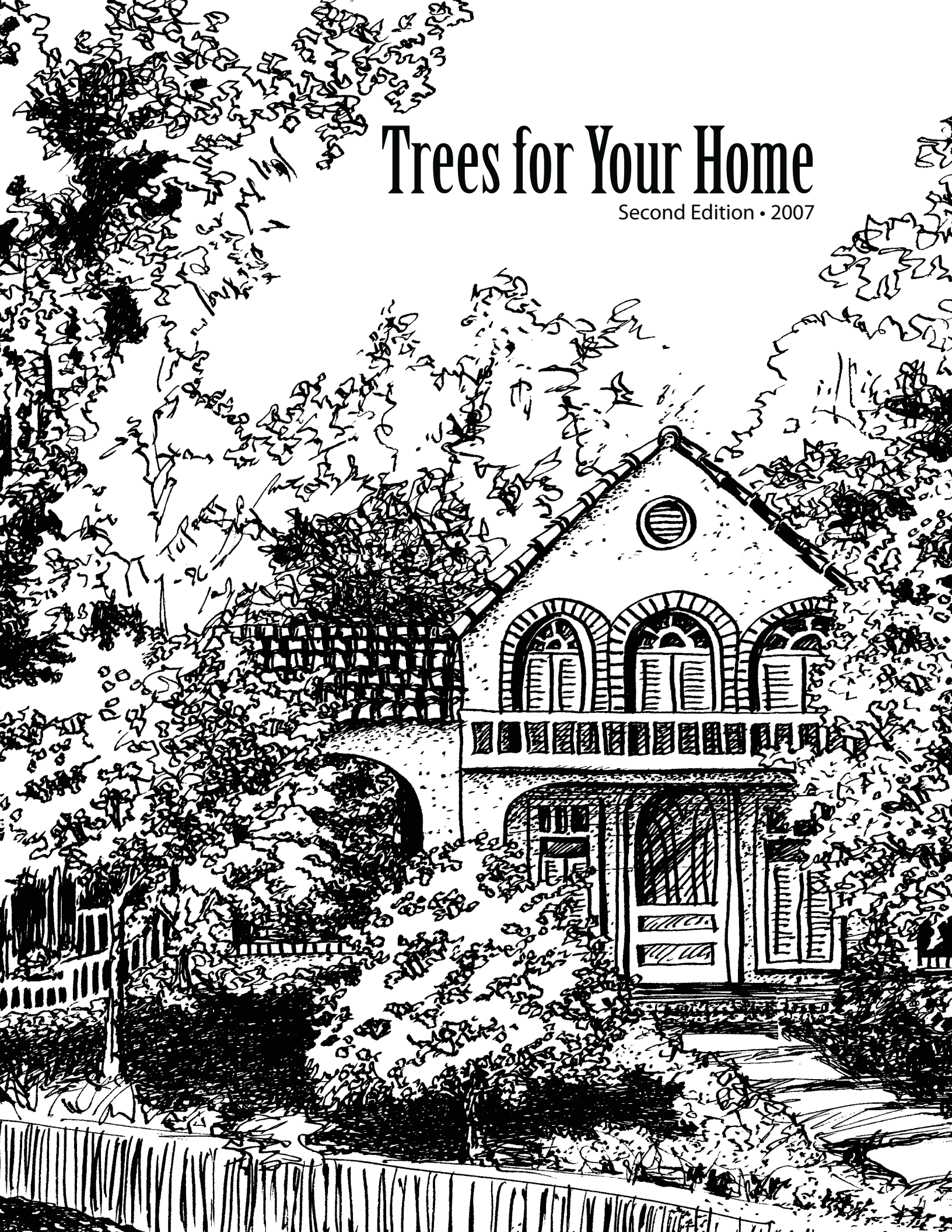


# Trees for Your Home

Second Edition • 2007



# METRO NASHVILLE TREE ADVISORY COMMITTEE

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# PURPOSE OF THE TREE ADVISORY COMMITTEE

The purpose of the Metro Tree Advisory Committee is to assist in educating the community and agencies of the Metropolitan Government regarding the value of trees and proper techniques for the planting, maintenance and removal of trees. This is done by:

- Providing information and public relations to citizens and groups in the city regarding trees
- Maintaining a recommended and undesirable tree list
- Gathering information and publishing reports as needed about trees and our natural resources
- Working with Metro departments and agencies to improve their understanding of trees and tree problems
- Meeting regularly with the Metro Urban Forester

Illustrated by Kathy Tupper 2001

Written and edited by Shawn Bible

# WHY PLANT TREES?

Trees create green spaces in communities. The right trees in the right places benefit you, your home and your community now and in the future. Using this guide will help citizens create community green spaces. It encourages both experts and amateurs to plant and grow trees correctly, and to maintain new and older plantings.

Trees growing in parks and commons, along streets and in the yards and gardens of neighborhoods provide a mosaic of green landscapes within a community. Trees provide a wealth of benefits that improve the quality of life in Middle Tennessee:

- Trees cool the air through evapotranspiration and provide shade that reduces radiation and reflection from hard city surfaces.
- Trees lower urban temperatures and so reduce the use of fossil fuels. Trees that shade your home can reduce electric bills by 15%. Shading an air conditioning unit can increase its efficiency by 10%.
- Tree foliage filters pollutants from the air and converts carbon dioxide to oxygen through photosynthesis.
- Trees reduce runoff and prevent soil erosion during heavy rainfall.
- Trees absorb noise and provide an effective screen for unsightly areas.
- Trees increase economic stability and property values. On average, trees add between 5% and 7% to the value of a house lot.
- Trees provide wildlife habitat and food.
- Trees provide a place for children to play and adults to socialize.
- Studies have proven that trees help us relax and recover from illness. They give us a feeling of security and make us feel at home.
- Trees beautify and add natural character to our city.
- Trees connect us symbolically to past events and eras and serve as a living legacy for the next generation.

## This guide provides information about:

- Site selection: where to plant
- Tree selection: what to plant
- Planting correctly
- Aftercare: long-term maintenance
- Pruning guidelines
- Other resources available



In Tennessee we are blessed with a favorable climate suitable for a variety of trees. With many native and well-adapted trees available, design and selection becomes important. This guide describes small and large trees that are at home in Middle Tennessee. Presented here are the current recommendations for tree selection, planting and aftercare. This is a guide on how to plant — for detailed information refer to sources listed at the end of the guide. Take this guide with you as you select a site and the correct tree for it. Use it again when you plant and prune. We hope that this information can help you get the full benefit of trees without any unexpected problems. We provide scientific names to help make sure you will get the tree you want.

**Let's help trees grow to be beautiful, healthy and safe.**

ing water or that might be eroding. It is also a good idea to dig a hole about a foot deep and wide and fill it with water. If the water has not drained out in six hours, subsurface drainage may be a problem. You should also make sure that you will have access to water. Your new tree will need the equivalent of one inch of rainfall each week to survive.

## Tree Selection

— You can save a lot of heartache and misery by carefully selecting a quality tree. There are many kinds of trees available for planting in this area. This guide has illustrated 41 of the Tree Advisory Committee's favorites and can aid you in deciding what to plant. Some questions to ask when deciding what to plant might be:

- What is tree's mature height?
- What is tree's mature shape?
- How fast does tree grow?
- Is it cold hardy for your area?
- What are its soil requirements?
- Does it require a shady or sunny site?
- Does it require a wet or dry site?
- Describe flowers and fruits.
- What is the autumn/spring color?
- Is the species unusually susceptible to certain insects, disease, or storm damage?

Once you decide on the type of tree to plant you must pick a specific tree at the garden center or nursery. Carefully inspect the trees to choose the healthiest ones with the best form. Look for a straight, single trunk — no double trunks or multiple bunches of trunks unless you are specifically looking for a shrub-like planting. Multiple trunks are often poorly attached to each other. Check for severe pruning cuts and wounds. (If trunk is wrapped check under wrapping.) Inspect for dead bark, cankers, or signs of disease or insects on trunk or branches. Don't select trees with tight, vertical branches where bark is squeezed between two branches or between trunk and branch. If you are purchasing a balled-in-burlap tree the ball should be 12 inches wide for every inch of trunk diameter. (Measure trunk diameter four inches above root ball.) If buying a container-grown tree try lifting the tree out of the pot to check for circling roots. These roots can eventually choke a tree to death. Think about the leaves, fruits and seeds the tree may drop in your yard. Some trees, such as magnolia and London plane, have large leaves that are difficult to dispose of. Some trees have large seed pods that may stick bare feet or smash on your sidewalk. Just how neat and tidy do you expect your tree to be?

## PLANT

After deciding where to plant your tree and choosing the best possible specimen, it is time to prepare the site and plant the tree. It is best to plant a tree during the dormant season — that is between November and March. During this period of dormancy, the tree can establish roots before new growth begins.

### Useful Tools

— Some useful tools to have on hand would be:

- Large spade or shovel
- Large tarp to hold soil
- Heavy-duty wire clippers and scissors
- Measuring stick
- Pruning shears
- Small pruning saw
- Gloves

**Preparing A Site** — While preparing the site keep your tree in the shade and keep the root ball well watered. Measure the height and diameter of the root ball or the height and diameter of the soil in the container. Dig to the depth of the root ball. Leave the bottom of the hole firm. Dig the hole two to five times as wide as the root ball with sloping sides. Break up compacted soil. The sides of the planting space should not be packed. Retain the soil from the hole on a large tarp. Use this same soil to backfill the hole after planting. Do not amend the soil unless planting in building rubble or severely disturbed soils.

**Planting** — Lift the tree into the planting space by the root ball, not the trunk. Balance the tree upright in the center of the planting space. Set your new tree in the hole so that the root ball is at or a little above the surrounding soil level. Check the old soil line on the tree. It is usually a brownish ring on the trunk. Planting your tree too deep will cause the roots to suffocate. If planting a container-grown tree, cut away the container just before the tree is put in the hole. Check the roots to see if they grow in a circular pattern around the container. Cut any large circling roots or pull them towards the outside. If planting a balled-in-burlap tree or a tree in a wire basket cut away any string or twine and cut as much of the burlap or wire basket away as you can. Be sure that the burlap does not stick out above the soil, or it will draw water away from the roots.

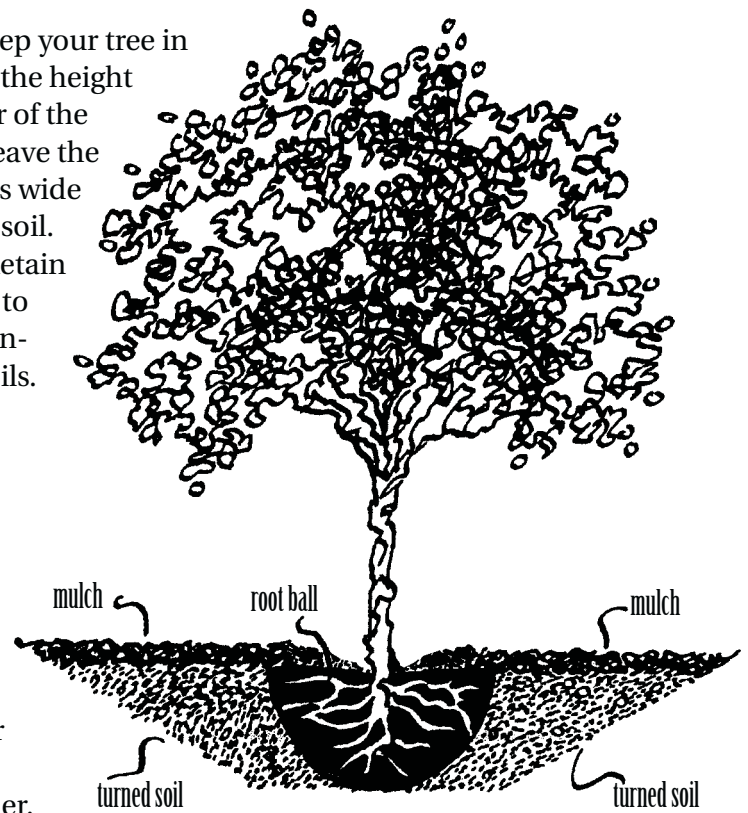
Use the pile of soil to backfill around the root ball. Remove any large rocks and break up any chunks of soil. Pack the soil firmly around the root ball but do not tightly compact it. When the hole is two-thirds full, water the soil to settle out any pockets of air. Finish backfilling until the soil is level with the top of the root ball. Use extra soil to build a berm two to four inches high around the planting area to hold water in the area of the tree's roots. Then finish watering the tree.

Finish by putting a three-inch layer of mulch around the tree. Keep the mulch several inches away from the tree trunk and don't pile it up like a volcano. Mulch will help to keep grass out, save water, provide organic matter for soil enrichment and keep lawn equipment such as string trimmers and lawn mowers away from the thin bark of a young tree. Remove any tree wrap, tape or string on trunk or up in branches. Trunks should be wrapped only to protect them in transit to the planting site. Don't fertilize at planting time. Don't stake your tree unless absolutely necessary. Trees grow better if allowed to stand on their own. If the root ball is in proportion with the rest of the tree it should stand up without staking. If you must stake your tree remove all wires and straps after one year. Prune only dead or injured branches; do not thin or top the tree to reduce height.

## CARE

A consistent watering and maintenance plan is the best insurance against insect and disease problems. Schedule time to spend a moment simply looking at your tree. You'll be amazed how regular monitoring will reveal insight into the health and growth of your tree.

**Watering** — Watering is perhaps the most important step in caring for a newly planted tree. The tree should receive at least one inch of water per week, whether it comes from rainfall or watering. Forget about a quick dribble while you stand there holding the garden hose. Give it a slow, extended soaking for a couple of hours or more. Trees need watering regardless of the season, even during the winter.

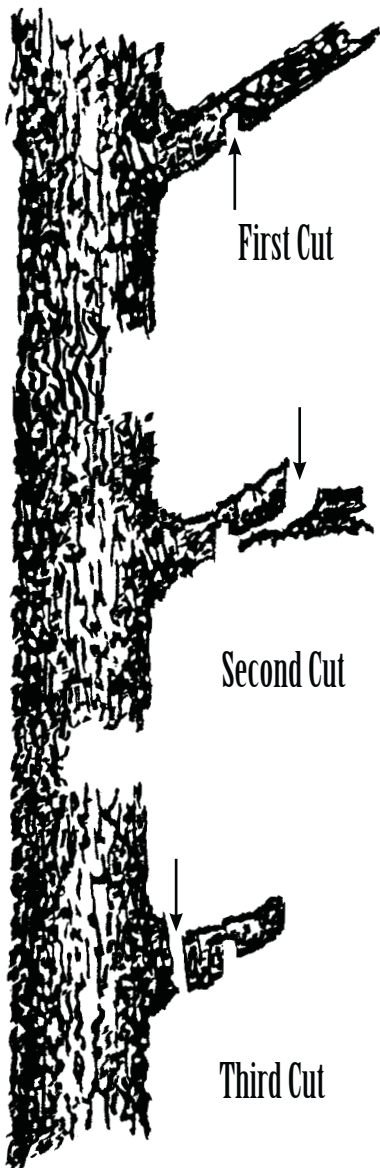


## Planting Procedure

**Fertilize** — Fertilize your trees only after having your soil tested and never fertilize stressed trees. Fertilizer is not tree food and should be applied only if needed.

**Pruning** — Pruning should be done with a purpose and not as an automatic routine. Remove dead and injured branches and those that are crossing and in contact with other branches. If you want to remove lower branches do it as soon as possible. Smaller wounds are less stressful to the tree. But never remove more than one-fourth of the entire tree. Good pruning doesn't show.

Prune with particular care. Proper pruning cuts may make the difference between a tree having a long healthy life or a short life. To cut correctly locate the branch collar, the slightly swollen ridge where the branch attaches to the trunk or a larger branch.



Make three cuts in all to avoid tearing the bark:

- 1 Cut one-quarter of the way through the branch, from the bottom, several inches from the trunk
- 2 Cut through the branch, from the top above the first cut, leaving a long stub.
- 3 Make the final cut from top to bottom just outside the branch collar to remove the stub

Do not:

- make flush cuts behind the branch collar
- leave stubs, living or dead
- injure or remove the branch collar
- paint cuts; it doesn't prevent insects, disease or rot

The best time to prune living branches is in late dormant season or very early spring before leaves begin to open. Dead and injured branches can be pruned any time. Use sharp tools. Make clean cuts. Use equipment safely. Never prune near utility wires. Call an insured International Society of Arboriculture certified professional for advice on large pruning jobs, hazard trees and insect or disease problems.

Never, ever top your trees. Topping is one of the most destructive and unnecessary techniques practiced today. There are many alternative pruning methods when the size and shape of a tree needs to be controlled. With a little care and skill this can be done without ruining the tree's beauty and usefulness. To a worker with a saw, topping a tree is much easier than applying the skill and judgment of good pruning. Therefore, topping may cost less in the short run. However, the true costs of topping are hidden. These include: reduced property value, the expense of removal and replacement if the tree dies, the loss of other trees and shrubs if they succumb to changed light conditions, the risk of liability from weakened branches, and increased future maintenance. Contact a qualified arborist, preferably an International Society of Arboriculture certified arborist, for more details.

Why not to top:

- Topping removes so many leaves a tree may starve
- Topping causes shock from sun scalding
- Large wounds are highly vulnerable to insect invasion and the spores of decay fungi
- New growth after topping is weakly attached
- New growth is also very rapid and returns to its original height in a very short time
- Some older trees can not tolerate topping and will die quickly
- A topped tree is an ugly tree. It has lost all its grace and character.

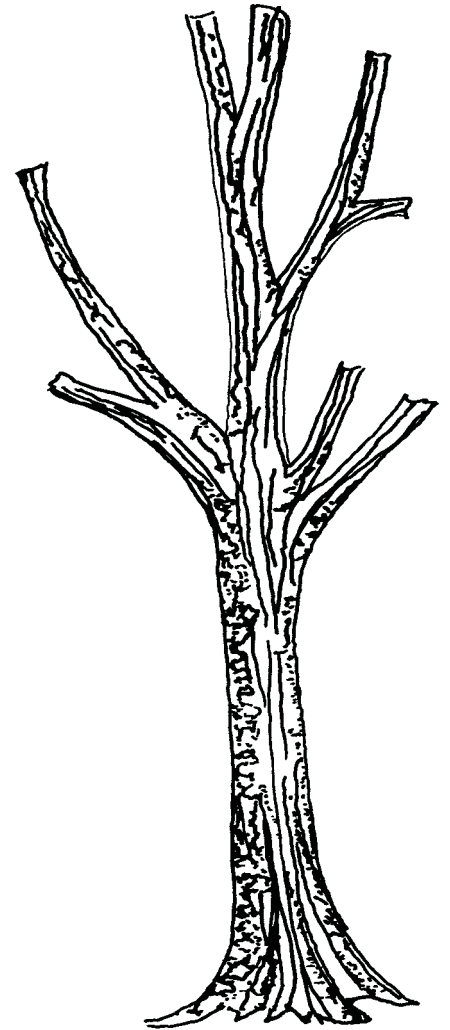
# PROTECTION

Many people who love trees may unknowingly cause them injury. Tree problems may be caused by:

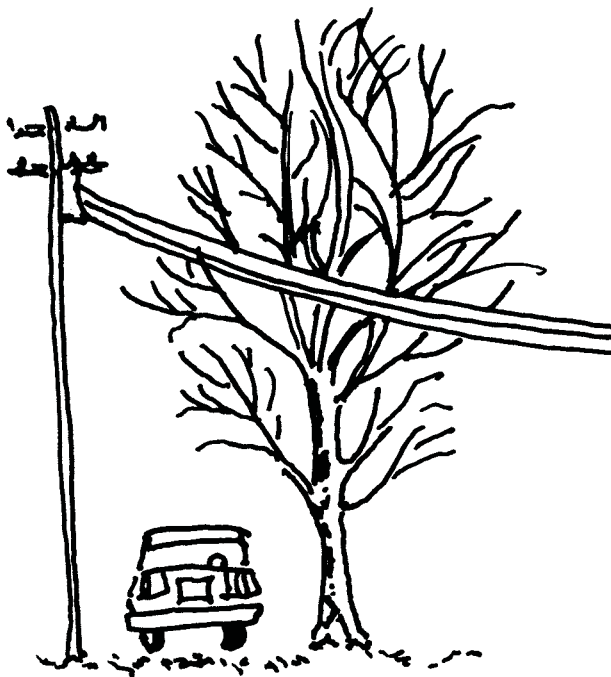
- Construction
- Soil compaction
- Lawn and garden equipment
- Lawn and garden chemicals
- Wounds to the trunk

Trees are often injured by earthmoving equipment and by changes in soil level. Roots can be injured when heavy equipment passes over them. Parking a truck under a tree can quickly compact the soil so that roots can't grow. Digging trenches can also injure enough roots to kill a tree. The addition of asphalt, concrete, bricks or more than a few inches of soil around trees will change the amount of water and oxygen available to the roots. Protect trees from construction by fencing off a large area around the tree, at least to the drip line before construction starts.

Lawnmowers, string trimmers and other garden equipment can severely injure trunks, branches and roots of trees. To prevent accidentally injuring young trees with lawnmowers, grass should be kept away from the tree trunks. Don't use chemicals to kill the grass. Mulch instead. Fertilizers and pesticides can either help or harm your trees. Beware of the idea that "if a little is good, a lot will be better." Avoid excessive use of commercial fertilizer-herbicide mixtures near trees, because toxic amounts of herbicides may be absorbed by tree roots. Recently transplanted trees are especially susceptible to herbicide injury.



Topping



Phone Lines

# DON'T PLANT THESE

## Potentially Undesirable Trees

- Boxelder — *Acer negundo* — weak wood, reproduces prolifically
- Silver Maple — *Acer saccharinum* — weak wood, prone toward splitting
- Tree of Heaven — *Ailanthus altissima* — coarse growth habit, sprouts up everywhere
- Mimosa — *Albizia julibrissin* — reproduces prolifically, disease-prone
- Hackberry — *Celtis occidentalis* — weak-wooded, messy berries
- Female Ginkgo — *Ginkgo biloba* — female tree has fruit with objectionable odor
- Honeylocust — *Gleditsia triacanthos* — has large thorns on trunk and branches
- Osage Orange — *Maclura pomifera* — large fruits can be a nuisance
- Flowering Crabapple — *Malus hybrids* — disease-prone clones only
- Red Mulberry — *Morus rubra* — produces fruit that stains
- Hybrid Poplar — *Populus hybrid* — has weak wood
- Bradford Pear — *Pyrus calleryana* 'Bradford' — prone to splitting as it gets older
- Siberian Elm — *Ulmus pumila* — constantly drops branches

## Invasive Exotics You May Want To Avoid

- Autumn Olive — *Elaeagnus umbellata*
- Bush Honeysuckle — *Lonicera spp.*
- Multiflora Rose — *Rosa multiflora*
- Privet — *Ligustrum spp.*
- Climbing Euonymus — *Euonymus fortunei*
- Japanese Honeysuckle — *Lonicera japonica*



Bush Honeysuckle

It is often smart to use native plants and avoid invasive exotics. Many exotics are harmless but some pose serious threats to biodiversity. Exotics that escape and naturalize change the composition of native plant communities and out-compete natives. Exotics have also been known to introduce diseases and insects that can decimate native plant populations. Some non-native plants are acceptable if kept away from natural settings or not allowed to produce seeds that can be spread. Natives, on the other hand, are adapted to our regional conditions, may require less maintenance and are cost-effective. They may also require fewer pesticides and fertilizers because of natural adaptations.





# Resources

There is plenty of information available to help you select the right tree for your purpose. Consider the following resources if you need more information about planting trees or shrubs.

- Tennessee One-Call System, Inc. - "Call Before You Dig", 1 (800) 351-1111, [www.tnonecall.com](http://www.tnonecall.com)
- Labeled trees with a printed guide are located at Vanderbilt University.
- Printed guides for the Centennial Park Trail are available at the Parthenon.
  
- Two good reference books that describe trees and shrubs are:

<i>Manual of Woody Landscape Plants</i>	<i>Trees For American Gardens</i>
Michael Dirr	Donald Wyman
Stipes Publishing Co.	Macmillan Publishers
10-12 Chester St.	866 Third Ave.
Champaign, IL 61820	New York, NY 10022
  
- Metro Tree Advisory website: [Trees.Nashville.gov](http://Trees.Nashville.gov)
- Metro Nashville Urban Forester, Codes Department, (615) 862-6488
- Metro Beautification & Environment Commission, (615) 862-8418
- Nashville Tree Foundation, 314 Page Rd., Nashville, TN 37205, (615) 292-5175, [nashvilletreefoundation.org](http://nashvilletreefoundation.org)
- Warner Park Nature Center, 7311 Hwy. 100, Nashville, TN 37221, (615) 352-6299
- Brentwood Parks and Recreation, (615) 371-2208
- Clarksville Urban Forester, (931) 645-7464, (931) 320-1693
- Cookeville Area Forester, (931) 528-6813
- Cookeville Utility Forester, (931) 520-5420
- Tennessee Urban Forestry Council, 6820 Cloudland Dr., Nashville, TN 37205, (615) 352-8985, [tufc.com](http://tufc.com)
- Tennessee Department of Agriculture/Forestry Division, Urban Forester, (615) 837-5520
- Davidson County Agricultural Extension Service, 800 2nd Ave. N., Nashville, TN 37201, (615) 862-5995
- The National Arbor Day Foundation, 100 Arbor Ave., Nebraska City, NE 68410, [www.arborday.org](http://www.arborday.org)
- International Society of Arboriculture, Southern Chapter, 213 Apollo Dr., Mount Airy, NC 27030, (336) 789-4747, [www.isasouthern.org](http://www.isasouthern.org)
- American Forests, P.O. Box 2000, Washington, DC 20013, [www.americanforests.org](http://www.americanforests.org)

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