



Arboriculture Research Note

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Bleeding Canker of Caucasian Lime (*Tilia x euchlora*)

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Summary

This Note reports a condition of the Caucasian lime that threatens the tree's use.

Introduction

1. The Caucasian lime (*Tilia x euchlora*) has been promoted by nurserymen because of its resistance to aphid attack. Carter (1992) has demonstrated that *T.x euchlora* is resistant to aphids, but leaf hoppers have been known to cause severe foliage discoloration.
2. Several incidences have been recorded where young (between 15 and 35 years old) *T.x euchlora* have developed "Bleeding Cankers". This Note reviews this condition and suggests control measures.

Description

3. The canker consists of a dead patch of bark on the main stem. During the summer and autumn white sap exudes from the canker and runs down the stem. This sap is very attractive to wasps which may become intoxicated on it. In the winter the external weeping of sap stops but the presence of sooty moulds on the bark below the canker indicates those trees that are affected.
4. Most of the cankers are formed near the points of branching. The canker usually takes the form of a vertically elongated lesion linked at one side to the branch crotch. Sometimes, however, the lesion is merely near a branch. It has never been observed on stems less than 10cms in diameter. As many as 5 or 6 cankers have been found at different points on the stem of a single tree.
5. As the cankers become older patches of dead bark fall away exposing the old wood (xylem), and folds of callus growth are formed. Some cankers appear to "heal" naturally but often they continue to develop until they have girdled the stem, at which point the top of the tree dies. Before this happens the crown often shows premature yellowing and defoliation. Decay fungi may develop in the exposed wood and lead to stem breakage.

The Cause

6. Laboratory isolations from the lesions consistently yield a bacterium which has been provisionally identified as an *Erwinia* species and thus belongs to a genus containing several tree pathogens, including some known to form bark cankers. However, experiments involving the introduction of the bacterium to healthy trees have not so far resulted in the creation of a canker. Its role as a pathogen thus remains unproven.
7. *Tilia x euchlora* may often show rows of peck marks caused by woodpeckers but there is no link between this condition and the disease.

Control Treatment

8. Excision of cankers may be worth attempting but it must be carried out while the lesion is small and before decay has become established in the wood beneath.

Reference

Carter, C.I. (1992) Lime Trees and Aphids. *Arboriculture Research Note 104/92/ENT*.
Arboricultural Advisory and Information Service, Farnham.

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