

fungi and insects remain alive in a weakened state. Sporophores of *Cytosporina* were observed on the dead bark including fruit bodies of *Hypoxyton*, *Stereum*, *Polyporus* and *Fomes*. About 30% of these trees displayed symptoms, however no tree yielded the *Nectria* fungus in culture.

The observed scale insect infestation was severe and approximately 20 trees died rapidly in the two adjoining woodlots at Newmarket. The beech scale was also observed in another woodlot in King City about 30 km southwest of Newmarket. The trees at this site had similar dieback symptoms. The aftermath zone advanced by Shigo (4) could be applicable to the disease in Ontario since the bark tissue died so rapidly that conditions for sporulation of *Nectria* spp., which had been present previously, was now passed.

In addition, the owners who maintain the woodlots for amenity and shelter have felled and utilized the badly affected trees. Also a successful spray program using dormant superior oil + ferbam before bud flush followed by sistox + ferbam in mid-June has been instituted during the last three years to contain the disease and control the

scale insect.

We believe this to be the first documented occurrence of the beech scale insect in Ontario.

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#### ABSTRACT

GIBBS, J.N. and D.A. BURDEKIN. 1983. **De-icing salt and crown damage to London plane.** Arboric. J. 6: 227-237.

During the post-war period, crown dieback has occurred periodically in London plane planted in London and other British cities. Most affected trees are very close to roadsides but some damage has been recorded in parkland trees more than 45 m from roads. Recent investigations strongly suggest that much of the damage can be attributed to the effect of de-icing salt applied to roads during severe winters. The main symptom of this disorder is the death of foliage shortly after flushing, with some branches typically being more affected than others. Later in the summer, remaining leaves may develop marginal and inter-veinal scorching. Chloride levels in leaves from affected trees are between 1 and 3% of the dry weight, well above the 0.1-0.3% found in unaffected trees. In certain years quite severe disease in plane can be caused by the anthracnose fungus, *Gnomonia platani*, which can infect buds, shoots, and leaves. It seems likely that this fungus could have been responsible for the damage to trees growing remote from roadsides.