

Teratosphaeria leaf disease (TLD)

Other names: *Mycosphaerella* leaf disease, MLD

Sexual stage (teleomorph): *Teratosphaeria*

Asexual names (anamorph): *Cercospora*, *Colletogloeopsis*, *Kirramyces*, *Lecanostictopsis*, *Mycovelloseiella*, *Passalora*, *Phaeophleospora*, *Phaeoramularia*, *Pseudocercospora*, *Pseudocercosporella*, *Sonderhenia*, *Stagnospora*, *Stigminia* and *Uwebraunia*

Various species of *Teratosphaeria* (many previously in the genus *Mycosphaerella*) singly or in combination are responsible for the most serious and common leaf spot disease observed in Australian *Eucalypt globulus* plantations. By producing leaf lesions, they reduce the effective photosynthetic area, resulting eventually in premature defoliation and reduced growth rates.

Species of *Teratosphaeria* and other closely related genera are difficult to distinguish in the field, often requiring laboratory and/or molecular techniques for identification. Further complicating matters, MLD may some times involve several different species with more than one species present on a single leaf, or within a single leaf spot.

Leaf spots are angular, circular or irregular in shape. The average size of spots may vary depending on the species and vary from small spots (0.5-2 mm diameter) to large spots which coalesce, resulting in leaf distortion. The spots usually penetrate through the leaf. They are various shades of brown, sometimes with a reddish or purple margin. The shape and size of spots produced by a particular species may vary on different leaves depending on the stage of leaf development when infection occurs. Smaller lesions often resulting from infection at a late stage of leaf development while the larger lesions are the result of infection occurring early in the development of the leaf.

Microscopic, black fruiting bodies are formed, either immersed in the leaf tissue (eg *T. cryptica*) or on the leaf surface (*T. suberosa*). They may be so numerous that the leaf spot appears grey. Some species only form fruiting bodies on the underside of leaves (*T. nubilosa*), while others form them on both sides (*T. cryptica*). In some species the fruiting bodies are in concentric rings.

Autumn and spring with moderate temperatures and rainfall, high relative humidity (> 95%), prolonged leaf wetness (> 24 hours) and the presence of susceptible young expanding leaves are thought to be the seasons most favourable for disease spread and epidemic development.



Symptoms of *Teratosphaeria* leaf disease on juvenile leaves

Teratosphaeria cryptica

Other names: *Mycosphaerella cryptica*, *Sphaerella cryptica*
Asexual form (anamorph): *Colletogloeopsis nubilosum*, *Colletogloeum nubilosum*



T. cryptica and *Colletogloeopsis nubilosum* on *Eucalyptus globulus*. From left to right; symptoms on juvenile foliage; symptoms on adult foliage; surface of lesion on upper surface of juvenile foliage, showing spore producing structures (small dark spots) along leaf veins; lesion on lower surface of juvenile foliage showing more densely packed fruiting structures

Teratosphaeria nubilosa

Other names: *Mycosphaerella nubilosa*, *Sphaerella nubilosa*
Asexual names (anamorph): Unknown



Teratosphaeria nubilosa on *Eucalyptus globulus*. From left to right; lesions on juvenile foliage; lesions on adult foliage; lesions on top surface of juvenile foliage showing lack of fruiting bodies; lesion on bottom surface of juvenile foliage showing numerous fruiting bodies.