



Month by Month With the Trees

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A CONTINUOUS and conscientious following of the best rules and practices in the feeding, pruning and spraying of trees is very helpful in eliminating the need for the treatment of cavities. However, trees are subject to accidents. Many times during grading operations the bark of the neighboring trees is bruised and torn. Lightning sometimes rips off large areas of bark. Fire, the weather, certain insect pests and often times careless individuals are responsible for wounds in trees which if not treated cannot heal before infection of the wood takes place and decay has progressed to such an extent that the physical strength of the trees is materially depreciated. With these facts in mind it is easy to realize that the treatment of cavities in the care of trees is essential.

When cavities are treated several different purposes are expected to be realized. First, it is necessary that all diseased wood be removed. In other words the infection has to be eradicated from the trunk or branch of the tree and unless the diseased wood is eradicated failure is sure. Next after the disease is eradicated it is necessary to protect the wound from future infection. Of course, it is obvious that the diseased tree is weaker physically than is a sound tree so that the third purpose sought is the restoration of as much physical strength as possible to the treated tree. The fourth result desired is the ultimate complete and perfect healing of the wound so that there is no possible chance of future trouble at the same place.

You Must Know What Causes Decay

In seeking to accomplish the first purpose of treating cavities, it is not particularly important to know the cause of the wound in the tree. However, it is very essential that one knows the cause of the decay. There are

some wood destroying fungi such as the so called mushroom root rot, caused by the fungus (*Armillaria mellea*) which very rapidly and completely permeates the roots and base of an infected tree so that unless the tree is treated in the early stages of the disease, it is impossible to eradicate the diseased wood and of course that means failure of the treatment. The white heart rot of trees caused by the fungus (*Fomes igniarius*), the brown checked wood rot, caused by the fungus (*Polyporus sulphureus*), the white piped butt rot caused by the fungus (*Polyporus pilotae*) which is confined almost

entirely to oaks and chestnuts, are in about the same class as is *Armillaria mellea*. It is equally true that most all the other causative organisms work slowly and that little fear need be had of success in eradicating them from the tissues of the tree. With this information it is quite apparent that much time, energy and money can be expended in trying to do the impossible when the operator does not have the necessary information concerning the disease which is affecting the tree.

Some Trees Worth Treating, Others Are Not

Not only is it necessary to have knowledge of the troubles, but it is equally necessary to have a knowledge of the tree itself together with a knowledge of the insect pests which attack that tree. As an example, one can cite the case of cherry trees. Sometimes specimen cherry trees are so located that they are of great value, but when one realizes that it is next to impossible to get a cherry tree to respond to the treating of diseased areas in its trunk and branches, one can appreciate the fact that it is more economical and satisfactory to allow such a tree to stand as long as it will and then replace the tree with some other more desirable variety. Another example, is the

Author is an Expert

Almost every greenkeeper has trees to take care of and loses a certain number every year. That's why we have enlisted the aid of Mr. Scherer, a nationally noted tree doctor to tell us what happens to the trees through all seasons of the year. It's a precious work, saving trees, and we believe the greenkeepers of America will appreciate Mr. Scherer's contribution to our worthy cause.—EDITOR'S NOTE.

white birch tree which is being attacked throughout the country by an insect pest which cannot be controlled. This insect is killing the birch trees very, very rapidly and consequently it would be poor judgment to try to save the birch trees from the attacks of some wood destroying organism when you can be reasonably sure that within a few years at the most it will pass on because the attacks of an insect which up to the present time is beyond any control measures which can be followed.

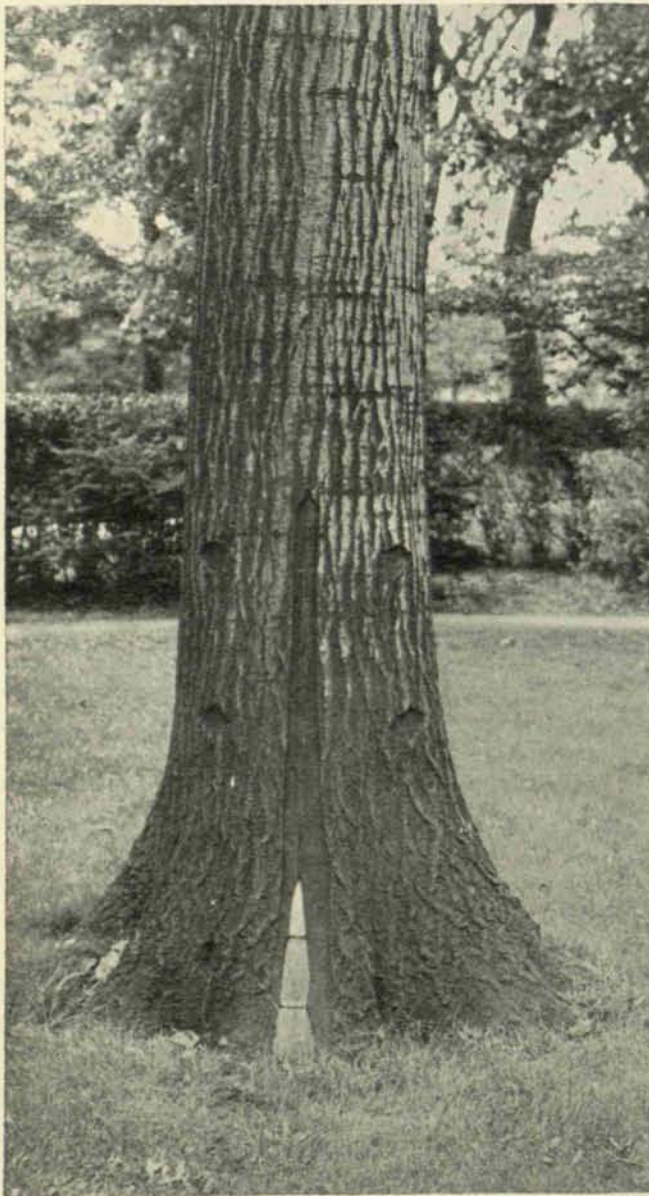
Tree Surgery Compared to Dentistry

Still other trees seldom merit the treatment of diseased areas because for various reasons the wood decays

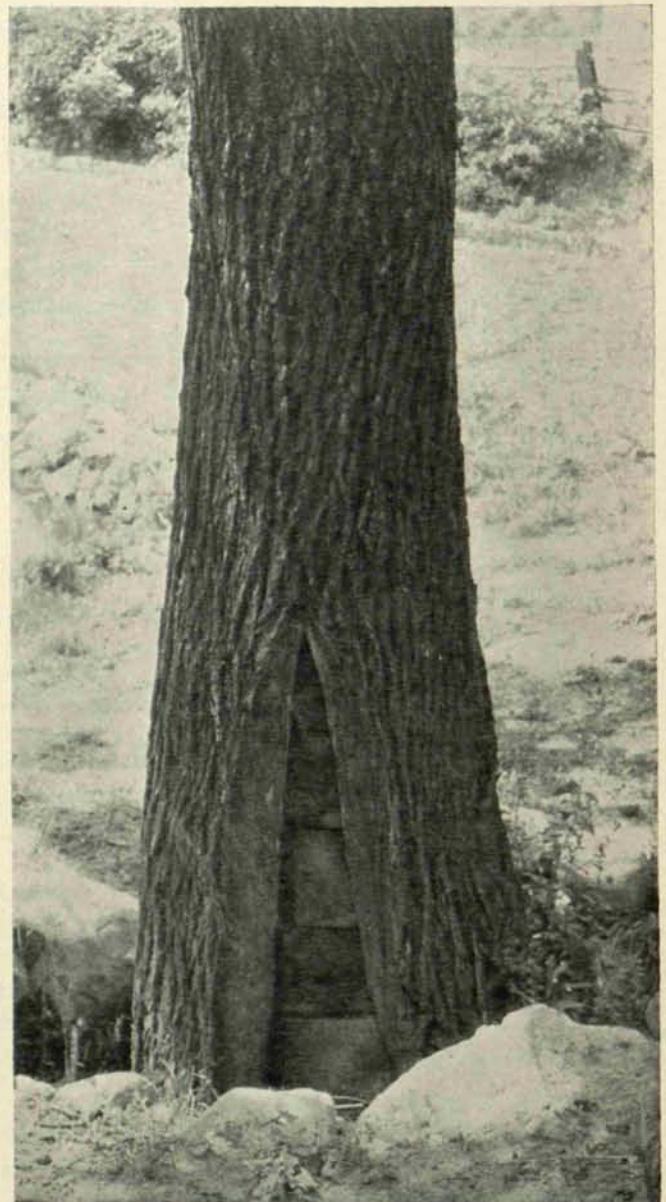
very rapidly and usually the tree is one which grows quite rapidly and a new and better tree can be supplied at less expense than would be needed to care for the tree already in place. This is particularly true of many of the poplar trees. Poplars are not particularly desirable at best and it has to be a valuable poplar tree indeed that merits the necessary expense to treat diseased areas in its trunk.

When the infection has all been removed from the wound, it is next necessary to protect that wound from future infection. The wound must be sterilized in much the same way as a dentist or a physician sterilizes the wound in a tooth or a break in the protective skin cover-

Examples of Expert Tree Surgery



Perfect healing over cement filling in oak tree on J. R. Nutt estate, Cleveland



New bark growing over cement in severe wound in elm tree, on Myron Wick estate, Chagrin Falls, Ohio

ing of your body. Immediately following the sterilizing process, it is necessary to cover the wound with some dressing which is permanent and after the dressing is applied it is necessary to fill the cavity with some permanent substantial weather and disease resisting material. Up to the present time no substance better than cement has been found for this purpose. Cement is cheap, permanent, easily obtained and easily applied. At the same time it is a perfect protection against outside agencies getting into the wound through the protective covering of the bark.

Proper Bracing Plays Important Part

Before filling is put in place, it is often times necessary to brace the tree to restore as much as possible its original strength. One has to be well versed in the mechanical structure of the tree in order to place the braces most advantageously. A brace placed in the wrong position is often worse than no brace at all. Whereas a brace placed properly is almost always one of the many division points between failure and success. Of course the filling itself adds considerable strength to the tree in that it prevents the sides of the cavity crushing together under the terrific strains to which trees are subjected.

Many Factors Control Success

Even if the first three purposes are fully realized and the last one is a failure, the whole operation is a failure. In other words, the wound must of necessity heal to have the operation a success, and there are certainly many factors which have a bearing upon the successful healing of a treated cavity. It is quite apparent that a tree must be healthy and vigorously growing for the wound to heal. It would seem a comparatively easy matter to decide whether a tree is growing vigorously.

Many of us from casual observation decide that a tree is growing rather vigorously, but when we check up on the details which prove our first opinion right or wrong, we find many times that our opinion has been wrong. It is only by a careful examination of the twigs and fissures in the bark that we can determine the vigor and growth of a tree and even after the examination a novice has a rather difficult time interpreting the signs which he may find.

When the wound is made it is necessary to make the angles in the cut at both the top and bottom at a certain sharpness. Experience has proved that an angle greater than (35°) thirty-five degrees is an invitation to failure. One must also cut parallel to the downward flow of sap in order to insure healing. Experience has proved that any irregularity in the side of the wound defeats the very purposes which we originally sought to obtain. In putting the filling in place certain definite rules and practices must be followed or failure rather than success is assured.

After having followed this article through, it should be apparent that the successful treating of cavities in trees require not only proper training in diagnosing the trouble, determining the tree and its general condition, but also demands proper training in mechanical skill or technique to put into operation the principles and practices of the care of trees definitely shown to be necessary in a particular case under consideration. The operator must be constantly on the alert to assure himself that none of the many essential details are slighted. There are few things more discouraging in the care of trees than the expenditure of considerable time and money trying to treat the cavities in some worth while tree, only to find a year or so later that the energy and money has all been wasted and the tree is probably in worse condition than it was when the operation started.

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