

the sociological and technological changes it will bring, we can expect the green industry to continue to boom on all levels. Municipal forestry will also grow, but more slowly because of budgetary constraints. On all levels we will face increasing demands and challenges. In the private sector it will take innovation to provide improved services at a reasonable cost in an environmentally acceptable manner. In the public sector it will take innovation to provide these same services with limited resources.

To meet the challenges of the Twenty-first Century, cooperation and shared goals are essential between the green industry, government, professional organizations, and educational and research institutions. To meet the challenges of the Twenty-first Century we need information to cope with change. Today's students are one of

our most important links to change, and they are our future leaders. Our profession needs students, and students need us.

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## ABSTRACTS

SHURTLEFF, MALCOLM C. 1989. **Diagnosing shade tree diseases**. *Grounds Maintenance* 24(6):22, 24, 26, 68, 72.

Learning how to diagnose common diseases will help you maintain healthy trees. Rapid and accurate diagnosis is the first step in the treatment of any disease. Follow these basic steps: 1. Evaluate the overall appearance of an unhealthy tree. When you evaluate problem trees on-site, knowledge of the past history of a tree will help you to determine the true cause or causes of a problem. 2. Look for direct evidence (signs) of the cause. Examine the foliage, twig and branch system, trunk, and roots. A weakened tree is much more susceptible to secondary attacks by insects (such as borers) or diseases (like cankers, certain wilts, root rots and wood decay). 3. You may need a laboratory examination and/or culturing to confirm your tentative diagnosis.

ILES, JEFF. 1989. **The case against tree topping**. *Grounds Maintenance* 24(6):51, 74.

The practice of topping—which also is called heading, stubbing or dehorning—involves the drastic removal of large branches with little regard for location of the pruning cut. However, professional arborists and other tree care practitioners now realize that the well-intentioned practice of topping can create a host of problems for trees and the people who co-exist with them. Proper early training, selective branch thinning, or entire tree removal are favorable alternatives. By removing a major portion of the tree canopy, the delicate balance between foliage and the rest of the tree is upset. These imbalances can lead directly to decline and death, or predispose trees to other problems, with death the inevitable result. Large branch stubs that result from topping are open invitations to insects, and wood-rotting pathogens. Regrowth resulting from topping is also succulent and more susceptible to attack from insects and disease pathogens. Topping also disfigures the tree and ruins its aesthetic value in the landscape.