# THE TREE DOCTOR; A BOOK ON THREE CULTURE

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The Tree Doctor; A Book on Three Culture by John Davey

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## **JOHN DAYEY**

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# THE TREE DOCTOR

#### A

### BOOK ON TREE CULTURE

· Illustrated Profusely with Photographs.

BY

JOHN DAVEY.

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#### INTRODUCTION.

THE Americans are a people who love the beautiful, and yet, strange to say, they have destroyed the trees, which are among the grandest objects of all nature. This, however, has not been intentionally done. The pioneers made war on trees, slaughtered them, burnt them up and got rid of them the easiest and quickest way they could devise. To a certain extent, this was excusable, as the land was needed for other purposes. Thousands now regret that they did not preserve some of the giants of the native forests. The majestic elm in this photograph is one of them. What would you give to have it in your yard?



Our people now deeply deplore the mistakes that have been made, and are spending millions of dollars annually, in the hope of establishing sufficient shade and fruit trees for the requirements of man and beast. In spite of all their noble efforts they are meeting defeat on every hand. The whole trouble is traceable to two oversights. It was my intention, five years ago, to point out these facts and the accompanying evils in a lecture, by the aid of the stereopticon; but I saw that a thousand persons in that work could not reach the masses in ten years. Then I thought I would write for some papers, but

readily discovered that but comparatively few people could be reached, and such reading is not easily preserved. Finally, I determined to put the camera to work. Two "authorities" might disagree on a certain point, and the public say, "They can't both be right; may be both are wrong." When, however, the camera gives you a picture, that is something from which you cannot get away. I had first intended to use fifty photographs, then made it one hundred. Again, finding there was a call for knowledge on the landscape and floral arts, I have used 175 photographs, and could use more to advantage, but cannot for the money. I desire to keep the book at \$1.00, so that it will be within the reach of all.

This is an age in which we do things by lightning. People want facts, but they must have them in a condensed form. I cover, in THE TREE DOCTOR, practically, all that has ever been written on tree culture. We herein present to the public the best photoengravings, the best paper, with a strong cover, put up by the best of workmen and, above all, knowledge that it has taken the author more than thirty-five years to acquire. You pay a dollar for a tree, shrub or plant, then lose it. You try again and lose it, because you know not how to proceed. I have known people to order over twenty dollars' worth at once, and have it nearly all die. THE TREE DOCTOR will prevent all this waste of money and inspire its readers with the ambition to add new beauties around their homes. All scientific terms are avoided. The language used is chosen so that it will convey a knowledge of the facts to the ablest scholars of the land, or to the merchant, farmer, mechanic, laborer, man or woman, boy or girl.

The time has come when tree planting and tree culture must be studied in connection with the physiology of plant life. If this is not done, a calamity will befall the inhabitants of these fruitful regions to an extent that no human mind can conceive.

There are no people on this earth who are blessed with such a scope of territory, range of climate, variety of soil and general adaptation to fruit-growing as those of North America. But we are confronted with the appalling fact that, unless something is done to arrest the diseases and check the ravages of the untold billions of insect pests which prey upon our apple trees, inside of ten years it will be next thing to impossible to grow even defective apples! For the last twenty years there has been a gradual decrease in the quality of this most desirable and staple fruit. Similar difficulties are being encountered in the attempts to grow the peach, pear, plum, and other fruits; and shade trees are going to pieces. The whole country is getting alarmed over the disasters that await us from the destruction of our fruit crops, and many of our ablest writers have done nobly in their efforts to stay this on-coming tide of evil. Though much good has been done, for some reason no one has "laid the ax at the root" of the trouble. Something has been said about every evil from which the tree suffers except two, and to these two all the other evils are traceable.

The author of THE TREE DOCTOR has had the care of trees and plants for more than thirty-five years and is an ardent lover of nature. The ghastly wounds of his friends, the trees, and their various suffering (if you will allow the expression) cry aloud and pierce his inmost soul and bid him arise and plead their cause. The author is not so conceited to suppose he "knows it all." Whatever knowledge he possesses he has learned from others, or gained it from observation. If nature has endowed him with the faculty of observing and the ability to trace effects back to their causes, and thus enable him to find the lwo real causes of the present sickness and premature death of trees, then, as a member of society, he owes that knowledge to the world at large, and particularly to the United States of America, his adopted and beloved "home" to which, with pleasure, he reverently dedicates this work.

THE AUTHOR.



Photo 1.

### DEPARTMENT I. Tree Surgery.

Photo I presents to you three Fallawalder apples. The middle one, 4 inches in diameter, is from a perfect tree, or as near perfect as we could find. Its fruit was all similar to the specimen herein shown. The other two are the same variety. The one at the left presents the "nose," the one to the right the "stem" end. Probably six bushels of this defective fruit could have been picked up under the tree, at the same time there



Photo 2.



Photo 3.

was not one sound apple on it. Why? Look at the slaughtered trunk and branches below, in photo 2. This tree is rotten clear through its whole body, and the microscope reveals the decay in the twigs, and in the "water-sprouts" it is visible to the naked eye.

The failure to obtain sound apples, the one most desirable and staple of fruits, is producing grave apprehensions throughout the United States. Apples, even from some of the western states, where there are but comparatively few insects, are becoming defective, and the tendency is to blame it all to the rapid invasion of insect pests. Scarcely anyone seems to think that it is we unwise creatures who have created the conditions for this alarming increase of our enemies, the innumerable billions of insects. In the front of your house is a tree whose branches intercept your view. This you will not tolerate. You get the ax and saw and call the hired man: "Ho! James; come here. I want you to trim that tree." James goes to work at it, following your directions, or using his best judgment. Sir, or madam, you have spent your money freely to procure your fruit and shade trees, and now, after kind nature has lent her assistance to give you favorable results, you unintentionally commit one of the gravest of blunders. If your child's arm or leg has to be amputated, whom do you call to perform the operation?

Do you send for the butcher, because he can do a quick and cheap job? No! The time it takes and what it costs are scarcely thought of. There is a life at stake, and the most skilful surgeon you can procure is the one you will endeavor to get. Did you ever stop to think, for a moment, that the tree has life just as really as you have? You know



Photo 4.

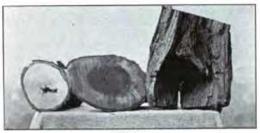


Photo 5.



Photo 6.

this to be a fact, but the question I present is, have you thought over it? The human being and the tree both have to feed to live; both have circulation, one a red fluid which we call "blood"; the other a transparent fluid which we call "sap." Both have their seasons of activity and rest. The human being has the period of infancy, childhood, maturity and old age. The trees would have these stages, but we kill them (or many of them) before they are "of age." It matters not if we do this unwittingly; natural "law excuses no one's ignorance" any more than civil law does.

Imagine that in some city there is a concern established, called "The Mutilating, Chopping and Destroying Bureau," and the only recommendation they present is "speed." William Brown, a mail-carrier, comes in to have a foot off. He places his limb on the block; one vigorous "whack" and the job is done. "Take your mail-pouch, William; hustle off and make your deliveries. You will bleed some, and find it a little inconvenient to get used to the stub, but all will be O. K. if you won't meddle with the wound!" Here comes John Adams, a penman; his right hand bothers him a little. "Lay that arm down here, John," "Cawhack!" The job is done! "Move on! You need pay no attention to the streaming veins and arteries; put on a handful of mud now and then, and if the flies 'blow' in the wound, don't disturb the maggots!"

Such proceedings would not be any more outrageous against life than what we have been doing with trees. Talking with a practical and well-read man awhile ago, he said that no one should be allowed to prune a tree, unless he held a certificate showing that he was qualified. That would be preferable to the present destruction. But the better way is to educate all people. This is the purpose of THE TREE DOCTOR.

The first thing to be considered before you sever a limb is, "Where shall I cut?" In photo 4 you will see three specimens. Study the one to the left. You will notice a "stub" left on the branch about as you will commonly see them after the tree has been "trimmed" by the average person, who has not made a study of this very important subject. This stub rots back to a certain point called the "shoulder."

The middle specimen, in that photo, shows you a case a year after the cut was made. The bark is decayed and peeled off, and to the right is an example of the invariable outcome. It takes six or seven years for this stub to rot and drop out. Nature struggles in every way to heal over the wound, but cannot do it while the obstacle is in the way. The reason why this stub dies is because there are no latent buds remaining to be excited and started into growth, thereby preserving a circulation, as shown in photo 6. In photo 5 the same specimens are turned so that you can see how the wood is affected.

Looking back at the middle specimen of photo 4, you will see that the stub has dried, because it has been exposed to rain, frost, snow, etc. The result is, decay has set in and has run into the trunk of the tree, as you can see by looking at the same piece turned over in photo 5. In this (photo 5), if you examine the right-hand specimen, you will see that by the time the stub decays and drops out, the rot has gone down into the trunk and up into the branches. This answers to blood poisoning in the human body. This dead tissue, as before stated, is carried to the farthermost twigs, causing "specks," " dry rot," etc., in the fruit. If you turn back to photo 3, you will see what destructive work has been perpetrated on an otherwise fine specimen of Summer Rambo apple tree. Directly in front of you is a wound where a stub was left till it rotted out. The birds have dug clear into the heart of the tree. To the right is an old sore, larger still. A year ago, in order to plow in a little closer, the farmer took his ax and slashed off the huge limb at the left, leaving, as you can see, a stub over a foot long. In order to have removed this limb a sharp saw, with plenty of "set," should have been used, and the cut should have been made close to the larger, upright branch, where the line is placed. (For cutting large branches, see elsewhere.)

You will hear all kinds of "hobbies" as to how a tree should be "pruned"; but, the fact is, when a branch has to come off entire, there is but one correct place to make the cut. Turn again to photo 4. In the left-hand specimen the saw has been run in and a piece of paper is placed there. About 2 inches to the right of the paper is a prominence, which is what we call the "shoulder." At this place nature always makes a vigorous effort to heal. This is a very strong point that connects the limb with the trunk of the tree. It answers to the "socket" of the arm. If you look at the middle subject, in that photo, you will see what an effort nature made in one year to heal at this shoulder, but could not, because the dry stub was in the way. Look still farther to the right-hand one, and see what a desperate attempt was made to close in after the decaying piece that stood in the way and conveyed the air, water and frost down the wood fibre, where it wrought such destructive work! If you turn to photo 17, you will see these "shoulders" very plain in that maple. The maple shows this prominence much more distinctly than some other species. It is also very plain in photo 16, by the side of which the highschool girl is standing. Look at the hole that is rotted into this fine cut of timber! See the decaying stub, also, above. If you will examine the trees that go down in windstorms, you will find nearly all are defective. (Those destroyed by cyclones are sometimes exceptions.)

I have told you where to cut, and it may be well to add a few words how to perform the act. There is a strong tendency for some of the wood and bark to split down. Sometimes, if care is not taken, the bark will split down several feet. To avoid this, it