



Forest Threats

Diplodia shoot blight, Sphaeropsis die-back

Tree Protection Co-operative Programme

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Fungal diseases

Diplodia shoot blight, Sphaeropsis die-back

Diplodia sapinea and *Diplodia scrobiculata*

SYMPTOMS

In South Africa, *D. sapinea* has been found in association with bark weevils (*Pissodes* spp.), the Mediterranean pine beetle (*Orthotomicus erosus*) (Zwolinski et al. 1995), black pine aphid (*Cinara cronartii*) and the pine bark beetle (*Hylastes* sp.) (Wingfield & Knox-Davies 1980a).

In the Mediterranean forests of Europe, the cone bug (*Gastrodes grassipes*), bark beetles (*Ips pini*) and western conifer seed bug (*Leptoglossus occidentalis*) are known to have an interactions with *D. sapinea* (Luchi et al. 2012).

BIOLOGY

Diplodia sapinea can subsist in dead plant material such as needles, twigs, cones and leaf sheaths where it forms fruiting structures known as pycnidia (Brookhouser & Peterson 1971). Once the environmental conditions are optimal, the pycnidia release spores that are transported by wind, rain, insects or equipment. These spores penetrate young needles through the stomata (or other natural openings) or through wounds caused by biotic or abiotic factors (Brookhouser & Peterson 1971, Wingfield & Knox-Davies 1980). After penetration, a lesion is formed on the needles, twigs or stems, where different symptoms will start to develop (Brookhouser & Peterson 1971). The dead tissue produced as a result of infection will be the source of inoculum for the new cycle of disease.

A sexual state for this pathogen is not yet known.

