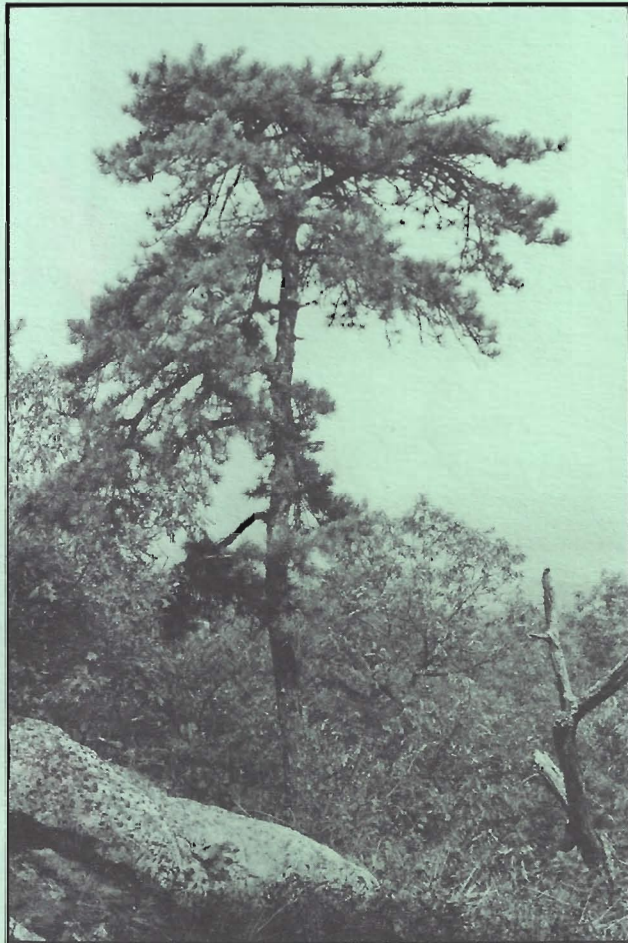


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# The Importance Of Trees



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# The Importance Of Trees

By Keith Smiley

Sequel to THE IMPORTANCE OF WALKING  
By the same author

This booklet focuses on the many faceted and frequently overlooked varieties of indebtedness to our friends, the Trees. It is not a field guide or a "how to" book. The booklet on THE IMPORTANCE OF WALKING treats the need of nurturing the "sixth sense." There (page I6) we read regarding this sensitivity:

"It allows all the ingredients of a situation to penetrate our very being. It hesitates to use labels like 'useful' or 'not useful.'"

This booklet tries to nurture a total awareness and appreciation of trees.

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## CONTENTS

Introduction	1
Foreward	3
Tree Tales	4
Walking Around the Year with the Trees	7
All Kinds of Places	11
All Kinds of Functions	13
All Kinds of Trees	15
Human Interventions	25
Commentaries on Treces	30
Grace Notes	38
More Information About Trees	40

## FOREWARD



**All Kinds of Trees**

“And on the banks, on both sides of the river, there will grow all kinds of trees for food. Their leaves will not wither nor their fruit fail, but they will bear fresh fruit every month, because the water for them flows from the sanctuary. Their fruit will be for food and their leaves for healing.”

From The Book of Ezekiel, Chapter 47, verse 12, RSV.

### **The Right to Life Itself**

“Both aspects of man’s environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights—even the right to life itself.”

Excerpt from Article I of the Declaration of the United Nations Conference on the Human Environment, Stockholm, Sweden, June 1972.

As the crickets’ soft autumn hum  
is to us,  
so are we, to the trees  
as are they  
to the rocks and the hills.

By Gary Snyder,  
from AXE HANDLES.

## TREE TALES

### The Odyssey of the American Chestnut

Before the early years of the twentieth century, the chestnut was one of the great trees of the forests in this section of the Northeast. Even as late as the World War I years, children could pick up the soft-shelled nuts which lay on the ground under the "spreading chestnut." Those nuts had a very special flavor. All wood-workers knew that these straight-growing trees were the best to use for rustic structures of all kinds. Longer-lasting than cedar and more workable than locust, the craftsmen of the Shawangunks thought that these noble trees would meet their needs forever.

Then a new chapter began among the chestnut trees of America. Swelling of the bark and cracks appeared on the lower portion of the trunk. A fungus gradually cut off circulation of nutrients from the roots. By the 1920's, the skeletons of these great trees were prominent along the slopes of the Shawangunk mountains. But their root systems still persist. To this day new young trees keep thrusting out into the forest ecosystem, as if to remind the oaks and the maples that "we chestnut people don't give up easily." The young trees sometimes grow large and produce flowers and a few nuts before succumbing to the blight.

One can read elsewhere about continuing efforts to develop more resistant strains. The message of importance for readers of this "Tree Tale" is that THE ODYSSEY IS NOT YET ENDED. These years of hardship may set the stage for a new era of involvement in the forest ecosystem.

### The Pitch Pine Parable

The Creator of the Trees asked two questions of the multitudes of tree-loving people:

What is it that thrives on adversity,  
but cannot stand competition?

What is it that says to itself continuously:  
"I must keep on reaching for the light  
and then I shall thrive and multiply."

The people said: "Please, give us the answer."

And the Creator spoke in a loud voice,  
which echoed from crag to crag:

"The Pitch Pine which grows in the rocks  
of the Shawangunks!"

## TREE TALES

### Prayer for Trees

To love trees is to understand life.  
They emerged from below the ground to  
gaze at the sun and the stars,  
and opened their arms to protect the birds.  
Taking pity on man, they give him  
all they have, even their shade.  
The trees are all serenity and  
are impregnated with the harmony of the Universe.

So wise are the trees that they give  
silent testimony of their humility;  
so charitable that they purify the  
atmosphere and men's souls; so pure  
that with every hand they implore  
Heaven for the well-being of all.

Day and night the trees labour,  
for they are both workmen and artists,  
creators of beauty; they move forever upwards.  
They are out in prayer, ascending to Heaven.  
To love trees is to understand life.

From THE FALLOW  
LAND, by Virgil.

### The Message of The Trees

Listen, listen, listen. I am the voice of the Trees. We are a special part of the earth, and you are deeply connected to us. Humans have been too little aware of us. As we have blocked you, your building, your farming, you should have honoured our contribution, seen how we hold the earth in place, provide a home for a rich multitude of earth's creatures and purify and balance the air. Yet you have massacred us, cut and burned and torn up our roots; we who are slow and gentle creatures, whose power lies in our steady strength and rich inter-connections. Learn from us, recognize us, know that our form of power can be yours also. Would you do more than that, oh humans?

Excerpt from a letter by Margaret Heather Dixon to THE CANADIAN FRIEND, a bimonthly publication, Vol. 84, No. 1, January-February 1988.

## TREE TALES

### A Conversation with James Fenimore Cooper

The author of this booklet had a dream:

Author: "Who's that knocking at my door in the middle of the night?"

Cooper: "It's Fenimore Cooper. Let me in. I want to speak with you."

Author: "Good evening, Fenimore. What brings you back to visit on this plundered planet? I should think you would rather remember it as it was when you were exploring the woodland with Deerslayer."

Cooper: "Word has reached me that you are writing about trees. I come to you because there is something I must tell you. It is something you need to know about what I expressed in my writing. Otherwise your message will not be complete."

Author: "By all means, Fenimore, have a cup of tea with me and share your experiences."

Cooper: "You are very kind to give me this opportunity. I will come straight on to the point. In my youth I had developed great affection for the trees of the forests. When I became known as an author, I deliberately assumed the role of 'pathfinder.' "

Author: "Do I hear you saying that in creating The Pathfinder you took upon yourself the prophet's calling? Prophets open minds to discover new opportunities. In what way did you do that?"

Cooper: "Ah yes, my friend, just as art often has a prophetic element, so the fiction of the English language has led people to the discovery of new truths. Examine the writings of our cultural heritage. Until my day, forests were almost always described as threatening, foreboding places, in which menace and evil lay."

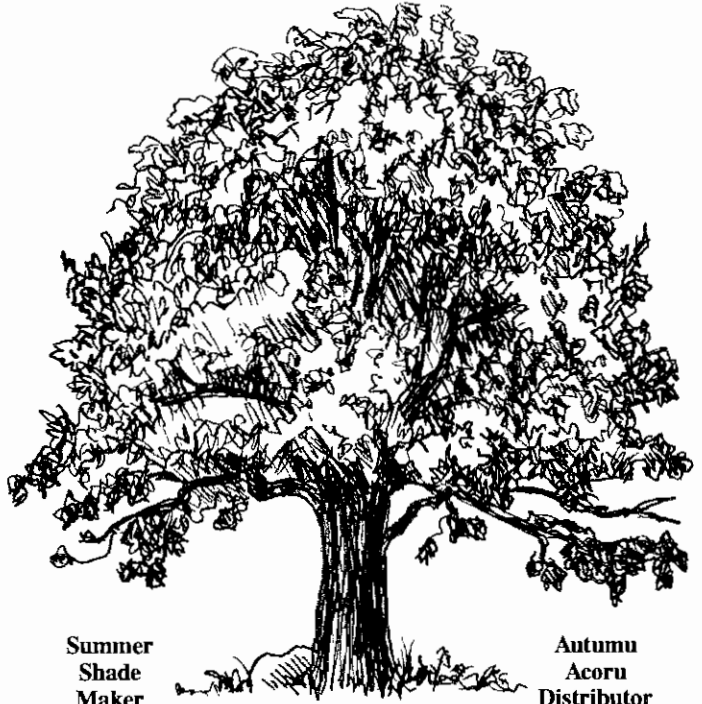
Author: "I congratulate you on your major role in turning an obstacle into an opportunity to partake of the beauty and inspiration and the purifying spiritual influence of the forests."

Cooper: "May you be well rewarded, my friend, for your ongoing effort to enlarge that vision."

## WALKING AROUND THE YEAR WITH THE TREES

The cycle of the seasons varies, as it does with all living things, according to the amount of light and darkness, the temperature, the rainfall, the condition of the earth, and many other factors.

This writing is not a scientific treatise and will not deal with all these factors. It will illustrate the importance of trees in the total life philosophy of people. It deals with a sequence of seasons in the Shawangunk Mountains, as observed at Mohonk. May each reader translate the insights into his or her own region.



Summer  
Shade  
Maker

Autumn  
Acorn  
Distributor

White Oak

## WALKING AROUND THE YEAR

### Tree Cycles of the Shawangunks

Let us move with the deciduous trees as they follow the rhythms of light and darkness through the year.

"At the autumnal equinox," says the maple tree, "I am already getting ready for winter. If you think that the seeds I've dropped that do not sprout and my fallen leaves are wasted, lost and gone, you are wrong. Those seeds form the winter food supply for all manner of winged and four-legged creatures. Those leaves are not dead; they are lively agents through the winter solstice and beyond. They are insulators for the earth and its plants and animals, as they gradually add to the supply of organic matter and enrich the earth in cooperation with the earthworms that 'degrade' them."

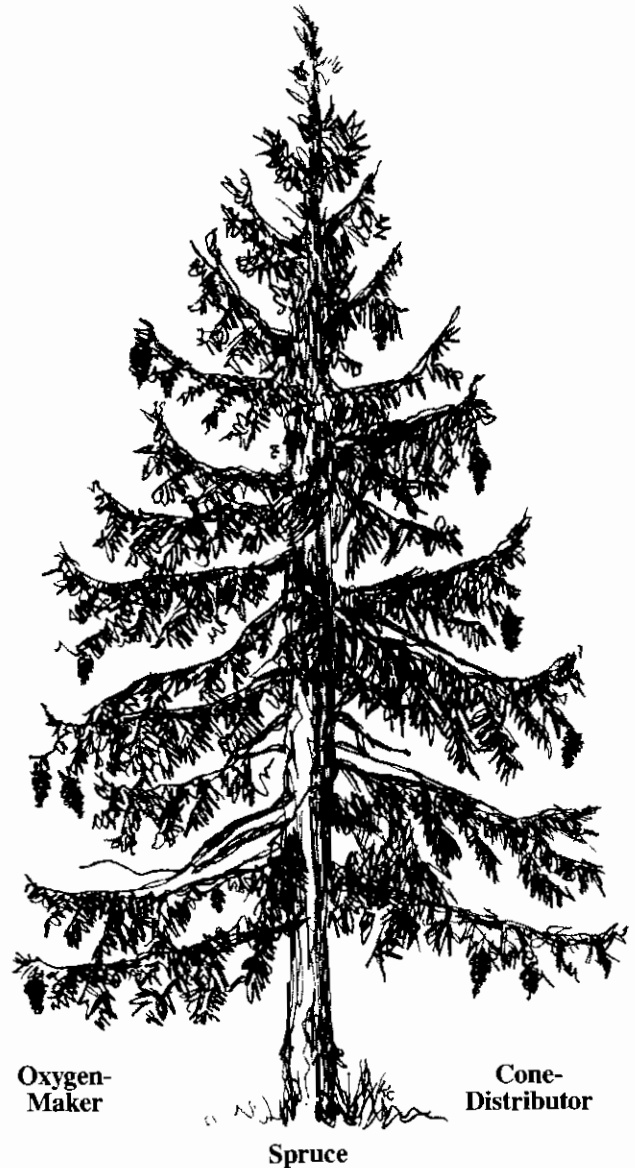
"At the arrival of the shortest daylight and beyond through the winter months," say the pines and hemlocks, "we have a special role to play besides providing protection from the elements for the winter birds. We know that some birds fly away and animals of certain kinds are able to slow their metabolism and decrease their need of life-giving oxygen and food. Yet others keep active, along with the human species and their vehicles. Therefore we evergreen trees are called upon to take over the job of converting carbon dioxide into oxygen so that others may live. We have a system of dropping a few needles at a time so we can carry on while our deciduous cousins are resting."

"There are very few days when we are entirely dormant," says the maple. "During the late summer, new buds are forming. In the winter, these embryonic leaf forms await the coming of the first warm days of late winter, days when we are already sending sap up through the under-the-bark pipelines. This supply system is followed quickly by the active resurrection of life. We don't pay attention to the fluctuating dates of Easter; we follow the lengthening daylight and the increasing warmth of the sun. And we become the great pastel painters, using the miniature tree flowers and opening leaves. Our canvas is the forest."

"Then we anticipate the solstice, and we paint all the leaves green so that we are ready for the time of FULL PRODUCTION. We go in for seeds with wings so the wind can carry them. But every tree species has its own combination of roles."

"With the coming of autumn and the shortening of the daylight hours, we prepare for our annual autumn ritual. We reveal our coats of many colors. It overlaps with preparations for winter. It is a grace note over and above our summer's long hours of production. Many of our friends among the trees add other hues to our yellows and reds. It is a free offering to all life, signifying an ending AND A NEW BEGINNING."

## WALKING AROUND THE YEAR



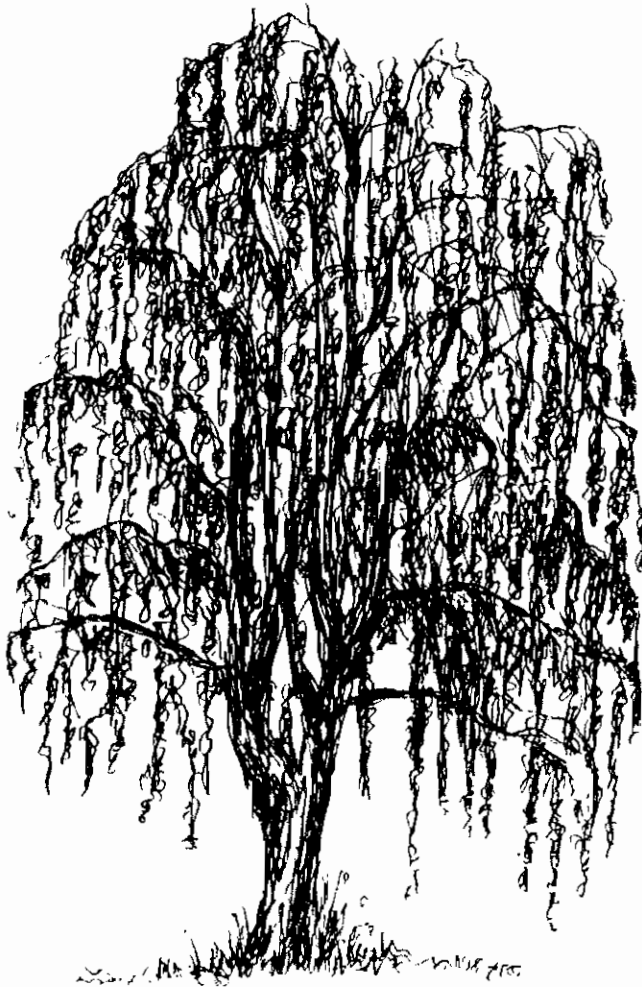
Oxygen-  
Maker

Cone-  
Distributor

Spruce

**WALKING AROUND THE YEAR  
WITH THE TREES**

**ALL KINDS OF PLACES**



**Early-  
Spring  
Color-  
Exhibitor**

**Weeping Willow**

**Stream-  
Bank  
Erosion-  
Controller**

Whether located in the rain forest or at the edge of the arctic tundra, whether at sea level or in the high mountains, trees of some kind have managed to adjust to stress or to abundance, and settle in. Let us wander around and up and down planet earth and take note of some random selections of adaptability. The importance of these pioneering site selections will be emphasized when we consider the multiple functions of trees. They have significant but often unrecognized contributions to the well-being of all life on planet earth.

- On high mountains or in the arctic, one observes windswept areas where there are natural "fox holes" sheltering dwarf trees which help other plants to gain a root-hold.

- In Costa Rica on the slopes of still active volcano Poas, trees are establishing themselves in lava deposits after only a few years of cooling.

- In the Outback of Australia, trees with foliage having reduced exposure to evaporation manage to survive the hot dry winds.

- In the swamps along the Pocomoke River on the Maryland Peninsula, and elsewhere in the Southern states, the rugged hard-wood cypress grow with their "feet in water," a condition that would kill many other varieties of trees.

- In the Sahara of North Africa and other places where the water table is prevailingly low, some trees have a long taproot which reaches the water and provides stability when winds are high. Try transplanting such a tree without the taproot, keeping only surface roots, and see what happens when a high wind blows!



**Tree Roots in Search of Water**

## ALL KINDS OF PLACES



**Tree Roots Breaking Rock**

For the interest and special observation of the reader, we are calling attention to a few special places in the Shawangunk Mountains.

At the top of the stone chimney which rises above the Parlor Wing of the Mohonk House, there is a tree miracle. With its roots in the mortar between the stones, a black birch tree has lived but has gained little in size, for many years. The ability of the pitch pines to "grow out of the rocks" has already been referred to in the parable. We see this phenomenon in large scale when we visit Sam's Point, where a large area of thin soil is covered with dwarf pines and huckleberries.

The chestnut oaks have a limited range and are a "special place" tree. They prefer the hard rock conglomerate layer of the Shawangunks and seem to get along without the deep root systems of the white oaks whose straight trunks and majestic size are found in the pockets of deeper soil and on the lower slopes. Such hardy pioneers as the chestnut oak are the benefactors of a group which may be called "trees that never grow up." Examples are the mountain laurel, the shadbush and the scrub oak. They are important links in the chain of successive soil building that followed the last glacial period. This process, taking thousands of years, is recapitulated in an observer's digest form in many places around Mohonk where an area of bare rock is still showing. Though the succession starts with lichens and mosses and ferns, the trees are important agents at a later stage. As trees mature and fall to the ground, they serve as host logs, doing their part in producing rich earth, upon which all life depends for food and shelter.

## ALL KINDS OF FUNCTIONS

The contributions of trees are legion. They support the planetary ecosystem in many ways. Thus they are essential to the well-being of ALL LIFE on earth, both now and in the future.

Their consumer functions are well recognized. In spite of the growth of technology of substitutes, we still use trees for lumber, furniture, firewood in some places and wooden shoes. Ten examples from a long list of special uses could include the following:

- The maples have given us syrup and sugar.
  - The hemlocks have provided tannin for leather curing.
  - From willows, salicylic acid has been used as a pain killer for many years.
  - From willow twigs, ropes and baskets are made. This was one of the early manufacturing enterprises.
  - The kapok tree fibers provide filling for life preservers, mattresses and pillows.
  - From oak trees, tannic acid is extracted.
  - The wood of the ash tree is used for tool handles, oars, furniture, and formerly for baseball bats.
  - Ficus, the rubber tree, is famous for its many uses.
  - The rugged cypress is well known for its resistance to water and is useful for gutters.
  - The cedars have a long and favored tradition of use for cedar chests and closets, as a moth deterrent.
- Then there are non-consumer functions—the kind of services that do not use up the tree. Trees provide shade to temper the sun's heat, to lessen evaporation, to protect plants and other fragile life. They help to prevent erosion, maintain a fuller water table and provide a pleasing landscape around homes and gardens. This happens as long as they are kept alive and well, free of weakness from acid precipitation or oil-soaked earth. These services do not show up on the electricity bill or the gas meter.



## ALL KINDS OF FUNCTIONS

Still more important, there are the "converter" services of the trees, offerings to the world at large, without measure and without price. We have already alluded to some of them as we walked around the year with the trees. Besides contributing to the total supply of oxygen, trees supply a variety of food in the form of seeds and nuts, which are converted into energy for other life-support systems. Even if the products of trees are not of direct benefit to some forms of other life, seeds and leaves and nuts become part of the bank of that natural asset called dirt or soil.

Some of us who reside at Mohonk in the Shawangunk Mountains can therefore assert that an acorn never dies; it only undergoes a conversion—sometimes into another tree, sometimes into another form of life, sometimes into the precious soil pool.

### Trees

A wise old owl once asked of me  
Do you know how useful you can be?  
I thought for a while and then replied  
Here are some uses that I provide.

A home for birds, food for man,  
Shade and protection for the land.  
I help to hold the soil together  
and help provide man with water.

The owl shook his head wisely and said  
That's true! Then why do men chop at you?  
Ah, I sighed, because you see I am different -  
I am a tree.

Joy Anne Howell—Age 9

Printed with permission from "Why Plant a Tree?"  
By CODEL, Inc. Environment and Development  
Program.



Hickory    Sassafras    Oak

## ALL KINDS OF TREES

It is easy to pick up one of the nature handbooks describing trees and to develop some feeling for the number of species. Even without including the hybrids which have been biologically engineered among the domesticated trees, the variety of natural characteristics is almost beyond comprehension.

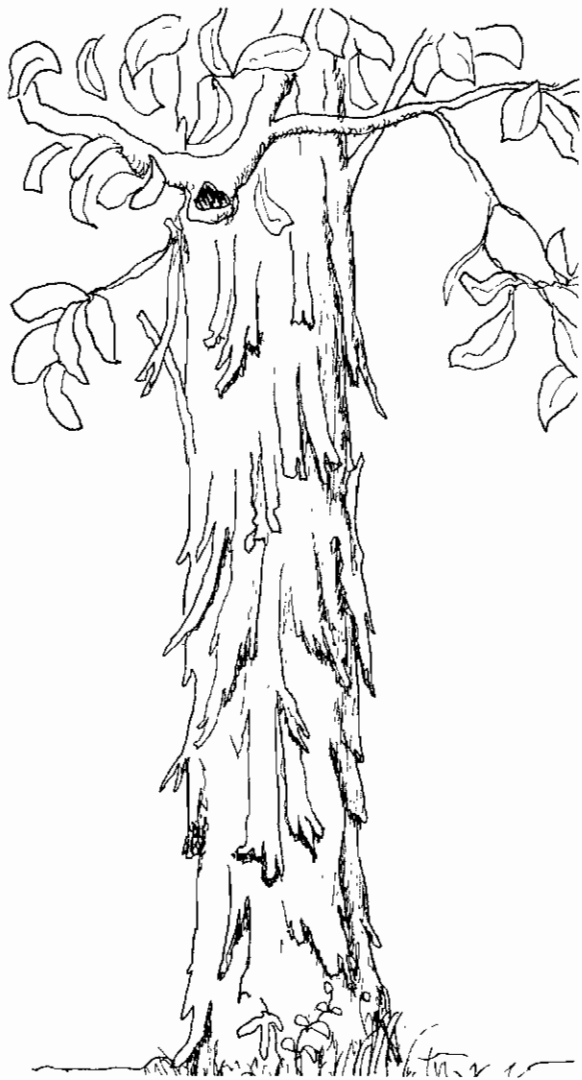
A further miracle is apparent when one becomes a student of forestry and encounters the various attributes used in identification and classification. Size and shape of leaves, needles per cluster, the frequently overlooked flowers of trees, the fruits, nuts or berries, soft or hard wood, and the character of branches and bark are among the arboreal life styles requiring attention.

Climate and elevation are important factors in the growth of different kinds of trees. Some trees flourish where the nature of the rocks has formed an acid condition. Others prefer the more alkaline soil. Still others are more generally tolerant. Grazing animals or human interventions may eliminate some species and leave space for others to maintain a varied ecosystem.

It is a special joy to roam the woods on the Shawangunk ridges and find many kinds of trees. How much more exciting than to penetrate a monoculture of all spruce or all balsam, planted in close formation. In the forest assembly there is the contrast of forms, such as the scraggly growth of the scrub oak and the neat straight trunk of the tulip tree. Unlike birds and wild animals, trees stand still and invite repeated visits. Not only do they become old friends, but also they provide ample opportunity to exercise the human senses of touch and taste and smell and hearing. Overworked eyes used as a means of relating and identifying can be given a rest in making friends with trees.

I like to feel the smooth bark of the striped maple and contrast it with the crusty protuberances of the trunk of a shagbark hickory. I like to taste the bark of a young black birch twig. I like to smell the aroma of the sassafras. I like to hear the soft crinkling sounds of the poplar leaves as they vibrate in the wind. And then I remember that the poplar and aspen tribe are a different kind of tree because they have leaf stems so shaped that they create a sideways movement of leaves. Because of their flappings in the breeze, they acquired a nickname: Quaking Aspen. The scientific name is also appropriately evocative: *tremuloides*.

ALL KINDS OF TREES



Shagbark Hickory

ALL KINDS OF TREES



Scrub Oak

Maple

## ALL KINDS OF TREES

### Trees of Mohonk

Few, if any, locations in the Shawangunk Mountains have the combination of trees that are found on the Mohonk grounds and in the surrounding woods. More will be written about this blended landscape in the discussion of human interventions. At Mohonk we find a combination of "old settlers" "special residents" and "invited guests." This cosmopolitan community of trees is the result of rocks and earth and climate selecting certain trees and of human choices of long-standing residents and more-recently-added special visitors.

It is not the purpose of this publication to provide an exhaustive list. Here we present a few outstanding examples in each category:

- Old Settlers: the chestnut oaks, the hemlocks, the striped maples, the tupelos (or sour gums) and the shadbush (actually a tree).

- Special Residents of Long Standing: the three varieties of European beeches in the flower garden—the copper, the cut-leaf and the giant weeping beech, the ginkgo tree, the camperdown elm, the yellowwood and the horse chestnuts.

- Recently-invited Guests: the dawn redwoods, the black pine, the kousa dogwoods, the flowering crabapples and the sorrel tree.

Some of these invited guests originated in other lands and add another facet to the global ambiance of our mountains.

Information about the Mohonk Garden Trail will be found in the section on "More Information About Trees."

### From a European Perspective

#### A sign on a tree in Spain

I am the warmth of the hearth on cold winter nights.  
I am the shade screening you from the hot summer sun.  
My fruits and restoring drinks quench your thirst as you journey onward.  
I am that which holds your homestead.  
The bed on which you lie, the timber that builds your boat.  
I am the handle of your hoe.  
The wood of your cradle.  
The shell of your coffin.

## ALL KINDS OF TREES



The Mohonk Ginkgo Tree

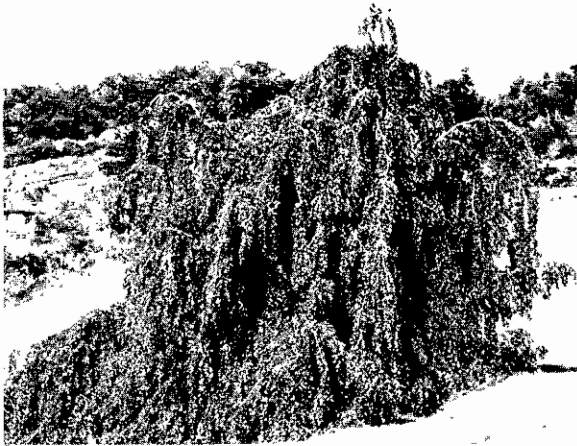
## ALL KINDS OF TREES

### Trees Treasured in Memory

When travelling, do not forget to look at the trees. If you admire them, and study them, and glory in their history and their special qualities, you will carry with you a mental sleeping pill when the night hours find you restless. Turn the mind toward a review of special trees YOU HAVE KNOWN.

A sampling from the writer's collection:

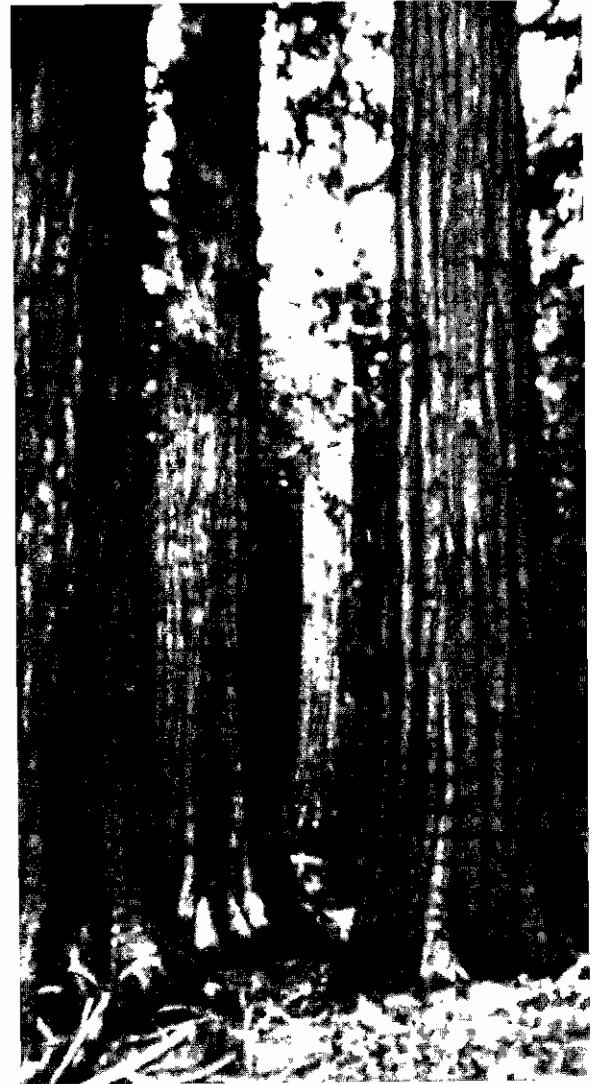
- The tall Eucalyptus trees of Australia exploding when lightning strikes.
- The California Redwood groves—the “feel” of entering a cathedral.
- The Sycamores of Ramsey Canyon, Southern Arizona—a crossword puzzle of great branches.
- The Dragon Tree in the Canary Islands—a lone relict of a former geologic age.
- The descendant of the Bo-Tree in Sri Lanka—reminiscent of the kinship with nature philosophy of the Buddha.
- The Coconut Palm trees along the beaches in Puerto Rico—majestic and enduring.
- The Teakwood of Kenya's hardwood forests—so long to grow, so easy to be misused.
- The Laurel Mahogany in Costa Rica's Cloud Forest, astride the Continental Divide, appearing and reappearing among the mists.



**The Weeping Beech**

## ALL KINDS OF TREES

### Trees Treasured in Memory



**Redwood Grove in Yosemite  
The Tree Cathedral**

**ALL KINDS OF TREES**

**Trees Treasured in Memory**



**Sycamore in Ramsey Canyon of Arizona  
Cross Branch Puzzle**



**Descendant of the Bo Tree in Sri Lanka  
More than 2,000 years old**

**ALL KINDS OF TREES**

**Trees Treasured in Memory**



**Dragon Tree in Canary Islands  
Lone Relict**

## ALL KINDS OF TREES

### Trees Treasured in Memory



Cloud Forest in Costa Rica  
Monteverde Preserve on Continental Divide

## HUMAN INTERVENTIONS

### Traditional Benefits

From the earliest appearance of human beings on planet Earth to the present day, people have used the wood of trees to benefit their lives. Besides the usual habitations, there have been tree houses, rafts and house boats. Ingenious hands and minds have fashioned myriads of implements ranging from toothpicks and wooden spoons to bows and arrows and great waterwheels. Inventories of these human uses of tree wood could fill many pages but our greater need is to recognize the OTHER very significant human benefits which trees provide.

### Importance to Farmers

First, we should examine the role of trees in agriculture and food production. Watersheds are like great sponges, which absorb the water and prevent erosion, while allowing a gradual seeping into springs or ponds. Tree roots and tree shade are important in this sponging process. In dry areas of Africa, shelter belts of trees are proving valuable for breaking the force of the hot winds and retarding the southward-creeping desert. Between the belts it becomes possible to re-establish farm activity.

An example of new applications in agriculture is reported in VITA NEWS (VOLUNTEERS IN TECHNICAL ASSISTANCE) of July/October 1988, in an article entitled "Promoting the 'Fertilizer Bush' among Nigerian Farmers." The article shows that through the term "fertilizer bush," farmers are persuaded to try a new method: "The novel concept of renaming a tree according to its farming function captures the attention of men and women alike, all of them farmers who must cope with the declining fertility of the land." This use of trees, nicknamed the "fertilizer bushes," is a special application of shelter belts, known as "Alley Cropping." It is "an agro-forestry system in which food crops are grown in wide rows alternating with strips (hedge-rows) of trees or shrubs. It has been scientifically demonstrated to be an economically profitable and ecologically stable alternative to the practice of bush fallow or shifting cultivation." (See More Information about Trees, in a later section, for source material.) This is one of many new applications.

## HUMAN INTERVENTIONS

### Even the Treeless

In the western plains of the United States and in the Kalahari Desert of South Africa, which are largely treeless, the trees do give helpful, even life-saving, messages. Even where one tree is seen on the horizon, it may be a sign of water, under the surface if not flowing above ground, in a river bed or a water hole. The flashing of the aspen leaves, already described, can emphasize that message.

### Lose One, Plant One

The trees send messages sometimes. They can set up a signal that they need help. When a tree goes "all out" in overproduction of flowers and cones or nuts, it often is telling us that it is under stress, and in case of its death, it is providing double insurance that its clan or family will survive. When that message comes, it is important that we examine all possible HUMAN CAUSES relevant to OUR well-being as well as that of the trees. This may be the time to participate in the World Tree Project of the United Nations to which reference is made in the list of references (see "More Information About Trees").

### Peace Trees

Through these examples of the interdependence of human beings and tree beings, our vision for a healthy planet Earth shared by all forms of life is broadened.

At a meeting I heard the owner of a family-operated farm speak about his woodlot. He said that this particular part of his acreage was not good ground for crops or pasture. He said he could get a fancy price for it if he sold it to a developer, but he was not going to do so. "Because," said he, "I know those trees are making oxygen which helps us all to breathe."

One thing that all can do is plant "peace trees" on his or her own land, or in another's custody. A "peace tree" is a symbol of a common need.

## HUMAN INTERVENTIONS

### Local Adaptations

In the Shawangunk Mountains, Mohonk's owners attempt to provide special insights with regard to the kinds of human intrusions among our respected friends, the trees. The following samplings will illustrate their range, from practicality to adaptation to the role of intangible benefits.

### The Monkey's Eye View

Having visited the tropics where monkeys travel mysterious routes through the tops of tall trees, I understand the feelings Balboa had when he climbed a tree on the Isthmus of Panama and beheld the Pacific Ocean. Alfred Smiley, the twin, made use of a "tree ladder" in his explorations southward along the Shawangunk ridges and first saw the blue waters of Lake Minnewaska. When it came to developing the main building at Mohonk, the twin brothers may well have repeated, at various stages of construction, "Let's go high with the monkeys. There will be less damage to this rocky terrain with its thin soil, AND WE WON'T HAVE TO CUT AS MANY TREES." (Note: This is the writer's paraphrase; the twins probably thought it with no need to verbalize!) In the same spirit, a "Prospect Tower" (a two-story gazebo) was built in the midst of the flower garden, where one benefits from the over-views as well as the nearby ramble.

### The Blended Landscape

When Rene Dubos visited Mohonk to attend a meeting on environmental education, he expressed special appreciation for the view from the House across the lawns and garden, as they gradually blended into the natural background of the Shawangunk rocks and trees, leaving no clear hiatus where human intervention ceased and nature's intervention began. He was saying very clearly that this was a logical adaptation—not an either/or but a both/and. (Dubos, who was a long-time Professor at Rockefeller University, was author among many books of THE GOD WITHIN, which deals with this philosophy.)

## HUMAN INTERVENTIONS

### Broad Horizons

The roads around Mohonk were built for driving in slow-moving vehicles and for walking, with provision of rest stops in the form of gazebos (or summerhouses) and rustic seats. These were places where one could sit and see out through "view sheds." They were places for meditation and absorption of the far-off scenes—the valley, the rock cliffs or the Catskills beyond. The long-time concern of the owners revolves around the question: How does one maintain the broad horizon, which frequent testimony has indicated is of inestimable, immeasurable value to PEOPLE, and how does one keep interference with tree friends and other life to a minimum? Each view shed presents a special situation. Trees play important roles, framing or setting off the foreground. Most careful and complete communication is required between the person with the easy-cutting chain saw and the person with the gift of envisioning the TOTAL RESULT. Otherwise, pleasing BROAD horizons may be lost for years. Trees do not grow up overnight.

The story is told of a manager who sent a man out to a certain scenic spot with the following directions: "Cut everything but the mountain laurel." When the manager went to inspect the work, he found that the man had cut all the laurel and left everything else!



A Blended Landscape

## HUMAN INTERVENTIONS

### Broad Horizons



In the Olympic National Park

From Avalanche Lillies  
to Distant Views



"Prayer, the one language we all can use, is at its deepest a silent language, like that of leaves on a tree, to each other, to the air around them. Tagore said, Be still, my soul, these great trees are prayers. Whether it be the redwoods in California, a maple stand in New England or a single towering tree, the Gothic principle is there. And, with its upward thrust, a like lifting of the spirit.

"One with the trees are their leaves: buds tightly folded during the winter respond to sunshine and rain as the year turns to spring; the surge of new life causes them to open like tiny hands to receive the benison of the elements; opening more to their full size and distinct patterns they perform their function, storing nutrients, purifying the air, providing shade.

"Silent the leaves often are and secretive, but just as often they converse as if the secret were too good to be kept to themselves. Whispering in a breeze, rustling, even singing and always in harmony with the wind that plays to them, they give their message. When autumn comes, they have their golden time, then drying and falling they have another function. Swept up or wind driven, their place is close to the soil and their work that of enriching the earth, a far longer process than that which the buds already forming on bare branches have before them.

"Keats, in a letter to a friend, said that if poetry come not as naturally as leaves to a tree it had better not come at all. I paraphrase those words to say that prayer should come to us as naturally as leaves to a tree."

From: Elizabeth Yates, *A BOOK OF HOURS*, unabridged. (The Wider Quaker Fellowship, 1987.)



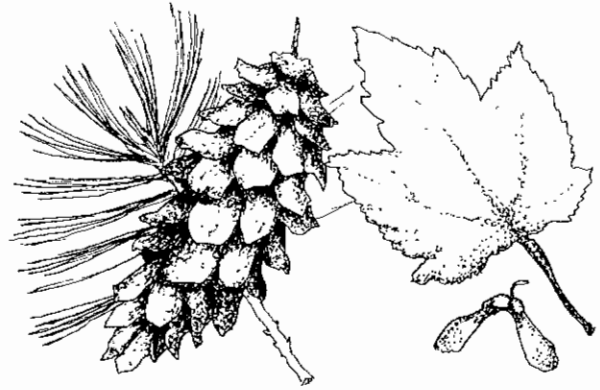
The poplar leaf, with its vertically hinged stem, whispers in the slightest breeze, "in harmony with the wind."

"When autumn comes, they have their golden time, then drying and falling they have another function. Swept up or wind driven, their place is close to the soil and their work that of enriching the earth."

Quotations are from:  
*A BOOK OF HOURS*  
(See opposite page.)



"Be still, my soul, these great trees are prayers."  
The sugar maple comes into its glory with the fresh greens of early spring, set off by evergreen cedars which stand like sturdy guards around their queen.



White Pine Cone • Red Maple Seeds

#### How to Combat the "Greenhouse Effect"

"The value of a tree is that it takes up carbon dioxide like a sponge, using it as a basic building block for more organic compounds and giving off oxygen in the process. The old carbon dioxide is stored as cellulose in the trunk of the tree or in the muscle tissue of leaf-eating animals. The AMERICAN FOREST explains: 'Ordinary trees are major actors in keeping the carbon cycle balanced. On the average, a forest tree absorbs about 13 pounds of carbon dioxide a year; 2.6 tons per acre of trees—enough to offset the carbon dioxide produced by driving a car 26,000 miles, from San Francisco to Atlanta and back five times.'"

From: THE WASHINGTON SPECTATOR,  
by Tristram Coffin, editor. (February 15, 1989.)

**A Genetic Storehouse**

“By the careless cutting and burning of tropical forests, the world is losing a genetic storehouse, in the words of a Smithsonian expert, Judy Gradwohl. Botanists regularly discover plants in the dense forests that are both nutritious and hardy, and many that are useful as medicines. Examples: a wild maize found in the mountains of Mexico is resistant to six of the seven viruses that habitually strike U.S. corn fields. A species of wild coffee with no caffeine was located. The sap from the xopaidba tree found in the Amazon can power trucks. Twenty percent of Brazil’s diesel fuel comes from that tree.”

From: THE WASHINGTON SPECTATOR,  
by Tristram Coffin, editor. (February 15, 1989.)

**What Trees Do For You**

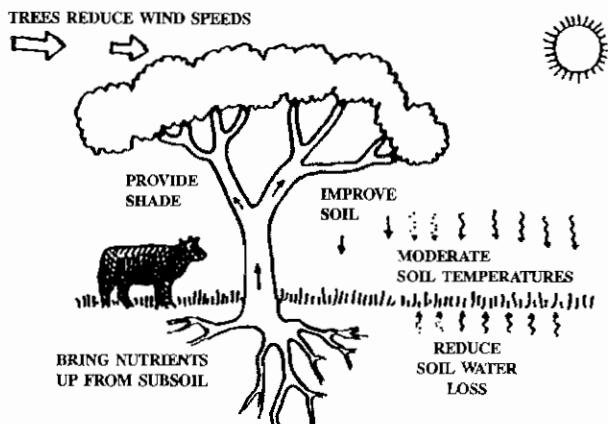


Illustration from: WHY PLANT A TREE?  
Prepared by Helen L. Vukasin. (Published by CODEL, Inc., Environment and Development Program.)



**El Yunque Rain Forest, Puerto Rico**

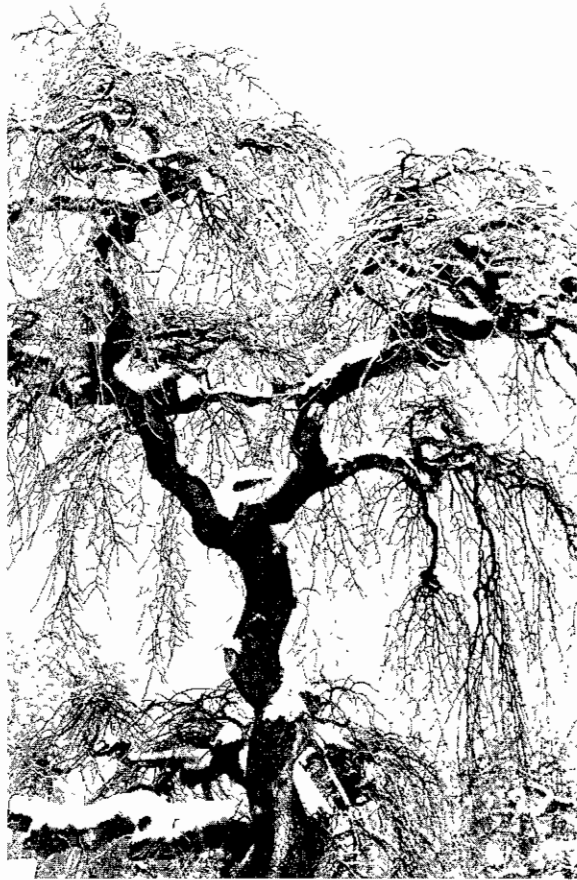
**Interdependence and Responsibility**

“Debt and deforestation—An unlikely and tenuous alliance is being explored among conservationists, international bankers and Third World governments. Emerging is a consensus that the crises of global debt and tropical deforestation are inextricably entwined.

“The three groups’ seemingly divergent goals—to save habitat, to recoup debt and to expand national economies—share a common need to sustain tropical rain forests. Their strategies and concerns were aired recently, at a New York conference entitled ‘Tropical Rain Forests: Interdependence and Responsibility.’

“‘For us, conservation is a matter of life and death,’ explained the ambassador of Madagascar Leon Rajaobelina. ‘Madagascar may suffer the worst erosion of any place on earth; this on a land that once was almost completely forested. Countries like Madagascar have been caught in a catch-22 of indebtedness and environmental destruction. Foreign banks and development agencies demand that countries defaulting on loans increase national exports to service their debts. Exploitation of natural resources such as timber generates quick revenue, but often leaves the land more impoverished than ever.’ ”

From: GARDEN, The Garden Society.  
Publication of New York Botanical Garden.  
(January/February 1988.)



Old Settler at Mohonk

The Camperdown Elm, located on the west side of the Mountain House, was planted in 1904, shortly after the completion of the stone section. The nursery produced it from an 8 foot graft on a European Elm.

A Symbolic Ceremony



Explaining the Project



3rd & 4th generations  
Planting



2nd & 4th generations  
Protecting the Tree

Four Generations Plant a Tree

On World Environment Day, June 3, 1983, members of the Smiley family at Mohonk planted an Austrian Pine. FOR EVERY CHILD A TREE was the name of a program in New York that day in a ceremony sponsored by the U.N. Environment Programme.



**A Butterfly Tree**

On an autumn day a Mohonk Pitch Pine hosted a group of Monarch Butterflies on their annual southward migration. A special function of trees is to provide a stopover site for these fragile but intrepid long-distance travelers.

### **New Perspectives on the Ecosystem**

The Heart of Understanding by Thich Nhat Hanh, edited by Peter Levitt. Published in 1988 by Parallax Press, P. O. Box 7355, Berkeley, CA 94707.

Thich Nhat Hanh's commentaries in this book grow out of a long tradition of Buddhist teaching but have been developed in a way which is compatible with western thinking and expression.

The brief chapter entitled "Interbeing" captures the heart of his message in a little over two pages. It is an excellent guide for those who are searching for ways of describing the interconnection of all life. The editor explains that "Interbeing" is a word which is not yet in the dictionary. Trees play an important role in this delightful meditation.

### **Just Published Information - 1990**

Hunger Notes, published by World Hunger Education Service; 3018 Fourth Street, NE, Washington, DC 20017. (202) 269-1075. Patricia L. Kutzner, Executive Director.

The January 1990 Issue (Vol. XV, No. 4) contains a lead article entitled "Reforestation in the Tropics: Striking an Ecological Balance" by Linda Worthington. She describes the factors which are upsetting the balance in tropical forests and their impact on human life. She follows up with comments on basic needs and strategies and evaluates reforestation as a solution. The five major "Tree Killers" are dramatized in little cartoons. The issue contains other valuable data and points of view on reforestation.

Reforesting America: Combating Global Warming?

By Mark C. Trexler and William R. Moomaw. Published by World Resources Institute, 1709 New York Ave., NW, Washington DC 20006, March 1990. Large-format paperback. ISBN 0-915825-48-1. Order Code TRRAP, \$7.50.

In this paper, WRI researchers review the problem of global warming and assess the impact on global warming of various U.S. forestry initiatives.

## MORE INFORMATION

### For Use in Identification

#### A CHECKLIST OF TREES AND SHRUBS OF THE NORTHERN SHAWANGUNKS

A research report of The Mohonk Preserve, Inc. By Paul C. Huth, February 1988. Available from The Mohonk Preserve, Mohonk Lake, New Paltz, NY 12561.

#### BRUIN PATH NATURE TRAIL (for all seasons)

For identifying native trees. By Ruth H. Smiley, 1977. Available from the Gift Shop, Mohonk Mountain House, Mohonk Lake, New Paltz, NY 12561.

#### THE MOHONK GARDENS, a History and Guide

Identifies some of the introduced tree specimens. By Ruth Smiley, 1977. Available from the Gift Shop, Mohonk Mountain House, Mohonk Lake, New Paltz, NY 12561.

#### A FIELD GUIDE TO TREES AND SHRUBS

The Petersen Field Guide Series—Northeastern and north-central United States and southeastern and south-central Canada. By George A. Petrides. Houghton Mifflin Company, Boston.

#### TREES OF THE EASTERN AND CENTRAL UNITED STATES

By William M. Harlow, pocket-size guide. Available from Dover Publications, Inc., 31 East 2nd Street, Mineola, NY 11501

#### MANUAL OF THE TREES OF NORTH AMERICA

By Charles Sprague Sargent, in two volumes, paperback. Available from Dover Publications, Inc. (see address above).

#### ARISTOCRATS OF THE TREES

By Ernest H. Wilson. Renowned dendrologist describes the great trees of the world. Available from Dover Publications, Inc. (see address above).

## MORE INFORMATION (cont.)

### General Interest Publications

### WORK IN PROGRESS

A United Nations University publication regarding rain forests and climate changes. Volume 9, November 1985. Inquire of U.N. University, Toho Seimei Bldg., 15-1 Shibuya 2-Chome, Shibuya-ku Tohio, 150, Japan.

### CONNECTICUT'S NOTABLE TREES

By Glenn D. Dreyer, Director of Connecticut College Arboretum Documents the history of Connecticut's largest and most interesting trees. Copies available from Memoirs, Connecticut Botanical Society, Inc., 24 Cedarwood Lane, Old Saybrook, CT 06475.

### THE MAN WHO PLANTED TREES

By Jean Giono. The story of a farmer and shepherd whose response to the desolation of his native region of Provence in southeastern France is to plant trees. Available from Cahill & Company, clothbound and paperback, Federalsburg, MD 21632-0039.

### TROPICAL FORESTS: A CALL FOR ACTION

In three parts

PART I: THE PLAN. Details the cost of deforestation and outlines a five-part action program.

PART II: CASE STUDIES. Accounts of successful forest management projects.

PART III: COUNTRY INVESTMENT PROFILES. What should be done. Available from World Resources Institute Publications, P.O. Box 620, Holmes, PA 19043-0620.

### ENVIRONMENTALLY SOUND SMALL SCALE AGRICULTURAL PROJECTS: GUIDELINES FOR PLANNING

Chapter 9, Agroforestry Systems. A revised edition, prepared by Miguel Altieri, University of California at Berkeley, and edited by Helen L. Vukasin. A CODEL-VITA publication. Available from CODEL, Inc., 475 Riverside Drive, Room 1842, New York, NY 10115 (212/870-3000).

## MORE INFORMATION (cont.)

### General Interest Publications (cont.)

AN OLD RED OAK TREE, Historical/Cultural Note No. 35-89.

By Paul C. Huth, Director of Dan Smiley Research Center. The story of the great oak which stood on what is now the Mohonk Putting Green for some 209 years. Available from The Mohonk Preserve, Mohonk Lake, New Paltz, NY 12561.

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### Tree Projects

#### A SAVINGS BANK FOR TREES

A nation's first official gene bank for woody landscape plants has been established by the United States Department of Agriculture. It is located at the National Arboretum in Washington, DC.

FOUR GENERATIONS PLANT A TREE (see page 37 of this booklet)

Reported in THE MOHONK BULLETIN, Volume 72, NO. 3. Copy may be obtained on request from the author.

#### THE TREE PROJECT: A MODEL FOR DEVELOPING GLOBAL UNDERSTANDING AT THE MIDDLE SCHOOL LEVEL

By Susan A. Reed, Coordinator. A complete description of the development of the project serves as a model for other schools. Published in 1988 by Mohonk Consultations on the Earth's Ecosystem, Mohonk Lake, New Paltz, NY 12561. Copies available upon request.

#### KEEP TROPICAL FORESTS ALIVE

Published by the World Resources Institute. This booklet includes suggestions on "how you can help," an overview of the destruction of tropical forests and a list of organizations which can help. Available from World Resources Institute, 1735 New York Avenue N.W., Washington, DC 20006.

## MORE INFORMATION (cont.)

### Tree Projects (cont.)

#### THE TREE PROJECT

A global reforestation program. Its purpose is to increase awareness of the effects of deforestation and to spur action to reverse current deforestation trends. Information on the possible modes of implementation of the Project includes:

- planting trees in rural areas for flood control and as windbreaks to protect farmlands from topsoil loss and crop destruction;
- creating tree plantations to meet the growing demand for firewood;
- planting drought-resistant trees;
- developing planting programs to match felling;
- planting trees in urban areas to create recreational space, while reducing traffic noise and air pollution.

Further information available from The Tree Project, DC 2, 1116 Building, United Nations, NY 10017.

#### THE WASHINGTON SPECTATOR (February 15, 1989)

By Tristram Coffin, Editor. This issue contains brief commentary on the following projects:

- Pennsylvania biologist creates 2,300 acres of tropical forest in Costa Rica.
- The usefulness of trees planted in cities. Energy saving and absorption of carbon dioxide.
- How to combat the "greenhouse effect."

#### GLOBAL RELEAF

A campaign which calls on Americans to plant 100 million trees in their cities and towns by 1992. Information is available from the American Forestry Association, P.O. Box 2000, Washington, DC 20013.

**YOUR NOTES**