

CONIOTHYRIUM CANKER

Causal agent: *Teratosphaeria zuluense* (previously *Coniothyrium zuluense*). In South America, Zimbabwe and Uganda a different species, *T. gauchensis*, causes the same symptoms on *Eucalyptus* trees.

Hosts: *Eucalyptus* species

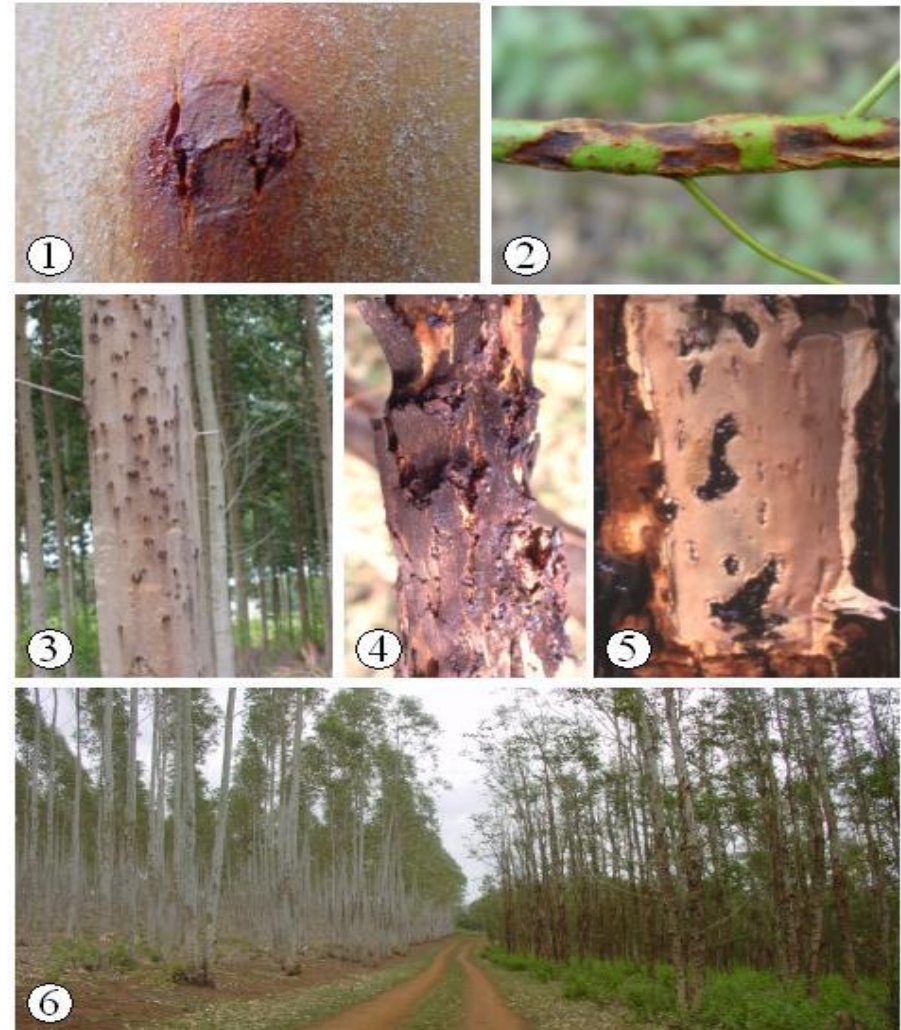
Geographic distribution: *Teratosphaeria zuluense* - Ethiopia, Malawi, Mozambique, South Africa, Zambia, South and Central America, Thailand

Relative importance: Causes twig and branch die-back of young succulent material. Results in malformation and weakening of the xylem. This impacts negatively on trees grown for sawn timber, transmission poles or construction. Difficulty is also experienced with the removal of bark from infected stems.

Symptoms and signs: On young green tissue infection first becomes visible as small sunken, necrotic lesions (Figures 1, 2). These may girdle the twigs and branches, resulting in their death. On older material and those of larger diameter infection is characterised by measles-like spots (Figure 3). These spots may penetrate into the pith of trees (Figure 4,5), or in the case of tolerant trees are restricted to the bark. Small, black fruiting bodies may be visible on the dead bark between the cracks.

Biology: Coniothyrium stem and branch canker seems to be more severe in hot, humid areas of the world. It has been reported from a few temperate areas, but here infection seems to be less severe. The fungus can penetrate the bark directly and disease may first start appearing on trees at around 12 months or older.

Management: Considerable difference has been observed between species and hybrid clones. The selection of disease tolerant material is, therefore, the most durable option to reduce the impact of this disease.



(1) Typical lesion caused by *T. zuluense* and *T. gauchensis* infection on main stem of tree, characterized by two parallel cracks, (2) sunken lesions on young green branch, (3) Multiple spots (measles) on main stem of tree, (4) multiple cankers/spot converging to form malformed stem on highly susceptible tree, (5) kino pockets in the wood of affected tree, (6) susceptible compartment on right, with tolerant compartment on left.