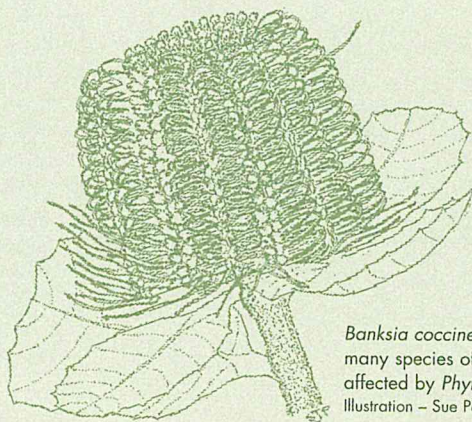
Department of Biodiversity,
Conservation and Attractions

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Don't let your activities spread *Phytophthora* fungi

To minimise the spread of *Phytophthora* fungi, the following guidelines are suggested:

- DO learn to recognise *Phytophthora* indicator species and outbreaks of *Phytophthora*.
- DO contact CALM for further advice if you suspect the presence of *Phytophthora* in areas you wish to access.
- DO observe the Road Closed signs in Disease Risk Areas.
- DO plan to use bush areas during fine weather.
- DO stick to well-formed, well-drained roads and tracks, especially during wet conditions.
- DO avoid boggy wet areas.
- DO plan access routes to avoid crossing areas infested with *Phytophthora*.
- DO inspect and wash down your vehicle and boots before moving to a new bush area. Don't assume your vehicle is clean; any soil from an infested area can carry *Phytophthora*.
- DO use washdown stations wherever they are provided, and/or use a solution of common household bleach diluted at 1 part of bleach in 22 parts of water as a washdown solution with a backpack sprayer.



Banksia coccinea is one of the many species of banksia affected by *Phytophthora* fungi.
Illustration – Sue Patrick

- DO take special care if the road is a Flora Road or if it adjoins a National Park, Nature Reserve or State Forest.
- DO remember that streams in infested areas may carry the fungal spores, so water obtained from them should not be used in uninfested areas.
- DO consult your local CALM office if you require further information.

Remember

The bush is ours to enjoy and use now. Your care in preventing the spread of *Phytophthora* will help maintain the bush for enjoyment and use in the future.



A washdown station used to prevent the spread of *Phytophthora* fungi.

Phytophthora The wildflower killer



You can help!



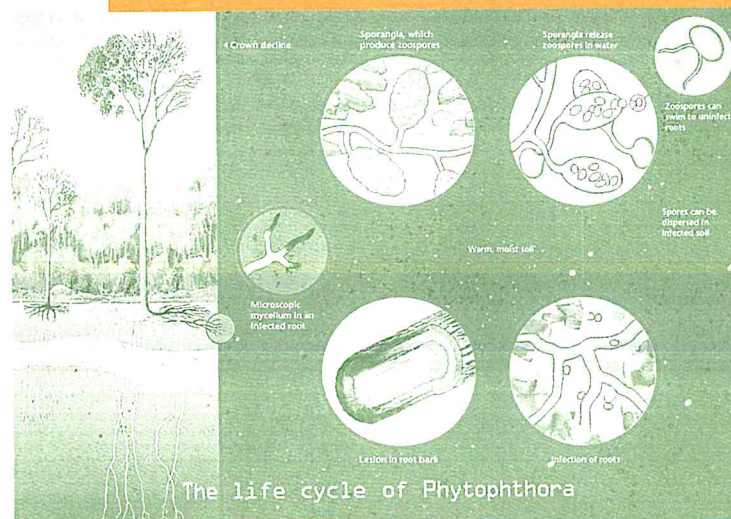
Department of Conservation
and Land Management

What is *Phytophthora*?

The disease of native plants known as *Phytophthora* is caused by several types of introduced fungi, all *Phytophthora* species. These fungi can destroy much of the flora in the forests, woodlands and heaths of WA.

About one third of Western Australia's unique south-western native plants are susceptible, including the many beautiful coastal banksias and jarrah.

The *Phytophthora* fungus infects the plant roots, restricting the uptake of water and nutrients, eventually causing the death of susceptible species. Plant disease caused by *Phytophthora* is more widespread and severe in the higher rainfall zone and water-gaining sites.



How does it spread?

The *Phytophthora* fungi are microscopic, living in the soil and plant roots. They spread naturally by the movement of spores in water or by root-to-root contact, or artificially by the movement of infested soil.

The movement of infested soil through human activity has resulted in very wide dispersal of these pathogens in Western Australia. Infested gravel, if used for roadwork, will spread the disease to previously healthy areas. Any vehicle can carry infested soil on its tyres or underbody, and even people on foot can spread *Phytophthora* fungi as they walk from diseased to healthy areas.

Legitimate bush activities, such as access to picnic or fishing sites, wildflower and seed harvesting, track and fire break maintenance, or just sightseeing, have the potential to spread *Phytophthora* fungi if not undertaken with appropriate bush hygiene.

Currently, there is no known practical method of eradicating *Phytophthora* once it is established in natural areas.

How can plant disease caused by *Phytophthora* be recognised?

Death of susceptible 'indicator species' such as banksias, blackboys, zamias, dryandras, hakeas and heaths is a sign of *Phytophthora* presence.

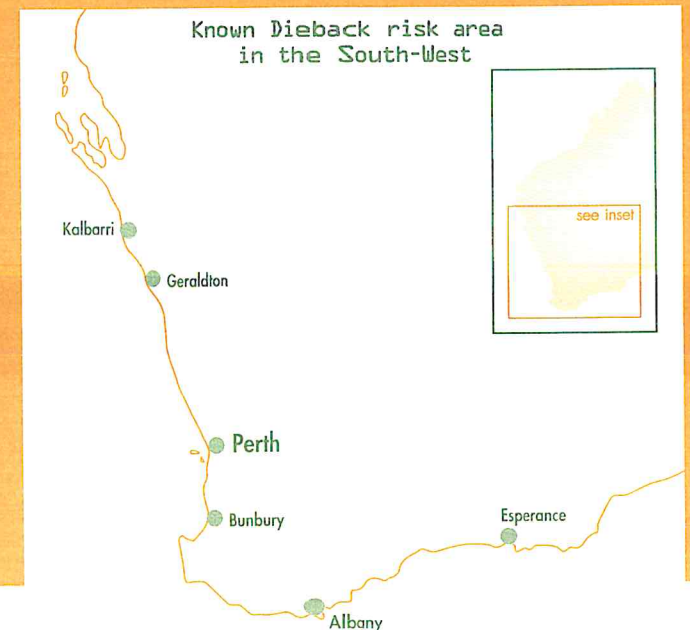
Moderately susceptible species, such as jarrah, may take years to die.

Marri, karri, wandoo, salmon gum, peppermint or tea-tree are not susceptible to *Phytophthora* fungi. Symptoms of 'dying back' at their tips are due to different factors.

CALM pamphlets on *Phytophthora* give further details. Alternatively, check with your local CALM office for information about the *Phytophthora*-affected areas.

If your bush activities are taking place within the shaded area on the map, there is a risk of spreading *Phytophthora*. In wet seasons when mud is more easily carried, the risk area could be even further inland.

Please take care before you undertake activities in bush areas, or venture off-road.



Major plant genera with species known to be affected by *Phytophthora* dieback

PROTEACEAE	MYRTACEAE	EPACRIDACEAE	OTHER
Adenanthos	Agonis	Andersonia*	Acacia
Banksia*	Beaufortia	Astroloma*	Allocasuarina
Conospermum	Calothamnus	Leucopogon*	Anarthria
Dryandra	Calytrix	Lysinema*	Boronia
Franklandia	Eremaea	Monotoca*	Conostylis
Grevillea	Eucalyptus	Sphenotoma*	Dampiera
Hakea	Hypocalymma	Styphelia*	Dasypogon
Isopogon*	Kunzea		Daviesia
Lambertia*	Melaleuca		Eutaxia
Persoonia*	Regelia		Gastrobolium
Petrophile*	Scholtzia		Hibbertia*
Stirlingia	Thryptomene*		Hovea
Synaphea	Verticordia*		Jacksonia
Xylomelum*			Lasiopetalum*
			Latrobea
			Macrozamia
			Oxylobium
			Patersonia
			Phlebocarya
			Xanthorrhoea
			Xanthosia

* Many species in the genus are severely affected