

# Old Arboriculture Book Proves Some Things Never Change

By Robert Wallace

Most arborists I know have one serious vice: They're tree book junkies! I know I am.

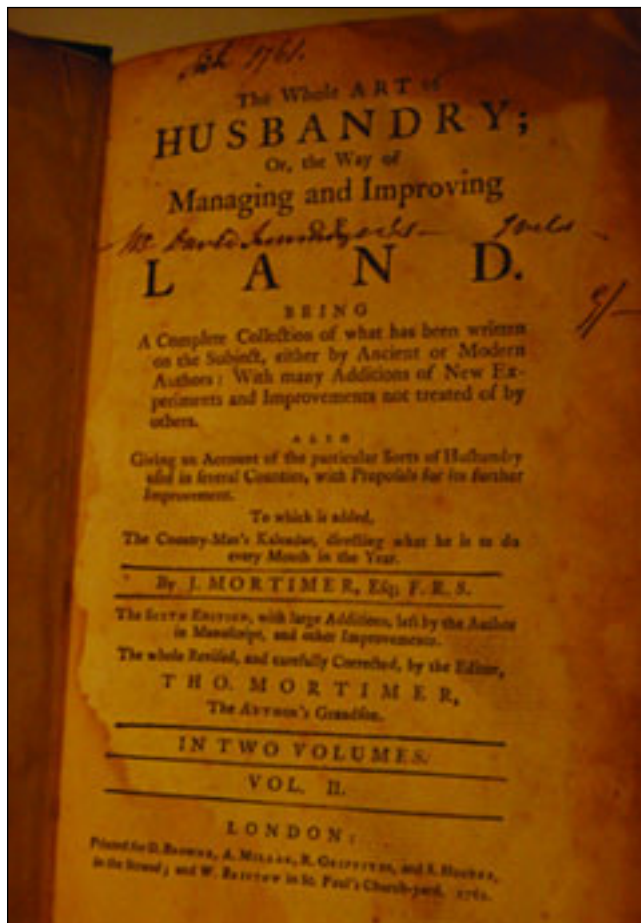
I'm a sucker for a good book on any facet of arboriculture. I expect loved ones and friends to buy me tree books for Christmas and birthdays or I'm secretly a little disappointed. That's my addiction. It's a monkey-on-my-back, my cross to bear, my dark little secret. I'm even envious of friends with larger libraries. It's a sickness! I know I need help or counseling maybe. Perhaps some of you reading this article can relate to my problem? My dad, a National Shade Tree Conference, Certified Tree Surgeon (1952), has always been a tree-book collector, too. I guess some things never change.

If you're a tree book junkie like me, just imagine owning a single, detailed book primarily about the care of trees written in the 1700s!

Where would you find such book and wouldn't it cost a fortune? Then really stretch out your fantasy to include that you were walking across a dirt lot in a run-down neighborhood counting trees for a report you would soon prepare for a developer when there, lying in the dirt, was that very book!

That's what happened to me on Monday morning, July 28, 2004. In fact, there was a pile of old books (over 300 in all) that had been dumped in a field rather than hauled to landfill (thank goodness for the illegal dumpers). I loaded them in my pickup and hauled them to my garage. Most were religious, many were educational (school texts) and some were nature-oriented. I stacked them away and slowly started investigating my find.

After about a month of having fun reading titles and publication dates, I found it!



This copy of Mortimer's *Husbandry*, published in 1761, was found in a trash heap in an empty lot in Simi Valley, California.

The leather cover was partially missing and the pages were a little wrinkled by moisture damage. The publication date was 1761. The title did not "grab" me at first: *Mortimer's Husbandry*. What was husbandry anyway? I had heard of animal husbandry, since several of those classes were offered at a local agricultural college where I received my horticultural degree (Pierce Junior College in Woodland Hills, Calif.).

The title page did not do much for me either: "The Whole Art of Husbandry: Managing and Improving of Land." But the next turn of a page to the "Table of Contents" really captured my attention and I've been focused on each new page ever since.

There were chapters covering transplanting, diseases, pruning, coppicing, felling, stump removal and how to measure trees. "Seasoning timber, preserving timber, grubbing of woods, and raising of fruit trees" were also covered among many more tree-related topics. The most notable feature of the book is its reference to numerous tree maintenance recommendations that we currently practice today. In fact, by the time I had read page two in chapter one, I knew that this book was going to be a spellbinder (for an arborist), but I had no idea that it was going to be cutting-edge education for 2007!

As I started through it, my thought was that this will be interesting and funny learning some of the really old fashioned, out-dated and ridiculous methods of tree care that were being espoused in those days when ignorance reigned, before Dr. Shigo and Tree Protection Ordinances saved the day for us.

Like most nature lovers, and having been raised in the tree business, I have a weakness for trees and a significant portion of the book is dedicated to the care and use of trees.

The inspiration for publishing this article came the very minute I first opened the book and saw the "Table of Contents" with page titles such as; "The Best Soil for Trees," "Transplanting of Trees," "Infirmities of Trees," etc. There is even a chapter on oak trees! As you read through the "Table of Contents," you realize that this book is a likely forerunner to the famed *Western Garden Book* that is so widely utilized by professionals and homeowners alike in the western states.

The book contained some exciting discoveries that prove that as long as there have been gardens, there have been individuals responsible for their care who

learned by experience how to properly care for plants and trees. Thomas Mortimer, his grandfather and others before them have thankfully recorded their findings in such books. Thomas Jefferson's library contained dozens of books; many (including *Mortimer's Husbandry*, Vol's. 1 & 2) written long before he was born. These included books on husbandry, gardening, agronomy, agriculture, etc. I'm sure that each one would include at least a few valuable tidbits of information that we could utilize today or that we have been utilizing for many years.

### Discoveries of past knowledge in *Mortimer's Husbandry*

1. *Tree Ordinances* – I had always assumed that ordinances to protect our trees grew out of the environmental movement of the 1960s and '70s. I was sure that they were a result of our enlightened age and our awareness of the need for good stewardship or tree preservation to save our planet. Apparently the modern environmental activists did not invent tree protection ordinances! Thomas Mortimer noted the following tree cutting regulations in his book:

▶ King Henry the VIII (1491-1547) ordered in Statute 35 that 12 "great oaks" were to be left on each acre where trees were felled on that site. The same number of elms, ash or beech were to be left for future lumber and could not be felled until they were at least 10 inches "square" at three feet above grade. Some trees were to be protected for seven years, etc.

▶ "Timber is taken much more care of in other countries than here (England), though we have the best harbours, the best conveniences for trade, and our shipping is our best security; for in Germany and France they are so careful of their timber, that they suffer none to be felled under eighty years growth; and when any one agrees to cut down any timber, they make a contract to leave at every thirty foot distance a good, fair, thriving Oak."

▶ "In the dutchy of Luxemburg\* no farmer is suffered to cut down a tree, for any use, till he has made it appear that he has planted another: and about Franckfort a young farmer must produce a certificate of his setting so many walnut-trees, before he can have leave to marry."

▶ "The king of Spain has near Bilboa\*\* very large woods, where he suffers no timber to be felled till an officer, (i.e., modern-day Consulting Arborist or Forester), has been there, and first marked what is likely to prove ship-timber."

2. *Root Collars* – We now know that it is critically important not to bury root collars<sup>1</sup>. Planting trees too deeply, either in the nursery or in the field, is probably the most common and potentially deadly landscap-

ing error. For most woody plants the root collar must be exposed (visible) and be kept as dry as possible. A buried root buttress may become subject to armillaria or other root collar maladies.

My dad taught me about this principle when I was a teenager and I experienced firsthand how critically important this practice is when I was performing disease control work in the 1980s. Of course there were other arborists in the 1960s and '70s

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The book includes subjects such as "The Best Soil for Trees," and discusses various methods of planting and "raising" trees, many of which are still used today.

or possibly as early as the '50s that had made the same discovery. Thomas Mortimer refers to this important land-

scape principle and he was borrowing from his grandfather who wrote the original *Mortimer's Husbandry* in 1707!

Mortimer wrote:

▶ When transplanting – "and be sure not to plant any trees deeper than they grow, before they were removed."

▶ Common Rules of Planting – "Observe to set your trees deeper in light ground than in strong. But shallowest in clay;"

▶ "... it being a very great error, in any soil, to plant trees deep, ..."

▶ "... dig away the earth till you come at the roots ("root collar inspection"), and see if they are spoiled with any rottenness (note: this was likely to have been phytophthora or armillaria), which may be occasioned by their being planted too deep."

3. *Transplanting Aspect* – In recent years many large trees are boxed and relocated with great success. One tree-transplanting practice that has helped to make this process successful is ensuring that the north side of the tree remains facing north

once it is boxed and that the tree continues to remain in that aspect after it has been installed. This important tree-transplanting practice will help reduce the likelihood of sunscald and borer damage that can result in the decline and/or death of the tree.

Mortimer stated:

▶ "If you take up a tree, mind how the roots grow, and dispose of them in the same order where you now place them, spreading of the roots carefully, observing to place the tree to the same aspect that it grew before." (Handwritten note of an early reader in the margin: "To place the same side of the tree in a similar direction, north or south, as where removed from.")

4. *Do Not Water the Trunks of Trees* – Watering the trunks of trees can be deadly. Of course this recent discovery is so new that it hasn't become established in the industry as of yet! But hopefully, the industry and the public will learn to avoid this practice. By the way, Mortimer warned against it 246 years ago:

▶ "by no means water at the stem, because it washes the mould from the

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roots, and lets the water come too crude to them, which often endangers their rotting”

5. *Plant the Right Tree in the Right Place* – I learned this “new” principle from an enlightened professor who repeated it over and over. In fact, this rule of planting had obviously been discussed and practiced by thoughtful arborists for hundreds of years!

Mortimer’s longer version of, “Plant the right tree in the right place”:

▶ “... I shall choose rather to refer the reader to his own observation, with only this caution to suit things to the circumstances of the place, the charge of making and maintaining of it, and the quantity of land designed for this purpose.”

6. *Don't Top Trees* – Thanks to a Davy Tree Company doctrine from the early '40s, Dr. Shigo and others, we now know not to top trees. But, apparently it looks like old Tom Mortimer also figured out that “topping” was not a desirable practice! It appears that he utilizes the word “lopping” for what we call “topping” and discouraged the practice:

▶ “Hollowness is contracted by the ignorant or careless lopping of trees, so as the wet is suffered to fall perpendicularly upon any part of it, especially the head: ...”

▶ “whereas when lopped they soon decay and perish; ...”

▶ “... but for those trees which you design for timber, be cautious of cutting off their heads, as I told before, especially those that have great piths, as the ash, wal-

nut, etc., and all soft woods, as the elm, poplar, etc. But if your trees grow too top heavy, you must abate the head to lighten them, which in many trees it is better to do by thinning of some of the boughs ...”

7. *Pruning* – When it comes to pruning trees, consumers should hire a person who is a member of the Tree Care Industry Associations or the International Society of Arboriculture (ISA). It would appear that experience and professionalism have been prized for hundreds of years.

According to Mortimer:

▶ “As to pruning of trees, it is a work that requires a great deal of skill and care, and for which general rules cannot well be given, because of the great variety which is met with in doing of it; ...”

8. *Painting cuts* – Thomas Mortimer wrote, “Never paint wounds or cuts”! Isn't that amazing?! (Just Kidding!). In fact, there are many references to wound treatments throughout the book. A good cavity-filler is described as, “good stiff loam, horse dung, and fine hay mixed

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## A Poem to Live By

One final gift that this book has provided for me is this poem, written to describe the sometimes difficult but necessary recommendation for tree removal:

*To fell these trees would be no loss at all,  
Whose age and sickness would your axe forestall;  
A youthful successor with much better grace,  
And plenty will supply the vacant place*

**Author Unknown**

I carry copies of this poem with me and give it to the saddened tree owner who has just been told his or her tree must come down. They always appreciate it and the poem seems to help ease the pain of losing an old tree "friend." It helps them to focus on a replacement tree (size, species, location, cost, etc.) and not so much on the tree they're going to lose.

### Conclusion

As you can see, some of the most important tree maintenance practices have been known for hundreds of years. The early, world-renowned gardens were installed by master gardeners who were well known and respected in their day, such as: Lancelot "Capability" Brown, an English garden designer and architect, or Augusta (the mother of King George III, who

together." Tar and goose dung were used for this purpose as well. The paint of choice however seemed to be pig dung mixed with clay. Whoa! I thought my years carrying around a small paint bucket with asphalt based tree seal was a messy process. In that era you could probably gauge how conscientious a tree man was by how bad he stank at the end of the day!

helped establish the Kew Gardens in England). Many of the ancient gardens still exist and have been thriving since they were installed primarily due to the fact that proper maintenance and installation techniques were utilized. These individuals installed plants on the principal of permanence. They did not plan or plant for immediate gratification. They intended to do it right and their reputations depended on the success of their gardens.

Thomas Mortimer even relied on the writings of Virgil, a Roman writer (A.D. 23-79). Virgil wrote his 37-volume, "Natural History," which has survived<sup>2</sup>. He also referred to Pliny for gardening information. Pliny was the greatest poet of ancient Rome (70-19 B.C.) In 29 B.C. he wrote "Georgics," four instructive poems about farming. The first deals with crops, the second with vines and olives, the third with cattle and horses, and the fourth with bees<sup>3</sup>.

After having the pleasure of studying Thomas Mortimer's book, I have come to realize again that some things, particularly in nature, never do change.

*Robert W. Wallace is a Registered Consulting Arborist in Simi Valley, California, and would welcome comment from fellow bookworms.*

### Sources

1 Jim Downer, "Planting Depth – A Common and Serious Cause of Tree Deaths," Landscape Notes, Vol. XVI: No.2, December 2001

2 Moses Hadas, "Pliny the Elder," The World Book Encyclopedia, 1988, XV, p. 575

3 Moses Hadas, "Pliny the Elder," The World Book Encyclopedia, 1988, XV, p. 575

\* dutchy = a region ruled by a duke or a dutchess. Luxemburg (founded in 963) is a small country bordered by Germany, Belgium and France. The Ardenne forest extends from Germany into Luxemburg. This is where a portion of the Battle of Bulge was fought in WWII. It is comprised of some of the largest stands of beech and oak forests in Europe.

\*\* Bilboa is a city found in the Calabrian Mountain Range near the northern coast of Spain. There are several pine species here including the cluster pine (*Pinus pinaster*) and the Calabrian pine (*Pinus brutia*). ⤴

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