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the wildflower killer PHYTOPHTHORA – you can help

WHAT IS PHYTOPHTHORA?

The disease of native plants known as *Phytophthora* is caused by several types of introduced fungi, all *Phytophthora* species, which 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 plants roots. They spread naturally by the movement of spores in water or by root to root contact, or artificially by the movement of infected 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, has 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 PHYTOPHTHORA DIEBACK BE RECOGNISED

Death of susceptible 'indicator species' such as banksias, blackboys, zamias, dryandras, hakeas and heaths are 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* gives further details, or 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.

FIGHT PHYTOPHTHORA DIEBACK, GIVE OUR PLANTS A CHANCE!

Major Plant Genera with Species Known to be Affected by Phytophthora Dieback

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

* many species in the genus are severely affected

DON'T LET YOUR ACTIVITIES SPREAD *PHYTOPHTHORA* FUNGI

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

DO	learn to recognise <i>Phytophthora</i> indicator species and outbreaks of <i>Phytophthora</i> .
DO	contact CALM for further advice if you suspect the presence of <i>Phytophthora</i> : 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 <i>Phytophthora</i> .
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 <i>Phytophthora</i> .
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 can be used as a washdown solution with a backpack sprayer.
DO	take special care if the road is a Flora Roads 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.