

maintenance), woodland and tree ecology, basic soils science, and tree protection and maintenance.

While seminars present useful information on how to protect trees during and after development, this may not be enough. Entrenched landscape tastes favor park-like landscapes with broad expanses of grass and large trees. Schmid (8) states, "If the planting and maintenance practices customary through a homeowner's previous experience in open landscapes are applied without changes to forested tracts, any woodland present soon vanishes." For many homeowners, the maintenance of a tidy landscape with manicured lawns is held to be a community responsibility (7) and the disharmony between native trees and an introduced understory goes unnoticed.

If the health and beauty of these areas is to be maintained, homeowners should be encouraged to maintain a portion of their lot in a natural condition. Emphasis should be placed on preserving natural groups with the forest floor left undisturbed rather than preserving individual trees (4). Natural ecosystems have been enjoying a current fashionable interest (10), and could become a popular style for residential vegetation if individuals are made aware of the many benefits this type of landscape provides.

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Abstract

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Landscape trees and shrubs constitute a major investment and add significantly to the beauty and value of residential and commercial properties. Landscape managers need to be familiar with woody plants, their requirements for survival and vitality, and their pest problems to implement effective insect control programs. Most native trees and shrubs on undisturbed sites suffer only rarely from ravages of insect pests. However, trees growing in landscapes are commonly stressed by lack of water (or too much water if there is poor drainage), high temperatures, compacted soils, and other factors that reduce the tree's ability to either repel or withstand insect attack without suffering decline. Most major pests of trees and shrubs are probably opportunists that exploit hosts that have been altered by their physical environment. Landscape managers can take advantage of the information in this article to develop strategies for controlling insect pests of woody plants. The information is organized according to season of insect activity. The time or times an insect is vulnerable to a direct control tactic and up-to-date insect control recommendations are provided.