

LANDSCAPE LOG

By Douglas Chapman, horticulturist, Dow Gardens, Midland, Michigan



Photo courtesy of the National Arborist Association.

During the next twelve months, this column is going to concentrate on timely maintenance practices as they relate to overall landscape maintenance and tree species. Although it will highlight one month prior, e.g. March activities in the February issue of WEEDS, TREES, AND TURF, it should be stressed that as one goes 100 miles south of central Michigan, the practices would move up five to seven days, and north, the converse.

Physiologically, there are two times to **prune deciduous trees**. The best time is from March through the commencement of growth. The second time is when we have active lateral meristem activity, or during August.

During these two periods the cambium, or lateral meristem, is more active and, therefore, the wound response (compartmentalization, or isolating the injury,) and the process of closure (callusing over) would be optimal.

Conversely, when the tree is in a rapid growth period (during early spring when terminal elongation is accomplished) would be least desirable to prune, and, therefore, the wound response would be poorest.

Most deciduous trees can be pruned but some trees are active bleeders. These so-called bleeders include Sugar Maple (*Acer saccharum*), Red Maple (*A. rubrum*), American Elm (*Ulmus americana*), and birch (*Betula* sp.). These should be pruned during August.

Size of the pruning cut also has a significant impact on the wound or the amount of time it takes to close over. Why, in English gardens, do we see trees one hundred to two hundred years of age but expect urban trees in this country to last only thirty-five to fifty-five years? Not only are the English concerned about the correct time of pruning, but they prune the trees actively every year or two. This, of course, means the wounds are smaller and have a decreased deleterious effect on the trees.

In this country, we often dream of five and six year pruning cycles but, in waiting this long, more damage can be done than corrective pruning.

All trees, when young, should be pruned annually for the first three years after transplanting. This devel-

ops a good structure and sets the pattern for its mature habit. At this point, we can be making smaller cuts, eliminating V-crotches, pruning of suckers, and removing rubbing or deformed branches.

Some trees require little pruning after this point. These trees include Scarlet Oak (*Quercus rubra*), White Oak (*Q. alba*), Maidenhair Tree (*Ginkgo biloba*), several low maintenance crabs, e.g. 'Snowdrift' (*Malus* 'Snowdrift') and floribunda (*M. floribunda*), Norway Maple (*A. platanoides*), Sugar Maple (*A. saccharum*), and Black Gum (*Nyssa sylvatica*). Other trees, and these would include many other crab apple cultivars (*Malus*), Silver Maple (*Acer saccharinum*), Red Maple (*A. rubrum*), American Beech (*Fagus grandifolia*), European Beech (*F. sylvatica*), birch (*Betula* sp.), ash (*Fraxinus* sp.), and linden (*Tilia* sp.), require frequent pruning, and, if frequent but small cuts can be made, then heartwood rot or structural damage is not a major problem.

March is optimal time for **pruning of many shrubs**. Corrective pruning, annual thinning or containment, and renewal of shrubs that have become overgrown is best in March.

Generally speaking, many of our early spring flowering shrubs should be pruned annually. This pruning, depending on height desired, would range from 10 - 25%. More pruning would be appropriate when decreased height is desired. Annual pruning to renew the shrub should be at ground level and allow it to sucker. Shrubs pruned in this manner allow the plants to display their natural habit without turning them into a square, triangle, or sphere.

If flowers are important to you, then many flowering shrubs should be pruned just after flowering. If, due to the pressures of other tasks, this pruning can't be accomplished just after flowering, then any time during March and April is acceptable. A brief list of shrubs to be pruned in the spring includes Red Twig Dogwood (*Cornus sericea*), Deutzia (*Deutzia*), cinquefoil (*Potentilla fruticosa*) Yellow Twig Dogwood (*C. s. 'Flaviramea'*), forsythia (*Forsythia intermedia*), St. Johnswort (*Hypericum prolificum*), Mock-orange (*Philadelphus*), Flowering Almond (*Prunus triloba*), spirea (*Spiraea*), lilac (*Syringa vulgaris*), and weigela (*Weigela florida*). There are deciduous shrubs which can be pruned in very early spring without affecting

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TABLE 1

March*

1. Prune deciduous trees, especially corrective pruning for those planted within the past three years.
2. Prune shrubs, for containment, thinning, correction and renewal.
3. Dormant oil spraying, for sucking insects when temperature is above 40 degrees.
4. Fertilizing trees and turf.

* Based on central Michigan, subtract or add 6 days for each 100 miles south or north, respectively.

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Many Other Insects

they have done for the industry. Also, the wide columns and small type make the otherwise well-designed book harder than necessary to read.

If there are 12,900 golf facilities in the U.S., then 12,900 superintendents should buy this book as should each greens committee. This book will carry the standard for golf course management just as its two predecessors did for 20-30 years. It may be too expensive for students, but certainly it is worth spending \$46.75 to protect the business and property of a golf course.

Bruce F. Shank, editor

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the flowering since the flower buds are formed on current season wood. These would include: Butterfly-bush (*Buddleia davidi*), Summersweet (*Clethra alnifolia*), Rose of Sharon (*Hibiscus syriacus*), and European Cranberrybush (*Viburnum opulus*).

Rejuvenation of shrubs is a particularly important consideration in pruning the plant back to six inches from the soil and allowing the shrub to come up from the suckers. This is another way to have new plants by reworking old shrubs while correcting neglected plants. This spring rejuvenation has saved many landscapes.

The application of dormant oil is one of the most effective, yet environmentally sound practices for control of sucking insects. The outstanding grounds manager or plantsman is constantly reviewing conditions of the landscape. While pruning one has opportunity to assess the plants for disease and insect problems.

If sucking insects are a problem, then the application of a dormant oil any time during March when the temperature is

40° or above should be considered. This will control aphids, many scales, and mites.

Dormant oil should be applied to the point of runoff. One should use highly refined oils, e.g. 80- 90- or 100 second oils. These highly refined superior plant oils (100 sec.) have little or no phytotoxic effects and can be used on a broad variety of plants. The mode of action of these plant oils is to smother the eggs of these sucking insects, thus only total coverage of the plant will result in control.

Several plants that often have heavy aphid populations include linden, ash, and crabapples. These plants almost warrant some annual control.

There are several plants that are particularly sensitive to dormant oil and, therefore, one should not apply it to these plants, e.g. birch, beech, hickory, or walnut (that is, the thin-barked trees). Further, if one has a 'Moerheimii' or Colorado "blue-type" spruce, dormant oil would eliminate or remove the bloom but will not injure the plant.

Early spring is also a time for **fertilizing**. It has been clearly shown from studies by Heimlich and Neely at the University of Illinois, and my studies at Ohio State, that timing results in the maximum effect of fertilization. That is, the same amount of fertilizer will have a more positive impact on the health and vigor of the tree when applied on or before the 15th of April (commencement of growth), when frost is out of the soil. Fertilizing at other times of the year could be beneficial but will not have as much impact.

When assessing your landscape, you note some decreased rate of growth on some trees, then early spring fertilization is paramount. Further, it is a cost effective task to combine tree fertilization with turf fertilization at this early time. **WTT**

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