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# FOREST LEAVES

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THE PENNSYLVANIA FORESTRY ASSOCIATION

JANUARY-APRIL  
1944

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## THE PENNSYLVANIA FORESTRY ASSOCIATION

*Founded in June, 1886*

Labor to disseminate information in regard to the necessity and methods of forest culture and preservation, and to secure the enactment and enforcement of proper forest protective laws, both State and National.

### ANNUAL MEMBERSHIP FEE, THREE DOLLARS

One Dollar of which is for subscription to FOREST LEAVES

Neither the membership nor the work of this Association is intended to be limited to the State of Pennsylvania. Persons desiring to become members should send their names to the Chairman of the Membership Committee, 1008 Commercial Trust Building, Philadelphia.

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# FOREST LEAVES

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## Soil and Forests Essential for Pennsylvania Prosperity

by

\*MAJOR GENERAL EDWARD MARTIN

*Governor of Pennsylvania*

Mr. Chairman and Fellow Americans:

Pennsylvania is one of the richest political sub-divisions in the world in natural resources. We have coal, oil, gas, iron ore, slate, sand, gravel, clay and a great acreage of rich soils. Two hundred years ago we had the finest forests in the world. Those magnificent woodlands are gone. Much of our ore, coal, gas and oil have been used in building this great country. We are using more and more of these natural resources today in fighting for our liberties and our lives.

Rich soils, slowly made by nature through the centuries, have also been worn and wasted. When the White Man came, the average depth of this soil carpet in Pennsylvania was nine inches. That rich, productive earth has now been wasted, eroded and washed away until its average depth is only six inches. That six inches of rich earth is all that separates us now from famine and want.

Conservation of natural resources, of these raw materials of civilization, is a proper concern of government. Soil is of the first importance. Next comes the conservation of our forests. It is vital that we consider the conservation of these and other basic natural resources in the post-war years.

\*Address at the 58th Annual Meeting of The Pennsylvania Forestry Association, Harrisburg, Penna., March 7, 1944.

Lumber is now a critical war item. The mills cannot cut enough timber. War demands are insatiable. For home builders, farm users, business and industry it is harder to get lumber than it is steel. Man can destroy a tree in a few minutes but it takes God a century to make one. When the resources are gone, man must go. Pennsylvania has many "ghost towns" in areas where the natural resources have gone. "Pit Hole" of the early oil days is a memory. Scioto, where Carnegie made his first million, is gone. The thriving lumber villages, dotted all over the Commonwealth in the great days of that rich industry have vanished. Deserted, windowless and decaying homes, churches and schoolhouses mark the areas of once prosperous coal operations.

Forestry has had a long history in Pennsylvania. The farsighted William Penn knew its value and significance. Had his ideas been carried out, Pennsylvania would still be noted for its timber. As early as 1681, Penn, in his Charter of Rights, provided that in clearing the land care should be taken to leave an acre of trees for every five acres cleared. Two generations ago the wood lot was regarded as a necessity in the life of every rural village or small town family. Long ago far too many farms sacrificed their woodlands.

Many of the early achievements in Pennsylvania forestry can be traced to the late Dr. Joseph T. Rothrock, affectionately known as the "Father of Pennsylvania Forestry." He was active in organizing the Pennsylvania Forestry Association in 1886; the oldest State Forestry Association now active in the Nation. He was largely instrumental in having Governor Beaver appoint a Commission of Forestry in 1888, the first of its kind in Pennsylvania. Seven years later, in 1895, Governor Hastings signed a bill which set up a Division of Forestry in the Department of Agriculture. In 1901, the Division of Forestry became the Department of Forestry and Dr. Rothrock was named as its first Commissioner. He served in that capacity until June 1, 1904.

The present Department of Forests and Waters was created under the Administrative Code of 1923, which combined the previous Department of Forestry and the Water Supply Commission. It continues to operate under the Administrative Code.

Year by year forest lands have been coming back under the control of the Commonwealth. The first State Forest land purchase was made in 1898, consisting of 17,010 acres in Pike, Lycoming and Clinton Counties. Today the State Forests comprise a total of 1,654,762 acres located in thirty-nine counties of the State. Our mountain counties, as is natural, have the greater acreage of these woodlands. Potter has 251,427; Clinton, 231,448; Lycoming, 151,997; Centre, 122,945; and Cameron, 119,038 acres. Tioga is in the hundred thousand acres class with 100,174 acres.

In addition to these State Forests, the Game Commission owns 742,362 acres located in 62 counties. Elk with 46,673; Sullivan with 45,247; Lycoming with 36,785; Bedford with 36,662; Bradford with 36,534 and Centre with 34,107 acres are at the top of the list.

The grand total of 2,397,124 acres makes an impressive body of state-owned land that is mostly woodland. This is a wartime as well as a peacetime asset.

Penn's Woods have always made a great and a valuable contribution to the wars of this Nation. The forgotten charcoal furnaces scattered over Pennsylvania supplied iron for the guns of Washington in the Revolution and for the weapons of the North in the War Between the States. Today some of these old charcoal furnaces are included in State Forest areas. They are again making a valuable contribution in supplying timber for the Nation's War Program.

Out of our State Forests come decking for battleships, aircraft carriers, mine sweepers and patrol boats. Our pulpwood is going into smokeless powder; rayon for parachutes; plastic for aircraft parts; paper for shell casings and containers for blood plasma, food and ammunition.

Few people realize the vast use of wood by the Navy and Army. Perry's historic Erie Fleet was made almost entirely of wood. It was the day of wooden ships. In fact, until the fight between the Monitor and Merrimac during the Civil War all ships were wooden ships. That battle made every wooden warship in the world obsolete.

But today wood is used even on battleships for many things, including 300,000 feet of wooden decking, and for the packing case filled with vaccine tubes. The Army and Navy list 1,200 items made from wood. The Navy is using more wood now than ever before in its history. Every big ship has a wood-working shop and a staff of carpenters. The tonnage of wood in 1942 for the Army and Navy was bigger than the tonnage of steel.

Our State Forests play still another part in war. They are valuable for purposes of training and maneuver. A United States Cavalry squadron, 497 men and 442 horses, bivouacked for nine days in the Susquehannock State Forest in Potter County where it conducted maneuvers for squads, platoons and troops. The 99th Field Artillery, Battalion Pack, of the Edgewood Arsenal in Maryland, occasionally uses the Mont Alto

*(Continued on page 11)*

## Maryland's New Forest Regulation Law

*\*by* JOSEPH F. KAYLOR  
*State Forester of Maryland*

I COUNT IT A privilege to be given this opportunity to come to the great Commonwealth of Pennsylvania in order to tell you something of how we in the Maryland Free State have started to put our forest resources in order and how we propose to keep them so. Believe me when I say that those forest stands across your State line are in a very dilapidated condition and badly in need of repair. It is, of course, the sad, familiar story, not to be told of Maryland alone but also of practically every other State with which I am familiar.

Now, two things compelled us to take action in this matter. One was the obvious and crying need for a coordinated system of management on privately owned woodlands that will ensure their rehabilitation and return to full productivity. The other was the fact, about as certain as death and taxes, that if we didn't do this ourselves, and do it quick, the Federal Government would do it for us. And, what's more, it ought to! Mainly for this reason, my conviction is that Federal legislation along this line is imminent. Right now, the Chief of the United States Forest Service, in his public utterances, is making out a good case for it—one that cannot be waved aside by mere talk. So far as the States are concerned, deeds, not words, it seems to me, are what the situation calls for.

That, too, was what the Maryland Legislature thought when, in 1943, it passed the Forest Conservancy Districts Act, which forms the subject of my discourse today. Maryland, as you may know, has consistently, and so far successfully, declined the role of vassal state.

*\*Given before members of The Pennsylvania Forestry Association at Annual Meeting in Harrisburg.*

JANUARY - APRIL, 1944

It lacks any desire to play host to an army of what our citizens like to refer to as "Government snoopers," all prepared to tell the State of Maryland how to run its business, or even to run that business for it. Fortunately, in Governor Herbert R. O'Connor we have at one and the same time a champion of forest conservation and of States Rights. As such, he made the Forest Conservancy Districts Act a "must" item in his legislative program. The rest is history.

I shall describe the provisions of the act, or law, only in barest outline. What I really want to talk about are the preliminary steps we have taken to carry it out, and the reception given it by the general public in the barely more than two months since it went into effect.

In brief, then, the act empowers the Commission of State Forests and Parks, which is the governing body of the Department of State Forests and Parks, to promulgate rules and regulations of forest practice on privately owned timberlands throughout the State, these to have the force of law. It also empowers the Commission to appoint district forestry boards of not less than five members, which shall, after public hearings, and in accordance with the general rules and regulations promulgated by the Commission of State Forests and Parks, establish local rules of forest practice. Once such rules are established in a district, every timberland owner in that district who plans to take or permit others to take from his property any forest products must first by written application, obtain the approval of the district forestry board. The only instances in which cutting may be done without such approval

*(Continued on page 13)*

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JANUARY - APRIL, 1944

## WHAT OF OUR FUTURE FORESTS

Last year a larger tonnage of wood than of steel was used in our war operations. More than fifteen billion board-feet of lumber went into crating to protect planes, tanks, jeeps, ammunition, and countless other accessories of war during 1943. Such vast quantities are difficult to visualize, however, one need not be a mathematician to figure the enormous drain upon the forest resources of this country. Though most of this lumber is being salvaged in the countries to which it is being sent, none finds its way back to these shores.

It is apparent that the manner in which the war is being fought is draining this country of many of its natural resources. Moreover, the probability that our lend-lease supplies will create such keen industrial competition in some raw material countries, that our international trade relations will have to be drastically readjusted, must be recognized. These factors, coupled with the amazing progress being made in the chemical utilization of wood and other plant life reaffirms our belief that the future economic life of the United States depends upon the soil and forests of this country. The ignorant wastage of our soil and the careless destruction of our forest resources must stop.

The economic decay of China, north-

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ern Africa and the Near East began with the destruction of the forests and the erosion of the thin layer of life-supporting top soil. Portions of this country are farther advanced toward desert conditions, due to the same blind methods, than we are willing to admit. Land deterioration in Pennsylvania has not progressed too rapidly as yet, but unless wiser use is made of our forests and soils, the destructive trend will accelerate.

There are two alternatives, either punitive legislation or education. One of the two courses of action must be taken. To object to legislation and acknowledge belief in education is not enough. The position taken must be supported by action.

The Pennsylvania Forestry Association is an educational organization. Its program has always been to educate the public to the value of the economic wealth which lies in conserving our soil, water and forests. We have an obligation to redouble our efforts in this crisis.

## LOW-COST ALCOHOL

Recent successful production of industrial alcohol from sawdust at a cost of around 4 cents a gallon (provided the lignin in the raw material is used for plastics at standard commercial value) is likely to bring into operation distillation plants using sawdust and possibly saw-mill trimmings, as chemical sources for conversion into plastics, synthetic rubber and materials in between these two. Since the government pays \$1 a gallon for industrial alcohol it would seem as if the conversion of wood sugars into ethyl (not methyl) alcohol holds vast possibilities in all the forest areas of the South.

## RAYON

The rayon industry has been greatly expanded and is producing extra strength rayon yarn for use in tires and self-sealing gasoline tanks and many other war uses. Purified wood pulp is used mainly in the manufacture of viscose rayon.

FOREST LEAVES

# Fifty-Eighth Annual Meeting of The Pennsylvania Forestry Association

ONE HUNDRED TWENTY-FIVE members and guests attended the 58th annual meeting of the Pennsylvania Forestry Association which was held March 7th at the Penn-Harris Hotel, Harrisburg, Pa. Following lunch, President Thomas, in opening the business meeting, expressed his gratitude for the interest shown as indicated by the pleasing attendance.

Due to the absence of the Treasurer, Roy A. Wright, his report was read by the Secretary. Cash on hand December 31, 1943, \$49.43, receipts from dues, donations, dividends, etc. \$5,449.82 making a total of \$5,499.45. Disbursements amounted to \$3,376.61, leaving a balance on hand December 31, 1943, of \$2,122.84. In the investment account there is cash of \$1,508.82 and securities valued at \$13,105.51 making a total of \$14,614.33. The books of the Treasurer are open for inspection by all members.

The meeting approved the appropriation of \$25.00 for the planting, care and marking of a Tribute Tree in Penn's Woods in memory of Dr. Joseph T. Rothrock.

An amendment to the by-laws which had previously been approved by the January meeting of the executive board had the unanimous endorsement of those attending the meeting. This results in doing away with the council and substituting three advisory boards, each to be composed of eleven members.

The Eastern Advisory Board will act in the interest of that part of the state east of the Susquehanna river from Sayre to the Maryland line.

The North Central Advisory Board will cover a triangular area starting at Sayre on the New York state line, running south to Harrisburg, then northwest to Bradford in McKean County.

The Western Advisory Board will cover the rest of the state.

JANUARY - APRIL, 1944

The following slate of officers, directors and advisory board members was elected:

HONORARY PRESIDENT..... Samuel L. Smedley  
PRESIDENT ..... Wilbur K. Thomas  
VICE-PRESIDENTS—Victor A. Beede, W. Gard Conklin, Dr. G. A. Dick, W. S. B. McCaleb, A. C. McIntyre, Mrs. E. S. Neilson, Dr. J. R. Schramm, Mrs. G. Ira Stott, Dr. E. E. Wildman, George H. Wirt, Edward Woolman.

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John W. Hershey ..... Hardy L. Shirley  
E. F. Brouse ..... Leighton Stradley  
Philip A. Livingston ..... Joseph J. Tunney  
Secretary ..... H. Gleason Mattoon  
Treasurer ..... Roy A. Wright

## North Central Advisory Board

H. F. Alderfer ..... State College  
W. G. Edwards ..... State College  
E. O. Ehrhart ..... Johnsonburg  
H. E. Elliott ..... Coudersport  
Robert L. Lyman ..... Roulette  
Sterling McNeas ..... Harrisburg  
C. H. Messerly ..... Bradford  
George W. Reilly ..... Harrisburg  
A. F. Snyder ..... Dushore  
R. D. Tonkin ..... Tyrone

## Eastern Advisory Board

Francis R. Cope, Jr. ..... Dimock  
Cadwallader Evans ..... Scranton  
J. O. Liebig ..... Allentown  
Stanley Mesavage ..... Wilkes-Barre  
C. N. Myers ..... Hanover  
Edward C. M. Richards ..... Westtown  
Edwin J. Schoettle ..... Philadelphia  
J. P. Stoltzfus ..... Gap  
Francis R. Taylor ..... Cheltenham  
Col. Laurence H. Watres ..... Scranton  
R. C. Wetzell ..... Wyomissing

## Western Advisory Board

V. M. Bearer ..... Ligonier  
C. M. Bomberger ..... Jeanette  
C. F. Chubb ..... Coraopolis  
Miss Margaret Coulter ..... Greensburg  
James H. Duff ..... Carnegie  
R. F. Hemingway ..... Warren  
Dr. O. E. Jennings ..... Pittsburgh  
James A. Kell ..... New Alexandria  
J. O. Miller ..... Pittsburgh  
G. Roy Sutherland ..... Aliquippa

Following the business meeting President Thomas called upon Dr. J. Horace

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McFarland of Harrisburg, who introduced Major General Edward Martin, Governor of Pennsylvania, as the principal speaker of the afternoon. Governor Martin gave a forceful and thoughtful review of the forest conservation history of Pennsylvania and outlined the responsibilities of the state to the returning soldiers. His address appears elsewhere in this issue.

Mr. Joseph F. Kaylor, State Forester of Maryland, next speaker of the day, was introduced by the Honorable James A. Kell, Secretary of the Department of Forest and Waters. Kaylor discussed briefly the salient points in the Maryland conservancy district law which in every-day language is a forest regulation measure. It went into effect on January 1st, 1944. Mr. Kaylor's paper which deserves study by every conservationist appears elsewhere in this issue.

The third speaker, Professor Nelson C. Brown of Syracuse University, who is the foster father of Community Forests in the United States, was introduced by F. A. Pitkin, Director of the State Planning Board. Professor Brown's paper also appears in this issue.

## Report of the Secretary for 1943

THE MULTIPLICITY of the demands of war being met by our forests is no less impressive than is the volume of wood products needed. In all matters concerning this war we are becoming accustomed to speak in astronomical figures, yet it is difficult to comprehend such quantities.

We are told that over 32,000,000,000 board feet of lumber were used last year in our war activities, and that nearly one-half this amount, some 15,000,000,000 board feet was used entirely for crating. It is not easy to visualize that figure but if we say that every tree, every stick of wood, on 3,000,000 acres of Pennsylvania forest lands would be needed to provide enough lumber to crate the guns, tanks, jeeps, and countless other accessor-

ies of war during 1943, we can get some conception of the vastness of the drain upon the forests of this country.

The needs are great, but they will be met, not however, without overcutting and depletion of the growing stock. In this emergency we cannot count the costs nor quibble over requirements. But we can and should give thought now to our future supply of wood products.

We are fortunate in having in Harrisburg an administration that is conservation minded and forestry conscious. It is our hope that this attitude will be translated into legislation at the next session which will provide money to increase the personnel of the Department of Forests and Waters. Many forest districts are large, too large for the efforts of a limited staff. Money should be provided also for more public interest projects in the State Forests. And the demands upon the recreational areas will be so great when war ceases and we return to normal life, that the present parks, picnic areas and monuments will be quite inadequate.

It is our hope also that a comprehensive program of reforestation will be undertaken. We must plant our grandchildren's timber now.

We urge a cooperative effort by the Department of Forests and Waters and the Department of Education toward the establishment of school forests particularly in the regions of high forest fire losses. The actual planting, care and protection of a group of trees, whether they cover one acre or ten, will do more to inculcate in children the principles of conservation than hours of talking and miles of posters.

The Pennsylvania Forestry Association is ready and willing to do its part in such a movement.

We recommend that the Department of Forests and Waters and the Department of Commerce jointly study the possibility of revitalizing some of the semighost towns of the State, particularly those surrounded by or contiguous to State Forests, by bringing in or encouraging small wood using industries. We

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FOREST LEAVES

## Community Forests . . . An Opportunity And a Challenge for Pennsylvania

by NELSON C. BROWN

PENN'S WOODS—What a heritage and what a challenge—and, best of all, what a grand opportunity! Pennsylvania has a notable record of achievement with its splendid system of state forests in one of our best forested states. You are to be congratulated on having such a live State Forestry Association under the able direction and leadership of Dr. Wilbur K. Thomas and your active and successful secretary, H. Gleason Mattoon. You are fortunate also to have an able, conservation minded Governor and a forestry conscious Secretary in Mr. Kell.

Next to the winning of the war, planning for the postwar period is uppermost in the minds of our American people. There has been a very cordial and wholesome interest in the possibilities of including more and better community forests in our postwar programs.

Here is a subject which appeals to the average citizen. Many have sought an opportunity to do something about forestry and conservation. This is, indeed, something in which every citizen of the State can interest himself in helping along.

Community forests are those owned and operated by our cities, villages, boroughs and counties. Heretofore it has been the neglected stepchild, the poor little Orphan Annie of the American forestry program. It is now on the threshold of emergence to its "proper place in the sun", and we believe it is something that everyone can enthusiastically support in our conservation program.

Throughout the nation, there were said to be about 1,000 community forests started up to 1930, about 1,600 in 1938 and, according to recent U. S. Forest Service figures, about 2,100 by 1943. Largely without any special stimulation

\*Address at the 58th Annual Meeting of The Pennsylvania Forestry Association, Harrisburg, Penna., March 7, 1944.

or support, this program has moved forward. It has been a logical and natural development. In Pennsylvania, the records show that you have 96 community forests with an area of 79,000 acres. Your State Department is to be largely credited with this excellent achievement—a notable record. But, frankly, this is only a modest start compared with the possibilities. I do not know of any state which is more happily and favorably located as is Pennsylvania for the extension and enlargement of the community forest program, and I am delighted to hear that your State Planning Commission, under Mr. Pitkin, is definitely planning to include it as one of the most important forward-looking plans for the State.

Community forests are an old and accepted part of the European forestry program where it is the most successful, popular and profitable phase of the entire forestry system. Some forests, like the Sihlwald in Switzerland, have a proud and profitable record for about a thousand years. Approximately 75 per cent of all the Swiss forests are community-owned. Many villages in Central Europe are partly or completely tax-free because of the excellent income from these forests. There is a little Alpine village of 2,600 people with a forested area of 4,428 acres which enjoyed a net income of \$35,280 in one year. The taxes per family in this village averaged \$43, but the cash income per family from this forest was \$163.

Many people of European heritage have left their imprint in the development of community forests in this country. Throughout Pennsylvania and in other states, there are evidences of sturdy early settlers bringing the idea of village and city forests and improving watershed properties. In Newark, New Jersey, the city engineer in charge of the Water De-

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partment began with a few acres and a modest plantation some 30 years ago. Now there are 40,000 acres, millions of trees have been planted and in 1943, more than \$10,000 in net receipts were received. This is only a small beginning. The main purpose of this forest was to assure a continuous and sanitary water-flow, but meanwhile the city is gradually beginning to reap definite financial benefits from timber management.

There should be a community forest in every town, borough and village in Pennsylvania. You haven't the large areas of cheap, idle and abandoned farmlands that we have in New York and in some other states. But there are areas forested or otherwise on the outskirts of nearly every community and perhaps some abandoned farmland or scrubby growth that should be converted into active well-managed timber-growing community forests.

Community forests are *service forests*. They should be designed and managed to best serve our people. Throughout the nation there is a magnificent system of national and state forests and parks. But most of them are rather remote from the daily lives and thinking of our people. In community forests, we enjoy that intimacy and "nearbyness" that one does not always associate with national and state forests.

The main objective should be timber-growing. What a part these forests would have played in this present war emergency if we had a great backlog of community forests to supply the much needed ship timbers and lumber for packaging and the shipment of munitions, food and everything else that goes to war! Literally everything that flies or floats or fights uses wood. We are rediscovering the importance of wood and lumber through their part in the war program. Wood ranks with steel, rubber and gasoline as critical war materials. It is likely that wood may prove to be the most important single raw material of civilization in the future because we can secure such a variety of necessary and important mate-

rials from it such as clothing, food, fuel, chemicals and other materials as well as those of construction and shelter.

Community forests have wide service implications in addition to timber production. Some of our good citizens are primarily interested in watershed protection or perhaps wildlife or recreation or to have these areas serve as field laboratories for school children, perhaps for reforestation demonstrations and even bird and wildlife sanctuaries. The little town forest of Groton, Massachusetts, was started as a wildflower sanctuary. Although there are many and multiple benefits to be derived from these forests, there is no single pattern, formula or blueprint that must be followed as applied to local conditions.

Another important objective is the opportunity for work relief projects, employing local people on local projects should a postwar economic depression develop. Already several communities are making plans for employment relief by acquiring areas for community forests.

There is no reason why all the above objectives may not be combined or at least two or more may be served.

Are there any bad spots or difficulties in this program? Yes—there are. They may be political, local differences of opinion or just a plain failure to "follow thru" after initial enthusiasms. Some people prefer to look for the flies instead of the ointment. There are plantations that need thinning for their best development. On some watershed types of community forests there is urgent need of some cutting irrespective of the local need for revenues. Some states have good community forest laws but this not necessarily means a successful system of local forests.

How are they started? All are the result of some local guiding spirit or "spark plug." Perhaps it is a civic-minded citizen who has caught a vision of their possibilities and local application—garden clubs, the American Legion, Boy Scouts, women's clubs and luncheon clubs have

(Continued on page 16)

## Pennsylvania Nut Growers' Association

A Practical Body of Nut Growers Whose Aim Is to Stimulate Greater Interest in Nut-Tree Planting



Black Walnut Kernel

### THE PERSIMMONS AS YOU LIKE THEM

by JOHN W. HERSHEY

AS AMERICA BECOMES more conscious of the horticultural diamonds in her own back yard greater and greater profits will be possible for the farmer of hill land, or for steep slopes, rocky knolls and semi-swamps on good farms. For—in any rolling country every farm has such areas large or small.

Reviewing these potential uncracked diamonds—nuts, sweet acorns, honey locust, paw paw, persimmon and many others where we've only laid the ground work for their future use, my mind has been centering around the persimmon this last autumn. Probably because of our beautifully loaded trees in the nursery.

How it makes the mouth water for a farm to plant a quantity of these trees for pasture and market as I gaze on our specimen trees loaded to the hilt. Not only are they excellent feed for hogs, sheep, cattle and horses, but the interest poultry demonstrates in them can be described by the antics of a bantam rooster under a nursery row Lambert tree, in late November.

Evidently they were not falling fast enough to supply the appetite of our flock of two hundred. For this fellow was leaping 3½ ft. in the air picking at something on the tree. I watched closely and found him leaping for a persimmon. After several stabs, he dislodged it. It was fun to see him clean it up in a hurry.

The value of the persimmon with its high content of sugar, vitamins, especially "C" and many traces of minor minerals for pasture is beyond dispute. Its value for limited marketing use is being explored and has possibilities. True, more publicity *must* be given it to acquaint the public with its delights but its big drawback is—it must be so ripe when it hits the ground it explodes like New Deal philosophy when it hits reality. In this shape it naturally doesn't last long for marketing.

### Preserving

Here's where the inquiring mind comes in. And here's where Miss Amelia Riehl, 80 years old tree crop patriarch of Godfrey, Ill., makes another contribution to the great cause.

In early October I received a small package from her containing a mayonnaise jar of something, with the accompanying letter:

"Did I ever show you how we stretch the long season of Early Golden by half drying them and then packing in jars with a little sugar? These I sent were not quite dry enough and would probably not keep indefinitely. But at least they will give you an idea of the finished product if examined right away. This jar contains 1½ tablespoons of sugar."

Being busy I didn't open it for nearly four weeks. I was then amazed at the fine quality and preservation of their natural freshness. I wrote for more information and Miss Riehl kindly supplied the following:

"Have been playing with persimmons for years and have always considered them a valuable food that should be used more than at the present time. Have learned several things *not* to do to preserve them in edible condition, but have only ideas about what might be done.

"I think they should not be cooked or evaporated with artificial heat. Nor should they be dried beyond a certain stage. In making the sample I sent you the fruit was spread on wire cloth frames in the shade of a well ventilated screened porch. When the persimmons are dried

to the gummy, chewy stage of dates they are split open with a small knife and the seeds removed. There is a time during the drying out period when the seeds drop out easily, leaving the seed covering in the fruit. When it is done right the fruit stays whole like a seeded date. It is then rolled in granulated cane sugar and packed in clean jars.

"Some seasons I have made gallons of these things and other times, if there comes a rainy spell before they are finished, I lose them all because of mold.

"If we had electricity my next step would be to use a dehydrator with fan and slightly warmed atmosphere. The degree of warmth could easily be determined with a little experimenting.

"For children these half dry persimmons make a nice spread if chopped and mixed with honey in place of sugar."

As we're all children grown tall, why not preserve and serve to everybody?—(Ed.)

She says her formula is all guesswork—we find the guesswork of artists far more valuable than the charts of scientists when they don't fit practical application.

## EXPERIMENTS IN BLACK WALNUTING

STRANGE AS IT seems, marked thinking appears most valuable coming from the individual living the simple life on the soil where his mind is unflecked with the foam of materialistic culture—not burdened with all the truths and logic found in the halls of scientific learning and science.

The following is an interesting letter of clear, deductive thinking from a farm boy in Central Pennsylvania:

"Most of our walnut trees are along stone rows where it is too stony to work fertilizer in, the rain has to soak it in.

"Concerning the Thomas I got the grafts from you in 1934—got only two sticks. I grafted them on a tree that year, and they grew. Two years later I trimmed those grafts. With the trimmings I grafted another walnut tree at our farm and a young tree for our neighbors a mile

north of us. The first tree I grafted the lower branch (Thomas), and the other branches to Stablers and Ohios—three varieties on one tree. The Ohios and Stablers are usually good and well filled while the Thomases are all sizes: large, medium, and small, and about all deaf. The Thomas grew as vigorous as the rest and the trees are in a good location, fertilized regularly.

"The second tree I grafted entirely to Thomas (two years later) grew vigorously. When it bore, the nuts were just the same as the first tree. No good except maybe one-tenth of them. The tree is along a run—it used to be a deaf or black kernel variety. Since it's grafted it got as good care as the other varieties. These first two trees were 15 to 20 feet tall when grafted.

"Our neighbor's tree was just a whip when I grafted it. It's a vigorous grower. The first crop this year is just like ours—mostly deaf or black kernels. They have a Stabler, too, and are well pleased with it.

"My opinion about the Thomas doing so poorly if I am right is this—although just a guess. They are all offsprings from those two sticks you sent me in our neighborhood. I sorta think it might happen to be a strain or sport of Thomas. Same as Starking is to Delicious or Blax Staymen is to Staymen Winesap—only except these went from good to bad. What would you think about this?

"I didn't write you that the walnuts might not be as well filled this year on account of dry weather.

"Here are some of my experiments with Stabler Walnuts. Two of them along a run (stream) 18-25 feet, grafted in 1935-36 about 200 feet apart. The one had fertilizer or manure regular every year, the other was never fed, just to see if there would be any difference.

"Last year the fertilized tree was much fuller although the tree was older and bigger. After they were cured I cracked a bucketful of each. After the kernels were picked out you should have seen them—from the fertilized tree I had a dish of nice plump kernels, not many

black ones. From the unfertilized tree I got a dish of poor looking kernels—many of them shriveled and the plump kernels didn't have as nice a color. Side by side there was a big difference. One dish was nice and full, the other three-fourths full. Don't know how much they weighed.

"I tried a new experiment with the borax this year on an Alpine English Walnut tree. It used to have dark poorly filled bitter kernels; this year the kernels were well filled, white and sweet. Tree, 8 feet high. This is the third crop—30 walnuts. I put only 4 ounces around the tree this spring. I can't guarantee this as it might be in pollination. Tried on Thomas, too, but no results. This is the off year for Stabler and also for the other varieties."

In a later letter he again wrote:

"Several weeks ago I wrote you about using borax for walnut trees, saying that the Thomases are mostly deaf like the other years. Although far from satisfactory yet, I got almost two 12-quart buckets of good Thomas Walnuts from a little over a bushel of walnuts unhulled. I am hoping it will be doing better next year. Before, I usually had maybe a few dozen good ones out of a bushel of Thomas Walnuts.

"P.S. The reason I ever started using borax this spring is because I saw in farm papers that it makes plumper seed in crops such as alfalfa, clover, wheat, etc. Walnuts are a seed, too—aren't they?" Yes, Enos, kernels are seed. (Ed.)

Note again the clear deductions made as noted in his P.S. I wish others would experiment with this and report results.

Reading his experiments on fertilizing I recalled our local druggist enthusiastically telling me the other day, "I got a good two bushels of hulled nuts off my Thomas this year, 13 or 14 years old, and boy, are they nice?"

But note—his tree stands in an abandoned chicken lot. Where the chickens left their mark on the soil and the earthworms play. Why doesn't the writer of that song, "Where the Flying Fishes

Play," write one on "How things grow where the earth worms play?"

ENOS D. PEACHEY, Belleville, Pa.

## Soil and Forests Essential For Penna. Prosperity

(Continued from page 2)

State Forest in Franklin County for maneuvering. The 75mm Howitzer Gun Batteries are carried on pack mules, each gun broken down into six units, requiring six mules to carry each howitzer.

Modern maneuvering must be done under some kind of cover. There are eyes in the sky. Forests are the best areas for troops to bivouac out of sight of the air forces.

There is much timber on and near the famous Indiantown Gap Military Reservation. This has helped make it one of the finest training centers in America. Already during this war the 28th, 29th, 44th, 37th, 77th and 95th Infantry Divisions and the 3rd and 5th Armored Divisions and the Port Battalions have trained at Indiantown.

The Pennsylvania Military Department, the Game Commission and the City of Harrisburg together own almost 70,000 acres in the Gap area. This includes artificial lakes, second growth forest, cleared land and streams. After the war it can be used, not only as a military training center, but also as a recreation area and a timber reserve.

What the Forestry Department could do in this national emergency it has done. Our forest fire observation towers have been made available to United States Aircraft Warning Service. Many of the personnel have been of great value as volunteers in war work. Their special knowledge has been very useful and valuable.

A carefully planned State Forest program for forest utilization has been drafted to meet the war emergency. It includes the selective system of cutting mature timber. Regulations which guarantee the protection of smaller trees, watersheds, recreational areas, wildlife and other essentials of sound forest practice are pro-

vided in the contracts. The timber cutting is at all times under the immediate supervision of the Department. Every day inspections are made to see that the contractor is carrying out the provisions contained in the agreement.

It is a pleasure to report that Secretary Kell has formulated an excellent post-war program for improving the State Forests. Various projects have been set up, with the estimated number of man-days for each project. These will give work to returning veterans who may have trouble in finding employment.

We must take care of the trees we have. We must plant more. Intelligent care of this great and growing asset is paramount.

Forests are nature's way of preventing floods and restoring the soil. Both are vitally important to Pennsylvania. Forests and rich farms are a permanent asset to set up against the staggering debt that our children and their children must assume. We have been short-sighted and unfair to the coming generations. What we can do to rectify our mistakes we must do. We must carry over our progressive spirit into the far future.

This has been a progressive nation. Free enterprise in America has won the battle of production. We have made more guns. We have made better guns. We have made more and better planes, trucks, ships and preserved foods than any other nation. Our living standards have been higher than those of any other Country in the world. Why?

Because of our great natural resources, converted to our use by inventive genius and hard work. Because of the mighty spirit of free enterprise that gave every American his opportunity in a free society.

Now we have come to a time when we must be more conservative. Through our research laboratories and technical skill we must make our raw materials stretch farther and farther. In this great undertaking government must see that all are treated fairly. Government can provide the results of research and see that these are free and open to all. Gov-

ernment can aid, but government must not direct.

Government can help in the tremendous undertaking of creating new forests on our submarginal lands. We no longer need this acreage for agriculture. Modern methods of farming have made it possible to produce so much more per acre and per man than was possible in past generations that this submarginal land can be spared from the plow.

Government can help the small business man by giving him an opportunity, free from hampering restrictions and burdensome taxes, to enter the lumbering business. The emergency of war is bringing back this business in many parts of the United States. It should be brought back in Pennsylvania. No State among the older States has a better opportunity. Government can do a great thing, if it will. It can restore freedom of action. That is what our armed men are fighting for and they must have it when they come home. If men, at any time in human history, ever earned the right to pursue happiness, they have earned it. To be able to pursue happiness is the freedom of action which really embodies all of freedom.

Today we are thinking in terms of war. We are acting in terms of war and will be until this war comes to a successful conclusion. We hope and pray that success will crown our efforts and that the war will end during this Administration.

Peace will bring a multitude of problems. They will be equally as pressing as those confronting us now in these years of battle.

First to receive our attention and consideration will be the soldier as he comes home. Under no circumstances must we permit the millions of veterans to become another lost generation, perplexed, worried and unable to find themselves. Wherever possible the soldier must be returned to the job he left, if he wants it.

Work, care and consideration he must have. It may be that thousands of them can find freedom of action and the future pursuit of happiness in the Penn's Woods of tomorrow.

## Maryland's New Forest Regulation Law

(Continued from page 3)

is when firewood or timber is taken for the domestic use of the owner or his tenant. Appeals from decisions of district boards may be taken to the Commission of State Forests and Parks, and from it to the circuit courts. Under the terms of the law, state district foresters serve as executive officers and secretaries of local boards. Administration of the act itself is placed with the State Forester. Violations of any of the provisions of the law or Commission rules and regulations constitutes a misdemeanor, punishable by a fine of not less than \$10 nor more than \$500, or imprisonment for not more than six months.

This covers what may be termed those features of the law which relate to forest management. There is also in the act, however, a section which provides for registration with the Commission of State Forests and Parks and licensing of all persons and companies engaged in raw forest products businesses, whether acting as principals or as agents for others. In this category the Commission has placed sawmill operators, and dealers or operators in pulpwood, fuelwood, mine timbers, poles and piling, posts, veneer logs, cooperage stock, crossties, pin bolts, copper poles, maple sugar and syrup, Christmas trees, laurel, holly, and mistletoe. I shall have more to say about this licensing system later on.

As a first step in administration of the act, the Commission of State Forests and Parks has promulgated, for the guidance of district forestry boards, seven rules and regulations of forest practice. The first of these aims to provide for adequate growing stocks of young timber on wooded areas throughout Maryland, and requires that after commercial lumbering operations there shall be left standing, per acre, one hundred thrifty young trees of commercial species 4.0 to 8.9 inches in diameter at 4½ feet above ground, or twenty trees from 9.0 to 11.9 inches, or

eight trees of diameters 12 inches and up, or any proper combination of two or more of these size classes. This, of course, is selection cutting. The primary aim of forest management under the law is, I hardly need say, the production of sawtimber, the product calculated to bring the greatest money returns to the owner. Money is what he wants, and money is what we aim to give him.

In even aged Virginia pine stands, modified clear cutting, with groups of seed trees left to ensure reproduction, often seems the best practice, and the second regulation permits this when district boards approve it. Except for certain purposes, the law prohibits complete land clearance.

The third regulation defines the types of trees that shall, so far as practicable, be cut for fuelwood, pulpwood, mine timbers, and the like. In these are included sound dead trees, down or standing; diseased or insect-infested trees, or those damaged by fire; hardwoods of bushy form, with stems too short to make a sawlog 8 feet long; crooked or broken trees; trees that are seriously overtopped and stunted; "wolf" trees with excessively large crowns; and trees of species not in demand for lumber. In effect, this regulation provides for revenue-producing improvement cuttings, such needed in many of our woodlands.

The fourth regulation has to do with forest protection, mainly from fire. It provides, among other things, that during the three spring months of March, April, and May, and during the four fall months of September, October, November, and December, brush and other inflammable debris may not be burned except after 4:00 p. m. and before 12:00, and outlines safety measures which the landowner must take to prevent the spread of fire. Provision is also made for cleared safety strips around sawmills and dumps, and for fire pumps and tools to be maintained at mills and carried by railroad rights-of-way clearance crews. It further requires that slash which results from woods operations shall be scattered, with all tops lopped as far up as a diam-

eter of 3 inches, and that all such slash shall be removed at least 50 feet horizontally from the property line on either side of a public highway. Slash which results from the construction or maintenance of highways, pipe lines, electric transmission, telephone, or telegraph lines must be disposed of within thirty days by controlled burning. A final provision is that, except when snow is on the ground, no one shall throw away any lighted tobacco, cigars, cigarettes, matches, or other ignited material, on any forest land, private road, public highway, or railroad right-of-way outside the limits of incorporated cities and towns.

The fifth regulation requires that in lumbering or other woods operations adjacent to public highways there shall be left along the road or roads a belt of timber 50 feet in width, from which may be removed only such trees as are marked by a representative of the Department of State Forests and Parks.

The sixth regulation reads: "If already on a tract when it is lumbered, suitable den trees and ground vegetation will be left after logging to provide adequate food and shelter for wild life."

The seventh and final regulation is designed to do away with "tree butchery" in Eastern Shore and Southern Maryland holly stands, which provide a large source of revenue for local residents just before the Christmas holidays. In part, it reads: "Only a certain proportion of the smaller branches will be removed with a pruning knife or with shears. The use of saws, hatchets, or corn knives in holly stands is prohibited. No healthy holly tree with a diameter less than 14 inches, breast high, will be cut for any purpose."

These regulations have not as yet actually been applied. Three district forestry boards have been appointed—one for Garrett County, in Western Maryland, one for Harford County, in north-central Maryland, and one for the four lower counties of the Eastern Shore. All have held initial meetings, and two have organized under chairmen and vice-chairmen. Eventually, we expect to have

about fifteen local boards for Maryland's twenty-three counties.

Public reaction to enforcement of the regulations cannot, of course, be forecast with any degree of certainty. We have, however, one thing very much in our favor, and that is the composition of the district forestry boards. Each one so far appointed is thoroughly representative of the local community. Timber owners, millmen, bankers, lawyers, mining men, and plain businessmen, who have accepted membership on the boards, without compensation, because they believe in what the law aims to accomplish and want to do their part to put it across. Their individual and collective judgment is bound to be respected, and for that reason our task is made so much the easier. This is Democracy in action.

I believe, moreover, that most men are reasonable, provided the why and wherefore of a matter is explained to them in clear terms. I cannot somehow accept the dictum that, almost invariably, "the other fellow's too dumb to know that he's wrong and you're right." As a matter of fact, a great many people in Maryland see the need for forest conservation without being told. A timber operator recently said to me, "The only trouble with the Forest Conservancy Districts Act is that it comes fifty years too late."

Another straw which may show the direction in which the wind blows is the reception accorded the system of licenses for forest businesses, which has been in full force and effect since the first of the year. I am glad to report that there has been remarkably little opposition on the part of millmen and others, who handle raw products of the forest, to registration with the Commission of State Forests and Parks and payment of a fee of from \$5 to \$25 annually in accordance with the type and size of business involved. We have encountered a few tough spots, but the great majority of operators and dealers have taken the matter in good part and voiced no complaint. With a cash outlay involved, we had rather expected a certain amount of opposition,

and that there has been so little is highly gratifying.

In the early stages of the law's administration our activities must, of necessity, be largely educational. The public must be brought to realize the need for scientific management of our woodlands—which constitutes the "why" of the matter—and the way in which existing rules and regulations are designed to accomplish this—which constitutes the "how." Education, of course, takes time. It is not an overnight operation. We expect headaches, and are prepared for them. We do not propose to ram the law down anybody's throat. We shall be patient, because for most people this is a new thing, and they need a little time in which to figure it out. On the other hand, we will be firm when firmness is called for.

In a manner of speaking, Maryland will, in this matter, serve as a guinea pig for other Eastern States who may contemplate similar forest legislation. They will be in a position to profit from our mistakes and take advantage of such of our activities as prove their merit. And I am only too glad to have Maryland assume such a role, if that will in any way help in the passage of other forest conservancy laws. For the fullest success in our undertaking we need company, especially that of those States which border us. My sincere hope is that such encouragement and support will not long be denied us.

#### REPORT OF THE SECRETARY FOR 1943

*(Continued from page 6)*

urge this not only as a means of reducing unemployment after the war but also to break the trend toward concentration of people in cities.

There are in Pennsylvania over 3,500,000 acres in farm wood lots. This vast acreage is potentially the source of considerable cash income for the farmers and of raw material for the industries of the State. Conspicuous examples of farm wood lots that are managed on a crop basis may be found but these are a tiny minority. We know that through the

County Agent farmers may get advice from the Extension Foresters, but 160,000 farmers are more than two Extension Foresters can hope to assist. We realize, too, that the District Foresters are giving valuable help to many woodlot owners, but they likewise have more than they can do. With additional personnel the Department of Forests and Waters could render a valuable service to thousands of farm woodlot owners.

It is the obligation of the Pennsylvania Forestry Association to scrutinize the conservation policies which may effect Pennsylvanians, to champion constructive legislation and to propagandize the economic, recreational and aesthetic assets the citizens of Pennsylvania possess in their forest lands.

We believe consciousness of these values of wooded property will be more widely realized by the establishment of publicly owned forest areas by counties, municipalities, boroughs, townships, and school districts. A community forest will not only afford an opportunity to prove locally the value of conservation of our forests but will more surely create in the mind of the individual the consciousness of ownership with its attendant desire for protection. Community forests will localize work projects of a beneficial nature.

The Association is taking an active part in the recently instituted "Penn's Woods" project at Bowman's Hill State Wild Flower Preserve. Since this year is the tercentenary of the birth of William Penn, it is fitting that in this area will be planted only species of trees and shrubs which are native to the State named for him. The committee is encouraging gifts for the planting, care and marking of "Tribute Trees." Each tree will be planted as tribute to a conservationist, scientist or other individual, living or dead who is considered worthy.

This is the 58th annual meeting of the Pennsylvania Forestry Association. To the pioneers in this organization is due great credit. Through their efforts were started the State Forests, the system of

fire protection and the many other wise features which today we accept as natural functions of the State within what is now the Department of Forests and Waters. No less is there need after 58 years for further refinements and extensions of these activities so that the people of Pennsylvania may benefit most from wise use of the wooded lands of the State.

Respectfully submitted,  
H. GLEASON MATTOON,  
*Secretary*

### COMMUNITY FORESTS — AN OPPORTUNITY AND A CHALLENGE FOR PENNSYLVANIA

(Continued from page 8)

been active and effective in many parts of the country. James Bryce, a member of the Borough Council and a civic minded citizen in Milford, Pike County, has been the inspiration to have the village purchase a beautiful forest glen that should have been acquired years ago—and just in time to save it from the axe! This will serve as a nucleus for a gradual extension to nearby forested slopes. Harris Reynolds in Massachusetts will have a great living and ever-green monument go down in history in his memory. He has done more with his town forest program than anyone has accomplished in any part of the country.

#### Revenues

Some of these community forests are just old enough to begin showing some income. This is the ultimate objective that will appeal to most people. At Little Falls, New York, on a 5,000-acre watershed forest, more than \$23,000 have been taken in from the sale of standing timber. Westfield, Massachusetts, one of the outstanding forests with 5,887 acres, was started in 1908 with a native second-growth stand of timber. Nearly one million trees have been planted on 800 acres. From 1913 to date, more than \$57,487 was taken in from fuelwood distributed to welfare agencies during the depression and from the sale of sawlogs, posts and poles. North Adams,

*Sixteen*

Massachusetts, secured in 1943 a revenue of \$10,336 from its forest of 3,500 acres. Erie County, New York, received \$2,676 from the sale of Christmas trees last December in Buffalo. Oneida County, New York, has 3,500 acres distributed in 21 different units. In 1943, it took in more than \$1,192 from the sale of excelsior wood. Thus from the sale of sawlogs, fuelwood, poles, posts, Christmas trees and other products, these forests already are beginning to make a definite financial showing.

May I congratulate Pennsylvania, and particularly Governor Martin, his Forestry Staff, and your Forestry Association on your forward looking vision and constructive ideas as well as the postwar Planning Commission on its plans. Community forests can play an important part in our postwar planning to make this grand old country a better, finer and happier place in which to live—and especially for those millions of our boys who will soon come marching home!

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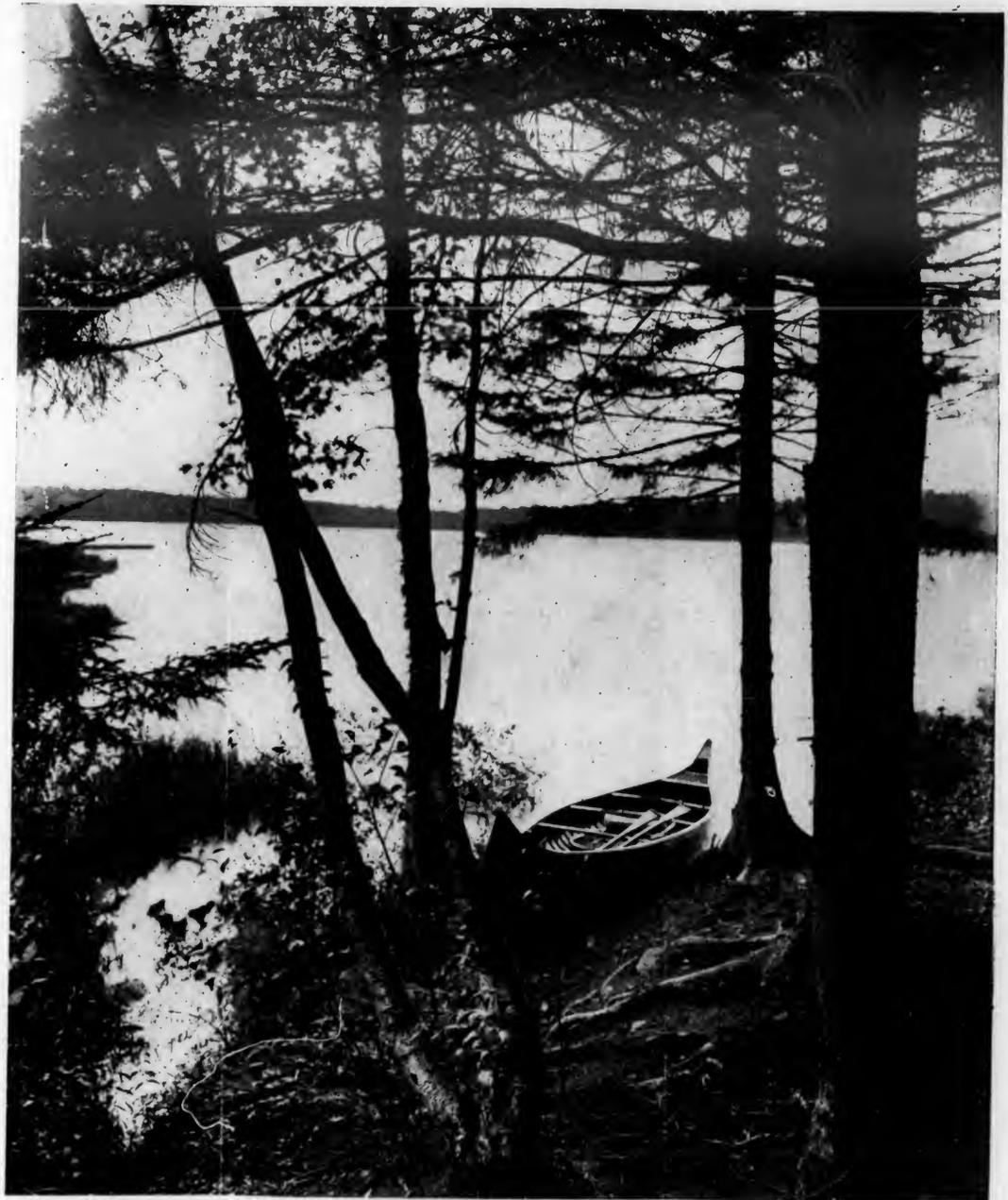
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THE PENNSYLVANIA FORESTRY ASSOCIATION

MAY-JUNE  
1944

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### THE PENNSYLVANIA FORESTRY ASSOCIATION

*Founded in June, 1886*

Labor to disseminate information in regard to the necessity and methods of forest culture and preservation, and to secure the enactment and enforcement of proper forest protective laws, both State and National.

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## Game Lands in State Planning Program

by F. A. PITKIN

*Executive Director State Planning Board*

FIRST, MAY I commend the State Game Commission for the wisdom with which it has developed and administered its program throughout the years since it was established. Today's conference\* is one more example of the wise planning on the part of the Game Commission which has brought Pennsylvania nationwide recognition as a leader in this field.

As a representative of the State Planning Board and as a Pennsylvanian who is an ardent if not always successful hunter, I believe that the Game Commission has been extremely successful in its primary objective of providing healthful recreational opportunity to Pennsylvania sportsmen and sports-women as well as in its secondary objective of providing supplementary food resources, fur and other forest products. I am in complete agreement with the early policy of the Game Commission of acquisition of large tracts of low-cost land for hunting purposes and with the more recent partial shift in emphasis to the purchase of higher priced land and the lease of hunting rights on land near our metropolitan areas.

The continuation of these policies with continued effort to secure geographical distribution of game lands and leases which will adequately serve the residents of our larger urban areas will eventually give us hunting opportunities which can

never be rivaled in any other industrial state.

From the point of view of comprehensive state planning, the provision of adequate recreational opportunity for our citizens is of great importance and there can be no doubt as to the value of the Game Commission program in this respect. However, I would like to discuss some of the other aspects of your program—aspects which are quite incidental to your main objective but which are of great importance to the Commonwealth and its citizens.

One objective of comprehensive state planning is to ensure the wise use of all of our resources and of course, most important of all, the wise use of our basic resource—the land. Unfortunately, we are far from that goal today. Land abuse is widespread. Irreplaceable top soil is being washed from our fertile farms because of careless farming methods. Poor farm land becomes poorer every year because the unfortunate farmer who is trying to make a living on submarginal land cannot afford to buy fertilizer. Ruthless clear-cutting of timber on mountainsides and repeated forest fires leave the soil with no protection against erosion. The eroded soil chokes our streams and fills up our reservoirs. It is of interest to note that in the lower Schuylkill Valley, where the anthracite mines are blamed for ruining the stream, analysis shows that almost half of the material dredged

\*Special Game Commission Conference, Harrisburg, Pa., March 8, 1944.

from the river is not refuse from the mines—it is the much more valuable soil from our farms and hillsides. We bedevil the mine operators and coal washers for their waste but we blithely disregard the much more serious waste of our top soil.

Aside from the waste of the soil itself, there are social and economic wastes involved in misuse of land. We permit the back-woods farmer to try to make a living on a submarginal farm miles from his nearest neighbor. Not only does he fail to make a living thus putting him on relief at intervals, but also we must subsidize him by providing roads and school facilities for him and his family. Sometimes his only cash income is the payment he receives from the school district for transporting *his own* children to school.

Other results of improper land use are seen when we trace the history of some of our tax delinquent land. Purchased for almost nothing at the County Treasurer's sale, the new "owner" will bring in a crew and cut off all of the timber regardless of its immaturity and then immediately allow it to become tax delinquent again—so in a year or two it is back in the hands of the County Treasurer again but this time it is worth much less than it was the first time.

We permit our lumbermen to clear-cut and move on, with no requirement that they replant—indeed, we do not even require that they leave a few seed trees to ensure the gradual reforestation of the area.

Since healthy stands of forest trees along our streams and rivers are nature's own device for controlling stream flow and retaining the moisture of the winter snows and summer rains in our surface and sub-soil, this continuous waste of forest cover has led year after year to disastrous floods which frequently destroy millions of dollars worth of property and wash down into the river bottoms millions of dollars worth of fertile soil. Pennsylvania is no longer a pioneer state. To support its more than ten million inhabitants it needs every acre of

its fertility and it needs every mile of its stream and river banks as sites for its factories or as fields for its crops. Neglect of our forest resources resulting in soil erosion, in flood dangers, and in the gradual decline of our year-'round water supply is a ruthless and unforgivable waste of all those vital resources we hope to bequeath to our children as some compensation for the heavy debt they must pay for the cost of this present World War.

I could go on and on enlarging upon the types of land abuse and the damage to our irreplaceable resources and the cost to us as taxpayers, but I know that this is unnecessary with a group of conservationists such as this. You know the story as well as I do.

But, what can we do to correct these and other abuses of privately owned land? There are three possible solutions—education, regulation or public ownership.

Education is being tried but it must be confessed that we are not doing a very good job in conservation education as yet. It is true that we point out the advantages of soil conservation, the dangers of forest fires and the vital importance of our natural resources, but our effort is still pretty weak and the results are almost imperceptible.

Progress is being made through the many agencies which have demonstrated the importance of forest growth in erosion preservation and in controlling spring floods—but education alone cannot solve this problem.

Regulation of the use of privately owned non-urban land is possible. In Pennsylvania our County Zoning Enabling Act makes it possible for our counties to set aside parts of their area as Forestry Districts or Recreational Districts in which any new year-'round habitation would be forbidden. Our Soil Conservation District Law theoretically makes it possible for a group of farmers to compel a careless neighbor to stop soil erosion which is threatening their farms. But so far the land-retirement type of

(Continued on page 10)

## Conference Held on Management of Game Commission's Land Holdings

THE PENNSYLVANIA Game Commission, having acquired nearly three quarters of a million acres of State Game Lands, chiefly forest, and holding leases of the hunting rights for more than a quarter million acres of privately owned lands, much of the latter being farms, recognizes its obligation to coordinate wildlife management with the best forestry and agricultural practices. On March 8th, it met with more than 70 prominent representatives of not less than 25 State and Federal Conservation agencies, the purpose being to pool expert knowledge in an effort to determine the most effective and economical methods of managing its holdings.

Governor Edward Martin, whose personal interest in the various phases of conservation is well known, welcomed the conferees, commended them for their interest



LUMBER ROAD THROUGH GOOD HARDWOOD TIMBER  
Stony Creek Valley, within the former Philadelphia and Reading Coal and Iron Company lands, under contract for purchase by the Game Commission.



VIEW OF THE LYKENS SECTION

At the junction of the Greenland dirt road and the State Highway on Peters Mountain. Forest growth on the left side of the road is largely scrub oak; commercially valuable trees on the right. Part of the former Philadelphia and Reading Coal and Iron Company lands.

and encouraged them to plan carefully. He stressed the need of wise use of our remaining natural resources, and pointed out the futility of the State acquiring large acreages of land unless they are given proper care.

President of the Commission, Ross L. Leffler, outlined the purposes of the conference, listed some of the major problems confronting the management program, and said he hoped the combined skilled knowledge of the conferees could find practical solutions. He explained that any land management program to be sound must be planned to benefit future generations as well as for the hunters of today. Continuing, he said the first major problem is, "Should our game land management program be based on: (1)

(Continued on page 8)

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## FOREST LEAVES

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### WHAT'S THE MATTER WITH MURPHEY

IT IS TIME for foresters to go into a huddle to review their signals. The public may overlook exaggeration as the natural result of overzealousness for the cause of conservation but the inconsistencies and contradictions which emanate from the supposed authorities on forestry matters are bewildering.

Because of iteration and reiteration, the belief that clear cutting of forest lands is wasteful and shortsighted, is being implanted in the mind of the public. Forestry associations, garden clubs, women's clubs and other public spirited organizations have condemned the cut-out and get-out method as pernicious and inimical to a sound economy. Over the years these organizations have been waging a successful campaign for the wiser, long range practice of selective cutting and replanting where necessary, in order to increase and maintain the production of wood products. The Pennsylvania Forestry Association has consistently advocated such a policy believing that it reflected the opinion of foresters, state and federal, who should know. This Association still believes that the gravest threat to the future of this state lies in the wastage of its soil and forest resources. Clear

cutting of forests and destruction of soil go hand in hand because they are both the result of ignorance or avarice.

And now, as reported by some of those present, comes Frank T. Murphey, Extension Forester, to contend that the educational work of the years is all wrong, that selective cutting is the bunk and replanting is a waste of time and trees. These bizarre opinions were expressed in the course of Mr. Murphey's address at a County Federation of Women's Club meeting. Unfortunately, no written copy of the talk is available but the audience was in agreement as to its portent. He went on to say that in his opinion Pennsylvania is growing too much wood and that, in any case, there isn't any money in growing wood "so why should the women of the state get so worked up over the forestry situation."

In reply to a question, he said that clear cutting should be practiced on both public and private lands and by implication he criticized the Department of Forests and Waters for spending time and money growing millions of trees needlessly.

Perhaps this was a sample of Mr. Murphey's wry humor which was misunderstood by the earnest ladies present. Perhaps Mr. Murphey should be warned that it does not pay to joke with the women. Their interest in the conservation of our natural resources is real and great and they will not take kindly to the intimation that it is foolish for them to get worked up.

It may be, however, that Mr. Murphey is being blamed for a policy to which he must submit willy-nilly; it may be that the Extension Service, of which he is only a part, should be examined with a critical eye. If our tax money is being spent to preach such ideas, it is time to call a halt. In the meantime, if Mr. Murphey has been quoted correctly, he should be gagged before someone believes him.

H. G. M.

FOREST LEAVES

## A Coast to Coast Bluebird Trail

by MARTHA SERENE LEWIS

A WARTIME MEASURE which has become popular with the Victory gardeners of America is a coast to coast bluebird trail. This project was originated by Mrs. Erle R. Jackson of Kirkwood, Missouri, Bird Chairman of the Federated Garden Clubs of Missouri, in the spring of 1942. The Missourians liked the idea so much that they now have 9,000 houses in their state with ten out of every fourteen occupied.

The reason for choosing the bluebird is first of all because he is the state bird of Missouri, and is one of the most loved birds of this country. When Maeterlinck wrote his "Bluebird" this bird at once became a symbol for happiness throughout the world. Women of America are hoping that he may become a symbol of peace as well. With his bright colors and cheerful song he brings the kind of peace we prefer rather than the dull colors and mournful note of the mourning dove. Besides, he is one of the best little conservationists in America and attacks the Japanese beetle and other insect pests with such vehemence that he is greatly valued by Victory gardeners and fruit growers.

When ornithology became an established science, birds, like plants, were classified into families and given Latin names. Laymen are often surprised to discover that their favorite little birds belong to the same family as some large, or not so well-liked species. The bluebird belongs to the Thrush family—Turridae—a family famous for its songsters. The robins and nightingales, as well as the thrushes properly belong in this group. The Eastern Bluebird is about seven inches long with his upper parts a bright blue and under parts cinnamon-chestnut-rufous and white. His bill is small and slender, his wings long and pointed. The tail, which is shorter than the wing, is decidedly notched. His natural nesting place is a deserted wood-

pecker's hole, the hollow of a decayed tree, or crevice of rock. He was one of the first birds to take advantage of boxes placed around farm houses for his convenience. Hollows in rail fences are also popular with bluebirds where their nests of grass and weed stalks and a little bark are often found. The eggs, four to six in number, are light bluish white.

The garden clubs are placing these bluebird houses, four to the mile, along the main highways of the nation. School children, Boy and Girl Scouts, members of the Junior League, and any others who can be pressed into service are making these simple houses and the garden clubs are paying for them and seeing that they are erected.

The Garden Club Federation of Pennsylvania decided to sponsor the project this spring — 1944 — and immediately there was widespread interest throughout the state. The first club to respond was the Garden Club of Kittanning which began the erection of houses along the Benjamin Franklin Highway. The Philadelphia to Pittsburgh trail began with the formal placing of a house in Radnor on February 19 at the corner of Radnor Road and the Lincoln Highway near Wayne. This house was contributed by William Mechlin, manual training teacher, and Wallace S. Brey, principal of the Tredyffrin-Easttown Joint High School in Berwyn.

Under the chairmanship of Mrs. Thomas A. Wood and Mrs. Edward LeBoutillier of St. Davids and Ithan eight bluebird houses were made in the Radnor High School under the direction of Charles Reilly, manual training teacher of that school, and placed along the Lincoln Highway through Radnor Township.

Mrs. Paul Lewis of Strafford is Bird Chairman of the Eastern Division of the Garden Club Federation of Pennsylvania, and Mrs. Charles A. Styer of Wil-

(Continued on page 7)

Five

# Travels in Georgia and Florida 1773-74

A Report to Dr. John Fothergill

WILLIAM BARTRAM

Annotated by Francis Harper

AS PART II OF Volume 33 of their TRANSACTIONS, the American Philosophical Society has recently issued this interesting *Report*, after long delays incident to the work of printing in war time.

The *Report* covers the first two years of Bartram's extended trip, which is described in his famous *Travels* published in London in 1791.

Just as Peter Collinson, the Quaker cloth merchant of London helped and encouraged John Bartram to carry on his valuable work in the previous three decades, Dr. John Fothergill, one of London's leading Quaker physicians befriended William Bartram for many years in his study of natural history. As a result, not only his diaries, but also the specimens Bartram collected, many of them new to science, were sent to Dr. Fothergill.

William Bartram possessed marked abilities as naturalist, writer and artist, as the wide popularity of his *Travels* both here and in various European countries attested. But its appeal lay mainly in the literary field. Scientists criticized some of its records of observation. Dr. Harper has shown, however, in his careful Annotations of this *Report* which formed the basis for the *Travels*, that Bartram was truly an accurate observer of nature, as well as a skillful writer.

One finds here fewer literary flights than in the *Travels*, yet these are not wholly lacking. For example, on page 155 the description of the coming of dawn on the great Allatchua Savanna is a poem in prose. "Arose early at the call of the watchful Watula, whose musical voice rings through the forest, calling up

American Philosophical Society, Philadelphia. November, 1943. Paper, \$2. Cloth, \$2.50.

Six

the drousey feathered Inhabitents of the grove and proclaims the Majesty of the rising sun. I take a view of the chearfull Savanah, & proceed on our journey." . . . .

The story of the discovery of a little gold fish, now known as Bartram's minnow; of new birds seen, and of many new plants; the first records of alligators bellowing, long considered "nature faking" by scientists, but now fully confirmed—all make this *Report* an important contribution to early American natural history.

Like his father, William Bartram was held in high regard by the Indians through whose lands father and son had travelled ten years earlier, in the "deep south." This *Report* includes important observations on the manner of life and records of the ancestry of tribes visited.

While research has shown William Bartram to have been a truthful recorder of natural phenomena, he did not have his father's accuracy as to dates, distances and dimensions. The editor shows that these inaccuracies have caused the expenditure of a lot of time and effort to make records of known events tally in reports of father and son, and in this *Report* and in the *Travels*. Yet he feels that they must be classified merely as "poetic license," and in no way seriously detracting from the value of the records.

Dr. Harper's interesting Introduction covers some 10 pages. In this he gives credit to the late Arthur N. Leeds as perhaps most responsible for the present study and publication of these valuable Bartram papers. The *verbatim Report* then follows in 38 pages; geographical, historical and other Comments follow, on 21 pages; an Annotated Index, 37 pages; a General Index, nine pages, and

(Continued on page 11)

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## \$2,247,000 Plant to

## Convert Wastes to Alcohol O.K.'d

MORE THAN 100,000,000 additional gallons of industrial alcohol, wholly from sawmill wastes, may be made available annually, according to an official statement by the War Production Board which just announced approval by its Chemical Bureau of the first American plant to produce wood-sugar by an adapted German process.

The Defense Plants Corporation, the announcement said, has been asked to provide \$2,247,000 to construct a wood-sugar and ethyl alcohol plant at Springfield, Ore., designed to produce 4,100,000 gallons of alcohol a year. It would utilize about 200 tons of dry sawdust and other mill wastes daily and is expected to be in operation within a year.

The project was sponsored by the Willamette Valley Wood Chemical Company, composed of Oregon lumbermen.

The program calling for 100,000,000 gallons or more a year would entail construction of many similar plants in softwoods regions of the West and South.

"Not only is this development of utmost importance in supplying a war-essential material, but it promises to mean much to forest industries generally," said C. A. Rishell, Director of Research, Timber Engineering Company. "It is well within the realm of possibility that this program will help solve the twin problems of sawmill and logging wastes. If so, a great step will have been taken in the direction of better forest practices and the encouragement of permanent timber growing in many of our leading forest areas."

Technical assistance has been given the project by the Timber Engineering Company, subsidiary of the national lumbermen's organization. Consulting experts have included Erwin M. Schaefer, former head of the first industry of this type in Germany; Dr. Eduard Farber, noted wood chemist, and Carl Levy, former superintendent of the Schaefer plant. All

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three are refugees from the Nazi regime.

The process, according to results obtained by the Forest Service in pilot plant tests last year, will produce approximately 1,100 pounds of sugar from a ton of dry waste wood, from which between 50 and 60 gallons of 190-proof alcohol can be made. The government has been paying an average price of about 90 cents a gallon for alcohol, needed chiefly for synthetic rubber and munitions, while the wood-sugar process is expected to produce it for less than 30 cents a gallon.

Chemical Bureau officials said that production and cost figures of the Oregon plant were conservatively arrived at. Its operation, they said, should develop techniques that would permit further installations at lower initial investment.

### A COAST TO COAST BLUEBIRD TRAIL

(Continued from page 5)

kingsburg is Chairman of the Western Division. Some of the garden clubs of the Philadelphia suburban area which are cooperating in the project and have appointed special chairmen are:

Mrs. N. Delroy Acker, of the Berwyn Garden Club; Mrs. Robert Wood, of the Bala-Cynwyd Garden Club; Miss Marian Little, of the Providence Garden Club, Media; Mrs. J. Bernard McGovern and Mrs. Charles H. Roberts, of the Penn Valley Garden Club.

Also assisting are: Mrs. F. von A. Cabeen, of the Weeders; Mrs. Charles Ristine, Mrs. Warren Graham, Mrs. F. Gregory Pierce and Mrs. Russell Kelly, of the Garden Makers, a Main Line group; Mrs. Charles Suplee, of the Lansdowne Garden Club; Mrs. Horace B. Suplee, of the Club of Little Gardens, Malvern, and Mrs. Ernest W. Sipple, of the Hill and Hollow Club, Wallingford.

Seven

## Conference Held

(Continued from page 3)

its economic value to the people of the State as a whole, (2) its value to those chiefly interested in wildlife, (3) or both?"

Some of the related problems mentioned by Mr. Leffler, in brief, were:

1. In forest territory, will clear cutting or selective cutting operations produce the most game food and cover over a period of time, and at the same time not impoverish the soil or cause erosion?
2. Should exotic species of plants be introduced to increase game food; or should we continue using native species and try to improve and develop them to increase productivity?
3. What is the present carrying capacity of our game range, and to what extent can it be improved to increase the wildlife population?
4. To what extent should the Commission conduct a farming program on the marginal lands it has purchased to maintain suitable conditions for farm-game species?
5. Should the Cooperative Farm-Game Program be revised and expanded; or should the Commission purchase more abandoned farms?
6. How can research be adapted to game land management; and should more Federal Aid in Wildlife Restoration funds be used for research?
7. To what extent can forestry and wildlife management be combined or integrated to better advantage on all public lands?

Mr. Leffler said the conferees would appreciate that many of the problems were not confined to the Commission alone, but were of interest to farmers, foresters, and other specialized agencies, and that he hoped those concerned would help formulate a program acceptable to all.

Eight



STONY CREEK

Well-known to sportsmen of Dauphin County. Within the former Philadelphia and Reading Coal and Iron Company lands under contract for purchase by the Game Commission.

Dr. Hardy L. Shirley, Director of the Allegheny Forest Experiment Station, said Pennsylvania has between 1½ and 2½ million acres of low quality forest and brush land and submarginal farms which individuals can ill afford to own, and that game is the first crop such land can produce. He thought such land should be acquired by the Commonwealth, but said ownership carries with it an obligation of management to the best overall interests of the public. After mentioning a number of ways by which his organization could help in finding solutions to some of the problems, Dr. Shirley said he would be happy to cooperate to the extent the Station's resources permit.

Mr. F. A. Pitkin, Executive Director of the State Planning Board, discussed the Game Commission's land program in its relation to future State Planning. He stressed the need for adequate recreational opportunities, and said there could be no doubt as to the value of the Game Commission's program in this respect. He estimates there are approximately 6,560,000 acres of Pennsylvania which might be termed "problem area," of which 3 million acres are now in pub-

FOREST LEAVES

lic ownership, and believes the remainder should be acquired by public agencies.

Hon. Miles Horst, Secretary of Agriculture, said Pennsylvania farmers are vitally interested in the conservation of wildlife, and cautioned the Game Commission against acquiring land which might be needed for the production of food. Continuing, he said his father always insisted farm fences be kept clean of brush, weeds and vines, and that trees should be removed because they interfered with his binder. "Maybe we were standing in our own light," he said, "in forgetting the relationship of bird life to the success of agriculture."

Attorney General James H. Duff, a renowned exponent of the conservation of natural resources, spoke feelingly on the need of protecting forests to safeguard water supplies, as well as to provide homes for wildlife. He suggested building small dams in streams in conjunction with reforestation and game programs.

The conference was honored by the presence of J. Q. Creveling, Esq., of Wilkes-Barre, and Mr. Wm. B. McCaleb, of Harrisburg, Vice-President of the Pennsylvania Forestry Association, both of whom were former members of the Game Commission and now past 80 years of age. Mr. Creveling spoke briefly and asked for effective planning to conserve and increase our wildlife resources, and advocated continuation of the Commission's land purchase program.

Other prominent persons who attended the conference, some of whom contributed to its success by making valuable comments, included:

- Dr. Fred Lininger, Director of the Agricultural Experiment Station, State College.
- Mr. Robert Vail, Sports Writer, Philadelphia Daily News, Philadelphia.
- Dean R. L. Watts, State College, Pa.
- Mr. Ellwood B. Chapman, President Pennsylvania Parks Association, Philadelphia, Pa.
- Dr. J. Horace McFarland, Harrisburg, Pa.
- Mrs. G. Ira Stott, Chairman, Department of Conservation and Gardens, Pennsylvania Federation of Women's Clubs, Philipsburg, Pa.
- Mr. Wm. E. Montgomery, Deputy Secretary of the Department of Forests and Waters, Harrisburg, Pa.
- Mr. Frank C. Edminster, Chief, Regional Biology Station, Soil Conservation Service, Upper Darby, Pa.

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- Mr. John Hershey, Secretary, Pennsylvania Nut Growers' Association, Downingtown, Pa.
- Mr. Harris G. Breth, Editor of Great Outdoors, Pittsburgh, Pa.
- Mr. H. Gleason Mattoon, Secretary, Pennsylvania Forestry Association, Philadelphia, Pa.
- Dr. R. D. Anthony, Instructor, State College, Pa.
- Mr. M. C. Merritts, Past President, Pennsylvania Federation of Sportsmen's Clubs, Altoona, Pa.
- Hon. R. Lamerton, Vice-President, Pennsylvania Game Commission, Franklin, Pa.
- Hon. G. I. Phillips, Member Pennsylvania Game Commission, Alexandria, Pa.
- Hon. Harold Moltz, Member Pennsylvania Game Commission, Williamsport, Pa.
- Dr. H. E. Kilgus, Member Pennsylvania Game Commission, Brockway, Pa.
- Hon. Seth Gordon, Executive Director Pennsylvania Game Commission, Harrisburg, Pa.

Time allotted for the conference did not permit any attempt to formulate actual plans of management. President Leffler, however, asked the conferees to individually write him their ideas and suggestions with respect to the various problems involved.

The extent of the problems facing the Commission becomes more apparent by referring to the following statement of acreages in the various classifications of land owned by the Commission or under its nominal control through leases of the hunting rights:

	Acreage
STATE GAME LANDS. Chiefly forest. Purchased by the Commission from money supplied by hunters. There are 183 unit blocks distributed through 62 of the 67 counties.....	742,362
STATE GAME FARMS. Purchased by the Commission for the propagation of ringnecked pheasants, bob white quail, et. Four in number	2,314
PRIMARY REFUGES ON STATE FORESTS. 86 in number. All in forest territory.....	59,507
AUXILIARY REFUGE PROJECTS. Privately owned land, chiefly forest, for which the Commission leases only the hunting rights. 53 in number .....	45,580
COOPERATIVE FARM-GAME PROJECTS. Privately owned farms in 27 counties, for which only the hunting rights are leased. 73 projects, comprising 1,907 farms.....	153,729
GAME PROPAGATION AREAS. Chiefly forest. Hunting rights leased from private owners. 94 in number .....	27,981
ARCHERY HUNTING PRESERVES. Two on forest land. One is located on the Allegheny National Forest; the other on State Game Lands .....	1,985
DOG TRAINING PRESERVES. Comprises both forest and agricultural lands. Two are located on State Game Lands, one on State Forest, and two on private lands.....	2,668
<b>GRAND TOTAL.....</b>	<b>1,036,126</b>
Deduction to prevent duplication of acreage of State Game Lands in Special Preserves.....	2,130
<b>NET TOTAL .....</b>	<b>1,033,996</b>

Nine

## Conference Held

(Continued from page 3)

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3. What is the present carrying capacity of our game range, and to what extent can it be improved to increase the wildlife population?
4. To what extent should the Commission conduct a farming program on the marginal lands it has purchased to maintain suitable conditions for farm-game species?
5. Should the Cooperative Farm-Game Program be revised and expanded; or should the Commission purchase more abandoned farms?
6. How can research be adapted to game land management; and should more Federal Aid in Wildlife Restoration funds be used for research?
7. To what extent can forestry and wildlife management be combined or integrated to better advantage on all public lands?

Mr. Leffler said the conferees would appreciate that many of the problems were not confined to the Commission alone, but were of interest to farmers, foresters, and other specialized agencies, and that he hoped those concerned would help formulate a program acceptable to all.

Eight



STONY CREEK

Well-known to sportsmen of Dauphin County. Within the former Philadelphia and Reading Coal and Iron Company lands under contract for purchase by the Game Commission.

Dr. Hardy L. Shirley, Director of the Allegheny Forest Experiment Station, said Pennsylvania has between 1½ and 2½ million acres of low quality forest and brush land and submarginal farms which individuals can ill afford to own, and that game is the first crop such land can produce. He thought such land should be acquired by the Commonwealth, but said ownership carries with it an obligation of management to the best overall interests of the public. After mentioning a number of ways by which his organization could help in finding solutions to some of the problems, Dr. Shirley said he would be happy to cooperate to the extent the Station's resources permit.

Mr. F. A. Pitkin, Executive Director of the State Planning Board, discussed the Game Commission's land program in its relation to future State Planning. He stressed the need for adequate recreational opportunities, and said there could be no doubt as to the value of the Game Commission's program in this respect. He estimates there are approximately 6,560,000 acres of Pennsylvania which might be termed "problem area," of which 3 million acres are now in pub-

FIRST LEAVES

lic ownership, and believes the remainder should be acquired by public agencies.

Hon. Miles Horst, Secretary of Agriculture, said Pennsylvania farmers are vitally interested in the conservation of wildlife, and cautioned the Game Commission against acquiring land which might be needed for the production of food. Continuing, he said his father always insisted farm fences be kept clean of brush, weeds and vines, and that trees should be removed because they interfered with his binder. "Maybe we were standing in our own light," he said, "in forgetting the relationship of bird life to the success of agriculture."

Attorney General James H. Duff, a renowned exponent of the conservation of natural resources, spoke feelingly on the need of protecting forests to safeguard water supplies, as well as to provide homes for wildlife. He suggested building small dams in streams in conjunction with reforestation and game programs.

The conference was honored by the presence of J. Q. Creveling, Esq., of Wilkes-Barre, and Mr. Wm. B. McCaleb, of Harrisburg, Vice-President of the Pennsylvania Forestry Association, both of whom were former members of the Game Commission and now past 80 years of age. Mr. Creveling spoke briefly and asked for effective planning to conserve and increase our wildlife resources, and advocated continuation of the Commission's land purchase program.

Other prominent persons who attended the conference, some of whom contributed to its success by making valuable comments, included:

- Dr. Fred Lininger, Director of the Agricultural Experiment Station, State College.
- Mr. Robert Vail, Sports Writer, Philadelphia Daily News, Philadelphia.
- Dean R. L. Watts, State College, Pa.
- Mr. Ellwood B. Chapman, President Pennsylvania Parks Association, Philadelphia, Pa.
- Dr. J. Horace McFarland, Harrisburg, Pa.
- Mrs. G. Ira Stott, Chairman, Department of Conservation and Gardens, Pennsylvania Federation of Women's Clubs, Philipsburg, Pa.
- Mr. Wm. E. Montgomery, Deputy Secretary of the Department of Forests and Waters, Harrisburg, Pa.
- Mr. Frank C. Edminster, Chief, Regional Biology Station, Soil Conservation Service, Upper Darby, Pa.

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- Mr. John Hershey, Secretary, Pennsylvania Nut Growers' Association, Downingtown, Pa.
- Mr. Harris G. Breth, Editor of Great Outdoors, Pittsburgh, Pa.
- Mr. H. Gleason Mattoon, Secretary, Pennsylvania Forestry Association, Philadelphia, Pa.
- Dr. R. D. Anthony, Instructor, State College, Pa.
- Mr. M. C. Merritts, Past President, Pennsylvania Federation of Sportsmen's Clubs, Altoona, Pa.
- Hon. R. Lamerton, Vice-President, Pennsylvania Game Commission, Franklin, Pa.
- Hon. G. I. Phillips, Member Pennsylvania Game Commission, Alexandria, Pa.
- Hon. Harold Moltz, Member Pennsylvania Game Commission, Williamsport, Pa.
- Dr. H. E. Kilgus, Member Pennsylvania Game Commission, Brockway, Pa.
- Hon. Seth Gordon, Executive Director Pennsylvania Game Commission, Harrisburg, Pa.

Time allotted for the conference did not permit any attempt to formulate actual plans of management. President Leffler, however, asked the conferees to individually write him their ideas and suggestions with respect to the various problems involved.

The extent of the problems facing the Commission becomes more apparent by referring to the following statement of acreages in the various classifications of land owned by the Commission or under its nominal control through leases of the hunting rights:

	Acreage
STATE GAME LANDS. Chiefly forest. Purchased by the Commission from money supplied by hunters. There are 183 unit blocks distributed through 62 of the 67 counties.....	742,362
STATE GAME FARMS. Purchased by the Commission for the propagation of ringnecked pheasants, bob white quail, et. Four in number	2,314
PRIMARY REFUGES ON STATE FORESTS. 86 in number. All in forest territory.....	59,507
AUXILIARY REFUGE PROJECTS. Privately owned land, chiefly forest, for which the Commission leases only the hunting rights. 53 in number .....	45,580
COOPERATIVE FARM-GAME PROJECTS. Privately owned farms in 27 counties, for which only the hunting rights are leased. 73 projects, comprising 1,907 farms.....	153,729
GAME PROPAGATION AREAS. Chiefly forest. Hunting rights leased from private owners. 94 in number .....	27,981
ARCHERY HUNTING PRESERVES. Two on forest land. One is located on the Allegheny National Forest; the other on State Game Lands .....	1,985
DOG TRAINING PRESERVES. Comprises both forest and agricultural lands. Two are located on State Game Lands, one on State Forest, and two on private lands.....	2,668
<b>GRAND TOTAL.....</b>	<b>1,036,126</b>
Deduction to prevent duplication of acreage of State Game Lands in Special Preserves.....	2,130
<b>NET TOTAL .....</b>	<b>1,033,996</b>

Nine

## Game Lands in State

(Continued from page 2)

zoning and the neighbor-regulating type of soil erosion control have not found favor in Pennsylvania. State regulation of timber cutting on privately-owned land so as to ensure maximum productivity and the requirement of effective reforestation is working in Maryland but we have as yet no such law in Pennsylvania.

I believe that in the interest of the future of our soil and forests, it will be necessary for Pennsylvania timber resources to be protected by some form of State regulation, and I believe that we should all work toward the adoption of such a law.

But for immediate results we must make use of the one means of forest protection which is now in our hands and which in the past has proved positive and effective—transfer to public ownership.

You, as members of the Game Commission, with your experience in handling the hundreds of thousands of acres of State Game Land are quite familiar with the possibilities of correcting the abuse of our woodlands through bringing it into public ownership. You have seen the gradual reforestation of submarginal farms. You have seen the growth of a valuable crop of game and the simultaneous, if slower, growth of a valuable crop of timber on land which never grew a valuable farm crop. You are seeing that a crop of timber not only creates employment in the woods but also that it creates employment in the factory where the timber is manufactured into useful and necessary products.

Although it is impossible to speak in exact terms, almost one-fourth of the area of the Commonwealth may be classed as "Problem Area" from some points of view. This would amount to more than seven million acres. Much of our present State Forest and State Game Land is in this region, because the distress of the land was reflected in its low cost. Of this seven million acres

much is so-called "forest" land but 2 1-3 million acres of it are not restocking with useful species because clear-cutting, repeated fires, lack of seed trees or the choking tangle of scrub have prevented the starting of useful growth. Of this 2 1-3 million acres, almost 400,000 acres show signs of moderate erosion, while more than 400,000 additional acres clearly show the effects of critical erosion. Although estimates will vary, it has been proposed that eventually 6,560,000 acres of this Problem Area should be in public ownership.

In the Problem Areas less than three million acres are now in public ownership, leaving more than 3 1/2 million acres which still should be purchased. Some of this land is within the nominal boundaries of Allegheny National Forest and eventually will be purchased by the Federal Government but most of it should be acquired either as State Forests or as State Game Lands.

Eventually most of it should be State Forest since timber production should be the primary objective, with game as the secondary crop, rather than the reverse. The reason for this emphasis on timber production is, of course, because of the remarkable progress already made in building up our game resources and the very limited progress we have made in restoring our timber resources. But, as State Forest, this land should be actively reforested—not just left to be restocked gradually by natural methods. No finer or more productive post-war public works project could be undertaken than the restoring of part of our timber-producing potentiality. The creation of temporary post-war employment in reforestation, the creation of continuing permanent employment in the sustained-yield management of the timber lands and eventually the creation of permanent employment in lumber-using industries certainly warrant legislative appropriations for this purpose.

Since we are now importing 56% of the timber products used in Pennsylvania, there can be no question as to the availability of local markets, nor can

there be any question as to our need for this new employment in Pennsylvania. But, whether this land is to be State Forest Land or State Game Land, it should come into public ownership as soon as possible to end its present abuse and to get it into productive use.

The State Planning Board has recommended that a Conservation Commission or Conservation Council be created as an advisory agency to stimulate and coordinate Pennsylvania's many conservation activities. The Executive Director of the Game Commission has kindly given us the benefit of his advice in the formulation of these recommendations. One of the first duties of this Commission would be to develop, with the advice of such agencies as the Department of Forests and Waters, the Game Commission and the State Planning Board, a comprehensive program for the acquisition and development of the problem areas which I have been discussing.

One of the duties of such a Conservation Commission might be to assist in developing mutually satisfactory solutions to the inevitable questions which will arise concerning game vs. timber in the newly reforested areas. We all know that in a severe winter our deer herd is very hard on young forest growth. It may be necessary to temporarily reduce the deer herd for a few years in the selected areas where extensive reforestation is to be undertaken. Then, after the young trees have a good start, the herd can be built up again in that area, while some other area is being replanted in the same way.

These problems will arise and many others also. But they all can be solved since all of us have the same basic objective—to make Pennsylvania a better place in which to live.

The forest area of Russia is reported to be in excess of one and one-half billion acres, and of British-India, including Burma, 215,000,000 acres. The forest area of China is about 20,000,000 acres, including Manchuria.

## PROTECTIVE CREAM AGAINST IVY POISONING

A protective cream against infection by poison ivy was recently developed by the United States Public Health Service. The cream must be applied on exposed skin before contacting the poisonous plants and gives protection for about four hours. The preparation has the following formula:

Castor oil .....	21.5%
Olive oil .....	21.5%
Lanolin Anhyd .....	21.5%
Diglycol stearate .....	12.9%
Paraffin, refined .....	8.6%
Boric acid .....	2.0%
Sodium perborate .....	10.0%
Duponel WA pure .....	2.0%

Dr. George A. Retan, P. S. F. S. '09, Director Laboratory Schools, Mansfield State Teachers College, reports that the Junior High School presented a very interesting program in honor of Dr. Joseph T. Rothrock, Father of Pennsylvania Forestry, in the college assembly.

The program consisted largely of a summary of the life of Dr. Rothrock; the study of timber trees of the United States; a statement of the lumber cut in the United States, and a poem recital of appropriate poems.

## TRAVELS IN GEORGIA AND FLORIDA, 1773-74

(Continued from page 6)

the Report closes with 21 plates which include 47 figures. These show several maps tracing Bartram's trips; photographs taken by Dr. Harper and Mr. Leeds of definite sites visited by Bartram as they look today; and finally original drawings made by Bartram of plants, birds, insects and reptiles, never before published.

This volume forms a fitting companionpiece to the Journal of John Bartram published by the Society in 1942, in commemoration of the 200th anniversary of his joining the Society as a charter member. The two are bound together in cloth, at \$5. Send orders to the American Philosophical Society, 104 South 5th St., Philadelphia 6, Pa.

EDWARD E. WILDMAN

Eleven

## Pennsylvania Nut Growers' Association

A Practical Body of Nut Growers Whose Aim Is to Stimulate Greater Interest in Nut-Tree Planting



Black Walnut Kernel

### PROPOSED FERTILIZER TESTS FOR A WALNUT ORCHARD

by J. RUSSELL SMITH

THE PLAN CONSISTS of a series of strips running across rows of the different varieties of trees. Two spaces between three tree rows is the absolute minimum. This gives one row for test and one that is half and half and therefore no test.

*The First Strip* receives nothing except 1,000 lbs. of ground limestone per acre to meet the necessary calcium requirement of plants. Weeds will be mowed and dropped on the ground.

*The Second Strip*—enough lime for sweet clover, namely pH. 6.5-7.00. Weeds to be mowed and dropped on the ground.

*Third Strip*—enough lime for sweet clover with enough phosphorus and potash applied after soil testing to see that the field has enough of these two elements to make a normal crop of corn. Quantity of chemicals is recommended by State College or experiment station. Use mowing machine as needed.

*Fourth Strip*—same as No. 3 except that it is disked in the spring, sowed to oats with a mixture of clovers; oats cut before grain forming begins, dropped on the ground. Enough mowing in the summer to keep things down. If possible, start this autumn. Sow rye and the fertilizer. Let clover ripen seed and mow and repeat mowing.

Twelve

*Fifth Strip*—same as No. 4 except that at the end of each second season, after walnuts are harvested, it is thoroughly torn up with either spring tooth harrow or disk harrow working shallow. This will incorporate the mass of vegetation with the top soil. There should be a heavy crop of white clover, Alsike clover seed, red clover seed to work in ready for a heavy crop to be disked in again two years later.

It should be noted that this is practically the method followed by the most successful apple orchard experimental plot in the now famous State College experiments except that they disk each year.

This above mentioned system, however, provides for reseeding. The humus content would be still further increased if at the time of this fall disking rye were sowed to be mowed in April of the ensuing spring.

*Sixth Strip*—same soil treatment as Row No. 4, sowed in fall with rye or in the spring to oats with sweet clover. Small grain cut and dropped. Ragweed mowed in July. Field mowed at walnut picking time if necessary.

Second year (1) heavy sowing of sweet clover seed in the second spring.

Second year (2) sweet clover allowed to ripen seed. Mowed as soon as seed is ripe. Mowed again if necessary at walnut picking time.

This field is now fixed to produce sweet clover, which will seed itself each year. It will have the advantage of the enormous roots of sweet clover big as lead pencils and longer, making holes in the ground to admit moisture and air and produce humus as they decay, a crop of them every year. This field has the possibility of becoming too rich in nitrogen, an evil that can easily be stopped.

The cost is the cheapest of all, limited to some mowing and maintenance of phosphorous and potash to test. It has the danger of getting such a collection of vegetation that it might burn. This perhaps could be remedied by a disking at some suitable time during the year. This will probably not kill enough of the

FOREST LEAVES

sweet clover to make trouble. March disking would be safest for the clover and November first safest for fire prevention.

*Seventh Strip*—Lime and phosphorous and potash as in strip No. 3, planted to rye with Korean lespedesia. Cut the rye before it starts to form grain. Cut the weeds in mid-summer when the Korean lespedesia is 4 or 5 inches high. It will probably not need mowing at walnut harvest time. If it does, mow it 6 inches high with the mowing machine and there will still be enough Korean lespedesia left for seed to form on the plants if climate permits. After walnut harvest this can be disked and sown to rye. If there is Korean lespedesia seed it automatically would reseed itself. If not, it can be seeded again in the spring. This will be green all winter with rye, and green all summer with Korean lespedesia, and there is no danger of fire.

*Eighth Strip*—same as No. 4, or 5 or 6 according to your taste, but it has double the amount of potash and phosphorous. It is quite possible that a great abundance of these plant foods will show itself up in increased quantity or quality of nuts in accordance with the same theory by which the food experts tell us that double or triple supply of vitamins gives us resistance to infection.

By soil testing, keep this strip at double the phosphorous and potash content required for good corn.

*Ninth Strip*—chemicals as strip 3. Plant to rye and hairy vetch. Disk the mass in as soon as both grains are ripe. Disk thoroughly but not deep. This is green all the year. The danger is that the ferocious growth of rye may rob trees of moisture in autumn.

If it were wheat instead of vetch and went to silo and came back on manure spreader you might be ahead.

The application of chemicals in the autumn gives the trees a chance to get them when the cover crops are not most active. Fall fertilization is now standard practice for apple orchards whether cultivated or sod.

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Cross fire—2 or 3 lbs. of high-power nitrogen per tree on a few trees in center row of each strip. This not to be limited to area under the branches but all around.

### A NEW BLACK WALNUT FIND FOR DRY CLIMATES

WHILE MANY OF US talk about the great value of a genetic institute to breed nut trees, and it has great value, I am convinced more and more that if the dwellers of the soil were taught in school, in their homes, and by the press to observe strange and odd plants, propagate them or give them to some nurseryman to test and propagate we could collect such finds the horticulture world of tomorrow would indeed be a strange place.

Most of the worthwhile apples and many other fruits were found by observant and wide awake farmers. The New Englander who found the concord grape died destitute according to our poor standards of measuring riches. But the riches he gave America in grapes would indeed be hard to compute. All the nuts, persimmons, paw-paws, acorns, and honey locust have been found by this method.

A plank in my platform of contentedness in life is that we should do what is right and by so doing the column will add up to the answer we're looking for in the sunset of our lives.

I have just gotten the first results in 1943 because someone, nearly a century ago did what was right. When the Mormons went West from Illinois in 1847 they carried with them some good old Illinois black walnuts. Did they stop to figure out whether they would grow in the climate to which they were going? Did they have a staff of experts to analyze just what they needed, to live and get rich on in their new home? We know they didn't. They just took some walnuts along to plant.

From that day until 1938 probably little thought was given to their value. How many trees grew on that semi-arid desert of Utah we don't know. BUT

Thirteen

in 1938 Arthur Combe of Ogden sent me a box of samples of three different trees marking them No. 1, 2, and 3—off-spring of the 1847 plantings.

He liked No. 1 best and for that reason listed it as such. I liked Numbers 2 and 3 best and asked him for scion wood.

The nuts are small but according to my record have a much lighter shell than Thomas and crack out nicer. Now the question arose. What had happened genetically in these nuts growing in the extreme heat and variable climate of Utah with only 12 inches of rainfall. We have reason to believe the frugal Mormons did not gather up runty nuts in Illinois to take on their long trek. We can only deduce they took the finest, largest ones. Hence were these nuts growing under what is called repressed conditions ready to bounce back to their normal size when grown in ideal environment or had the genes sometime, somewhere in the 90 years on the desert adjusted themselves to that climate? We know of the Cut leaf here in Pennsylvania. In the Buffalo Valley east of the State College, appearing in seedlings which scientists say was caused by nature changing the genes so, a fine cut leafed tree was borne to adjust the species to the several long droughts in that valley. You see, the drier the climate, the smaller the leaf. Had the Utah trees done the same thing in the nuts?

Our No. 3 scions failed to grow—the No. 2 did fine top worked, and in 1943 bore a quart of nuts. We watched them all summer and held our breath until they fell and were fit to crack. What would they be? First we found the nuts the same size as those grown in Utah. Then as we had no rain fall from July 1st till August 15th we questioned "What would they do?" Thomas was only partly filled this fall, a Stabler standing next to the Utah was completely deaf or blank. We held our breath and cracked the Utah. It was rammed full of kernel, solid and firm as the Thomas should be under the best of conditions. Well, was this something? We had the answer and

it was interesting. What are the possibilities? I see a great future as we get more nuts from this tree to grow seedlings for dry climates and to graft this variety for dry climates on it's own seedlings.

True, we would not recommend anyone putting out a grove of such nuts under 12 inches of rain BUT in America's program of getting back to "a way of life that DOESN'T lead to disaster" more people MUST live on the soil and the more attractive their home can be made in balanced living with tree crops and plow crops, pasture and cattle, the sooner we will grow spiritually to where we can rule ourselves as a republic rather than by fiat of bureaucrats.

## Penn's Woods to Be Recreated

NO MORE APPROPRIATE celebration of the tercentenary of the birth of William Penn could be conceived than the development of a fifteen acre grove at Bowman's Hill State Wild Flower Preserve which will eventually contain all species of trees and shrubs indigenous to Pennsylvania. This grove is to be known as Penn's Woods and will be skillfully and naturally developed under the able guidance of Dr. Edgar T. Wherry, eminent botanist of the University of Pennsylvania.

A special committee has been created to advise and assist Dr. Wherry composed of Dr. R. C. Magill, Superintendent of Washington Crossing Park, Mrs. Lynwood R. Holmes, Mrs. A. B. Ross and Mrs. C. C. Zantinger who are so largely responsible for the unique wild flower preserve at Bowman's Hill. Other members are: A. F. Hough, U. S. Forest Service, Philadelphia; J. W. Adams, Morris Arboretum; E. F. Brouse, District Forester; Samuel N. Baxter, Horticulturist, Fairmount Park Commission; Herbert Bowen, Washington Crossing Park; R. Lynn Emerick, Chief, Bureau of Forests, Harrisburg; Mrs. Leon Hutton, Washington Crossing Park Com-

mission; H. Gleason Mattoon, Secretary, Pennsylvania Forestry Association; Dr. E. E. Wildman, former Director, Science Education, Philadelphia Public Schools; Mrs. Humbert B. Powell (ex-officio) President of the Conservation Council of Pennsylvania; and W. Wilson Heintsch, Director of the Preserve.

The planting of the more than 100 species of native trees and shrubs will be started this year. They shall be known as "Tribute Trees" and will be given by individuals, patriotic societies, women's and garden clubs, conservationists and others in memory of heroes of U. S. wars, noted scientists or others for whom a living memorial is most fitting.

Gifts are to be made in the form of money rather than plants although the donor may suggest the species he wishes planted. Such gifts shall cover the cost of planting, care and marking. The committee has recommended a minimum of \$5.00 for a shrub, \$10.00 for a small tree and \$25.00 for a large tree. Each tree and shrub will be carefully marked and catalogued, with the name of donor and of the person to whom the tribute is dedicated.

H. G. M.

## Can Conifers Be Protected From Deer?

TO THOSE LONG suffering tree planters who have watched deer devour seedlings almost as fast as they are planted, a chance discovery may be a boon. Last year John A. Andrew, Jr., instructor at the School of Horticulture for Women at Ambler, discovered that rabbits do not like the taste of aluminum sulphate. In fact, they dislike it so much that having taken a nibble from one lettuce plant sprayed with it, they refuse to try any of the other plants in that row. Since we have also tasted aluminum sulphate and can testify that unripe persimmons are a delicacy compared to it, we can understand the reaction of the rabbit. Mr. Andrew's news spread among Victory Gardeners with the result that other

tests have been made in several states with excellent results.

These were all summer tests. What rabbits will do in the winter when they have the choice of feeding on bark sprayed with an aluminum sulphate solution or starving, we do not know. Nor do we have any record of the reaction of deer to this salt. However, we believe tree planters in the northern part of Pennsylvania should mark out some test plots, thereby helping us to find out.

Aluminum sulphate in peace time was readily available and comparatively cheap, but it is now under allocation as are most other chemicals. In the making of paper huge quantities are used.

In tests to keep rabbits from feeding on foliage it has been used at the rate of one ounce dissolved in one gallon of water. This is sprayed on the plant using a nozzle which releases a fine mist. The resulting deposit is colorless and has great adhesive properties. One application will probably be sufficient to protect plant material for from 2 to 4 months.

To those who would try it on conifers, we suggest using it at the rate of two ounces in one gallon of water, spraying all seedlings in a marked area. An adjacent unsprayed plot should be used as a check.

We are most anxious to have this material tried and will welcome letters giving results.

## LOW-COST ALCOHOL

Recent successful production of industrial alcohol from sawdust at a cost of around 4 cents a gallon (provided the lignin in the raw material is used for plastics at standard commercial value) is likely to bring into operation distillation plants using sawdust and possibly sawmill trimmings, as chemical sources for conversion into plastics, synthetic rubber and materials in between these two. Since the government pays \$1 a gallon for industrial alcohol it would seem as if the conversion of wood sugars into ethyl (not methyl) alcohol holds vast possibilities in all the forest areas of the South.

Fifteen

## Texas Pine Newsprint

Outstanding chemurgic achievement in Texas to date is the successful large-scale operation of the Southland Paper Mills, Inc., near Lufkin in the East Texas forest, where ordinary loblolly and shortleaf yellow pines are converted into mechanical and sulphate pulp to make news print for a group of Southwestern newspapers.

The Lufkin mills, representing an original investment of \$6,500,000, opened for commercial operation on January 17, 1940, under direction of a staff of Canadian and American experienced papermakers who quickly mastered new techniques or adapted proved methods, in part, to the making of excellent newspaper from a raw material which had never been used for that purpose on a commercial scale before.

The researches of the late Dr. Charles Holmes Herty, director of the Pulp and Paper Laboratory at Savannah, Georgia, and those of government laboratories, as well as commercial paper mills, made possible the nation's first newsprint mill to use Southern pines.

Southland mill's annual output for the past year has totaled around 60,000 tons of newsprint. The newsprint and wood pulp shortage, however, encouraged the mill's executives to obtain permission to double the mill's output, as well as to produce an additional supply of commercial sulphate pulp to be sold to other paper mills and users of kraft in the war program. A new wing, costing \$3,000,000 has been added, devoted largely to installation of its sulphate pulp unit, and another paper machine.

In its first two years of operation Southland obtained its sulphate pulp from Champion Paper and Fibre Company near Houston, another large mill using Southern pines and gums as raw material, and making not only the slick paper on which the magazines Time and Life are printed, but a large supply of kraft and other pulp.

Champion's paper mill represents an investment of around \$10,000,000. Each mill employs around 600 in plant, forest, and transportation. The two mills

have given an outlet for rapid-growing young pines and other forest trees for East Texas.

In the postwar period it is almost certain that other paper mills, and perhaps plastic plants, using the cellulose and lignin of wood as raw material, will be erected in the East Texas forest, which until recent years has not been tapped for its pulpwood as have most other Southern states, where many of the nation's largest kraft paper mills are located.

Prodded by food rationing restrictions, large numbers of persons are roaming the forest areas and fields in search of edible wild plants. Young leaves of dandelion, chicory, watercress and lamb's quarters are among the favorite plants being gathered for use as greens and salads.

Because of their wide usefulness in wartime industry, wood tanks have quadrupled in production since 1940. It is estimated that 170,000,000 board feet of lumber will be used for this purpose in 1943.

**Plant CHINESE HYBRID CHESTNUT TREES for Pleasure and Profit**  
Blight Resistant and Early Bearers, Sweet Like the Old American, Send for Catalog.  
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**Bearing Blight - Resistant**  
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experimented with nut trees for over 44 years.  
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When you're stumped as to how to make your farm pay, just write us for list of nut and crop trees and how to use them. Fifty years of experience in twenty gives us a good background as a consultant.  
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FOREST LEAVES

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# FOREST LEAVES

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THE PENNSYLVANIA FORESTRY ASSOCIATION

JULY-OCTOBER  
1944

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## THE PENNSYLVANIA FORESTRY ASSOCIATION

*Founded in June, 1886*

Labor to disseminate information in regard to the necessity and methods of forest culture and preservation, and to secure the enactment and enforcement of proper forest protective laws, both State and National.

### ANNUAL MEMBERSHIP FEE, THREE DOLLARS

One Dollar of which is for subscription to FOREST LEAVES

Neither the membership nor the work of this Association is intended to be limited to the State of Pennsylvania. Persons desiring to become members should send their names to the Chairman of the Membership Committee, 1108 Commercial Trust Building, Philadelphia, 2.

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Whole Number 319

## Crawford County Forest

by GEORGE M. HUMMER

*County Commissioner, Crawford County*

CRAWFORD COUNTY is primarily an agricultural county. It is noted for its good dairy cows and farms. However, much of the land is unsuited for agricultural purposes, due largely to the origin of the soil, which is glacial. Three different glaciers covered all or most of Crawford County, leaving a wide variation in soil types, even in the same locality. Out of the County's 600,000 acres of land outside of the boroughs and cities, the amount to which the commissioners have title varies from 6,000 to 9,000 acres. This land is acquired through tax sales resulting mostly from poor soil conditions and poor management. Of this amount about 3,000 acres are definitely non-agricultural, it being hilly and rough and having a thin soil. This land lies as a disgrace to the county and if not a liability, it is at least unproductive.

The problem has been what to do with these idle acres, of value only for reforestation. The commissioners, realizing the fact that where our resources are gone, the population goes, decided early this year to do something about it. So, with the encouragement of some of our leading citizens and the fine cooperation of Honorable James A. Kell, Secretary of Forests and Waters, and his staff, a certain tract of land was set apart as a County Forest, the first in the State. A resolution to this effect was placed on our Minutes March 29, 1944. This action was in accordance with the State

Act of April 13, 1933, P.L. 35, which has to do with the establishment of such forests.

Under this Act, the County can buy seedlings at cost, plant trees, cut and market the forest products at its own discretion, and take the profit. In other words, it has full control. There are no taxes on the land except that the County must pay annually 4c per acre to the township, half to the School District and half for road purposes.

*(Continued on page 16)*

## Prevent Fires

**REMEMBER THESE RULES:**

 **Crush out your smoke**

 **Down your campfire — then bury it**

 **Break your burned match**

**IF YOU BURN SLASH**

**First — get a permit**

**Last — kill every spark**

**OUR CARELESSNESS  
Their Secret Weapon**



# The Thrush Family

by MARTHA SERENE LEWIS

THE THRUSHES, blue birds, robins and wheatears all belong to one big family, the Turdidae, of which there are some 600 species, divided into sub-families. The thrushes belong to the sub-family Turdidae, Turdus, which is the Latin for thrush. The plumage of thrushes is always more or less spotted and there are five, all of which might be confused by the beginner with each other. The wood thrush and the veery are the only ones we see about our woods and their habits are so very different that they should never be mistaken. The wood thrush bounces along the ground and the veery sneaks through the bushes. The wood thrush's spots are much larger and his back is much browner. The veery is more of a cinnamon brown. His song is a weird ringing monotone of blended alto and soprano notes. Van Dyke says: "I remember once, at the close of a beautiful day's fishing on the Swiftwater, I came out just after sunset into a little open space in an elbow of the stream. It was still early spring, and the leaves were tiny. On the top of a small sumac, not thirty feet away from me, sat a veery. I could see the pointed spots upon his breast, the swelling of his white throat, and the sparkle of his eyes, as he poured his whole heart into a long liquid chant, the clear notes rising and falling, echoing and interlacing in endless curves of sound,

"Orb within orb, intricate,  
wonderful."

Other bird-songs can be translated into words, but not this. There is no interpretation. It is music—as Sidney Lanier defines it—

"Love in search of a word."

There is no better loved bird in the vicinity of Philadelphia than the wood thrush. He always arrives some time between the 29th of April and the first of

Two

May, never before the first date and never after the last. I usually hear his song about five o'clock in the morning the first day he arrives. Then we put out white pieces of cloth for him to make his nest. If we don't, he somehow manages to find toilet paper to weave into his nest. From then on, until the latter part of August he sings all morning and again after four o'clock. There are several well known musical compositions that have taken their theme from the wood thrush. One is in the "sweetly solemn thought" of Handel's Largo from Xerxes, and two phrases of Faust's beautiful appeal to Marguerite in the garden are astonishingly similar to the wood thrushes. Chapman says: "His calm restful song rings through the woods like a hymn of praise rising pure and clear from a thankful heart. It is a message of hope and good cheer in the morning, a benediction at the close of day."

The most beautiful of all the songs is that of the hermit. My introduction to it, like that of the veery, was by reading a description by Samuel Scoville, Jr.: "So I dreamed, when suddenly in the twilight beyond my thicket a song began. It started with a series of cool, clear, round notes, like those of the wood thrush but with a wilder timbre. In the world where that singer dwells, there is no fret and fever of life and strife of tongues. On and on the song flowed, cool and clear. Then the strain changed. Up and up with glorious sweeps the golden voice soared. It was as if the wood itself were speaking. There was in it youth and hope and spring and glories of dawns and sunsets and moonlight and the sound of the wind from far away. Again the world was young and un-fallen, nor had the gates of Heaven closed. All the long-lost dreams of youth came true—while the hermit thrush sang." But when I heard it for the first time at

(Continued on page 13)

FOREST LEAVES

# The Paid Fire Crew

by T. ROY MORTON, District Forester

TOO MUCH CREDIT and praise cannot be given the volunteer Forest Fire Wardens and their volunteer crews. These men work under great odds, many of them have inadequate equipment, no telephones and must depend upon using their own or their neighbor's car or truck for transportation to forest fires and must spend from one-half to one and one-half hours rounding up the crew.

Then, too, many times when a man is called to go out to a fire he has already worked eight to ten hours at a regular job and he is tired, or he will have to leave his plowing or other essential work to respond to the call. He works well on the fire line, but all the time he is thinking about his own work and whether or not the wife and children can milk the cows and do the other necessary chores.

These men have the true spirit of freedom and democracy and want to preserve our land at any cost. But, through the years as a forester, I have felt that their willingness to serve has been imposed upon and that for the work they do, they have been very poorly paid.

I fully realize that in some sections a higher rate of pay for fire extinction may only result in more forest fires; this has always been true, and so, it would seem that the only solution is the Paid Fire Crew.

A Paid Fire Crew of ten men, properly trained and adequately equipped will get to a fire sooner, and extinguish the fire quicker than four or five volunteer

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July-August 1944.

JULY - OCTOBER, 1944

crews; for they will always be together and will have the means of transportation and necessary tools at hand. If they are trained together they will know what to do and when to do it and will work together in such a manner that every move will count.

On the other hand the volunteer crews get very little practice working together, they often times live miles apart and much time has to be spent in getting them together and ready to go to a fire. On the fire line, they are willing to work

and work hard, but Jones, who usually used the brush hook is not along this time, so Brown who on the last fire used a spray tank to mop up along the line takes over

the brush hook, and Smith who is better with a rake, takes the tank. Brown hasn't had much experience with a brush hook, so can't go very fast and holds up the line back of him, thus giving the fire plenty of time to keep on spreading. Smith who hasn't had any experience mopping up, fails to use enough water on an old stump or did not know that the stump should have been chopped down, goes ignorantly on his way and the fire flares up and breaks over the line, thus resulting in more acres burned and a more costly fire. Whereas, with the Paid Fire Crew, each man is trained to do every job and to do it well. He is adequately paid the whole year 'round and it is his job, and he naturally wants to do it the best it can be done.

The Paid Crew may seem to some an expensive idea, but personally I feel they

(Continued on page 11)

Three



# FOREST LEAVES

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JULY - OCTOBER, 1944

## TAX ON SALE OF TIMBER\*

IN RESPONSE TO several inquiries, we have obtained the following interpretation from the U. S. Treasury Department on the manner in which farmers should figure their Federal income tax liability in the sale of timber:

The gain or loss from the sale of timber is measured by the difference between the consideration received, less expenses of making the sale and (1) its fair market value at March 1, 1913, if owned prior to that date, or (2) its fair market value at date of inheritance, if inherited after March 1, 1913, or (3) its cost, if acquired by purchase after March 1, 1913.

In determining the fair market value at March 1, 1913, or date of inheritance, the market prices of the timber prevailing on these dates should be applied to the quantity of timber sold, reduced for growth after March 1, 1913, or date of inheritance.

If the farm was acquired by purchase after March 1, 1913, the total purchase price should be allocated on a reasonable basis between the land, improvements, timber and any other items of value. The amount allocated as the cost of the tim-

\*Reprinted with permission from *The Rural New-Yorker*, September 1944 issue.

ber then becomes the basis for determining the gain or loss from a subsequent sale. If only part of the timber is sold, a reasonable portion of the total cost allocated to the timber should be assigned to the timber sold.

The following example shows the method of determining the gain from the sale of timber from a farm purchased after March 1, 1913, assuming that one-half of all the timber is sold.

Consideration received for timber.....	\$1,500.00
Total cost of farm allocated as follows:	
Buildings and improvements	\$2,500.00
Land .....	6,500.00
Timber .....	1,000.00
Cost of timber sold (1/2 of timber cost)....	500.00
GAIN .....	\$1,000.00

The following example shows the method of determining the gain from the sale of timber from a farm owned on March 1, 1913 or acquired by inheritance in 1913.

Consideration received for timber.....	\$1,500.00
Total quantity of timber sold in 1943 (bd. ft.) .....	300,000
Less: Estimated growth of timber from 1913 to 1943 (bd. ft.).....	200,000
Timber owned in 1913 (bd. ft.).....	100,000
Fair market value, 100,000 bd. ft. March 1, 1913, at \$3 per M. ft. ....	300.00
GAIN .....	\$1,200.00

If the timber has been owned for more than six months prior to the date of sale, only 50 per cent of the capital gain or loss should be taken into account in computing net income, and 100 per cent if the timber has been held for not more than six months.

NORMAN D. CANN

Women have again invaded a supposedly man's field as they become forest fire fighters. A crew of twenty-seven women from the Sugar Valley, Clinton County, section completed training in late March. Other women fire fighting units were organized in various sections of the State.

# County Forests As Demonstration Areas\*

by H. GLEASON MATTOON

IT IS NOT needful for me to say anything about the merits of county forests nor the laws pertaining to their establishment. Secretary Kell will more than adequately cover that field. I should, however, like to say a few words about forest possibilities in Pennsylvania and the part county forests can play in attaining that goal.

Too often in a talk on forestry, the speaker dwells at length upon the iniquities of the early lumbermen; he tells a sob story of the waste and wanton destruction of acre upon acre of superb primeval timber. When he finally does reach the point of speaking of the present forests of the state, he treats them as the battered remains of a horrible wreck that is scarcely worth the words or the effort to salvage. It is time we stopped bemoaning the past. Let us concentrate our thought and effort upon the wise use of the forests we now have, for we do have forest lands in Pennsylvania—over 15 million acres of them according to the most recent survey. They are not fully stocked nor are all of them wisely managed. But, potentially, we have a raw material source for great expansion of our wood using industries. Let us examine the facts and explore the possibilities.

The stock survey completed about four years ago shows that there are forest areas in Pennsylvania on which the an-

nual growth amounts to nearly 500 board feet per acre. This is not the maximum annual growth possible, nor is it the average. Foresters hesitate to say that it is possible to produce 500 board feet of wood per year on every forest acre in the state but they are in agreement that under proper management an average of 300 board feet per acre is not only possible but feasible. In other words, 15 million acres can produce annually 4 billion, 500 million board feet of wood. Now, let us see what that means to the people of Pennsylvania.

This state before the war was consuming nearly 2 billion board feet of lumber a year but less than 20% of that came from the forests of Pennsylvania. Nearly 1 1/2 billion board feet were brought in from other states for which we had to pay \$100,000,000 annually. More recent figures are even more impressive, because, with the impetus of war, we now use nearly 3 billion board feet and we import 2 billion, 400 million of it.

The 15 million acres of forest land in Pennsylvania might be likened to a gigantic farm on which is grown just one crop—wood. But instead of using the acreage to the best advantage, we are niggardly with the seed; we let weeds choke out the good trees; we harvest the crop before it is mature and we continue to do this year after year. Because of such poor management we are paying enormous transportation costs every year for wood from the west coast and south. If a farmer used such haphazard and un-

\*Paper read at convention of the Pennsylvania Association of County Commissioners, Williamsport, Pennsylvania, August 1, 1944.



economic methods, he would have gone on relief long since.

Now suppose the forests of the state are brought to such condition that they produce 4 billion, 500 million board feet a year. The stumpage value on a peace time basis would be over \$30,000,000 as against \$5,000,000 which forest land owners were getting for the cut in 1939. Moreover, we could cut from our own forests not only all of the saw timber, pulp wood, mine timber, dunnage, lagging and chemical wood we need, but we would have an excess to export. On top of that, suppose the raw wood is converted into finished products in industrial plants within the state, then the value of the wood increases about ten times. The processing of wood into houses, furniture, plastics, toys or chemicals represents ten times the opportunity for labor and capital as does the mere growing of the raw material. Thirty million dollars worth of wood would grow into over one-quarter billion dollars if converted in the state into consumer products.

This is no pipe dream. It can be made a reality if you gentlemen, who are the leaders in your respective counties, catch the vision and lay the ground work for ultimate fulfillment.

A lasting economy must be based upon the wise use of our renewable resources. Wood is the chief renewable resource which through processing can provide continuous employment for many thousands. Moreover, the abundance of forests scattered over Pennsylvania offers an opportunity for many wood using industries to locate in small towns close to raw material sources and water power, yet within easy shipping distance of domestic and export markets. By spotting small industries over the state, unemployment will be alleviated, the rural population will be held at home and the political and economic problems of the cities will be lessened.

But the forests of Pennsylvania cannot and will not be brought to maximum production unless the people of Pennsylvania realize the practical dollars and

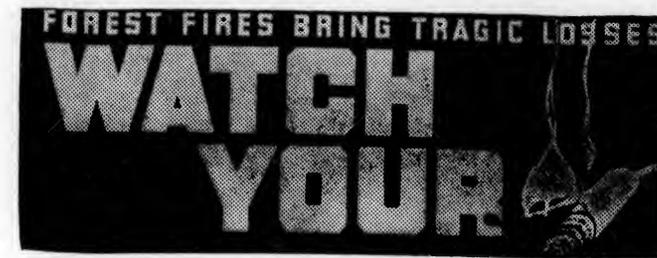
cents advantage to them of such action. Each person in the state must be made so aware of the potentialities that when an acre of trees burns, he sees money from his own pocket going up in smoke. Each person in the state must be so enthused over the prospects of a continuing economy of plenty from our forests that he will actively support appropriation bills and other legislation necessary to bring the 15 million acres of forest land to a state of maximum production. This cannot to be accomplished in one year, or five, or ten but progress can be made each year by continuous, persistent educational work.

Now then, gentlemen, you, as the political and administrative leaders of your counties, have an opportunity for great service to the Commonwealth, an opportunity to have your names inscribed on the pages of history as foresighted leaders and public benefactors. Such acclaim from posterity will be yours if you work assiduously for the perpetuation and wise use of the timber resources of your county. And since the efficacy of demonstration is not to be denied, I urge that you emulate Crawford county, whose far sighted commissioners have laid the ground work for a county forest.

A county forest of 500 or 5,000 acres managed for revenue will, over a period of years, not only make it possible to reduce taxes, but wisely managed it will also be a demonstration area, accessible to every woodland owner in the county, who cannot help but observe the wisdom of careful management.

The creation of a county forest for revenue through the production of forest products does not preclude use of a part of the area for recreation but I emphasize wood production in the county forest because, ultimately, such a use will be of the greatest benefit to the citizens of the county.

Very likely you gentlemen know, in a general way, the tax delinquent lands within your respective counties. May I have the temerity to suggest that these records be studied from the view point



of a possible county forest. May I further recommend that you make a complete study of the forest lands of your county, their size, distribution, condition, species and annual growth. These are all factors which will determine the type and size of the wood using industries which might be brought in, not only to take up the post war employment slack but more particularly to maintain employment permanently at a high level.

In making such studies you will find the records of several state agencies of considerable value, the State Planning Board, the Department of Forests and Waters, the Department of Internal Affairs and the Department of Commerce, all could lighten your work.

The Pennsylvania Forestry Association, the oldest forestry organization in the country, for which I speak, was largely responsible for the passage of the county forest law. We are intensely interested in the creation of county forests for the reasons I have enumerated above. Our facilities and personnel are at your service in whatever capacity you may wish.

Perhaps we might be of service in assembling the information on the forest

areas and potentialities in your county. We should like to publish a series of such findings, county by county, in our quarterly magazine "Forest Leaves" which is widely distributed over the state.

If we, in Pennsylvania, are to see our forest areas fully stocked and wisely used, we must first convince the public and ourselves that Pennsylvania's day as a lumber state has not passed. In no better way can the lumber future of Pennsylvania be demonstrated so that every citizen may see, than by a series of county forests from the Delaware to the Ohio.

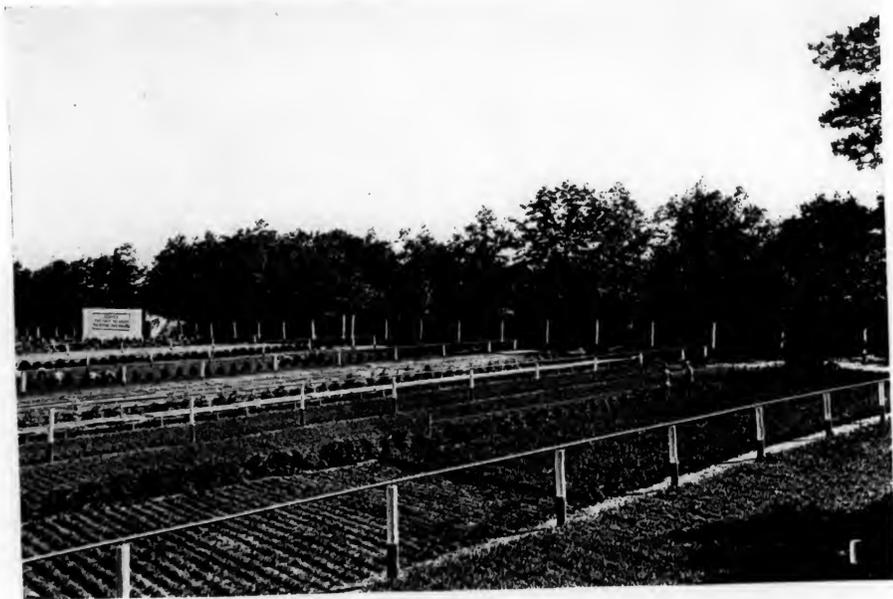
The largest cork oak in this country is said to be growing on the grounds of the Napa State Hospital in California. This tree was planted in 1858 and at present is 58 inches in diameter and 75 feet tall.

A number of women were employed at the Clearfield, Mont Alto and Greenwood Furnace State Forest Tree Nurseries during the spring months. They assisted in the transplanting, counting and grading of seedlings.





Millions of coniferous seedlings benefit from the research conducted by the Department of Forests and Waters.



The Department conducts three large nurseries to supply coniferous and deciduous seedlings.

## Forest Research in Pennsylvania

by ALBERT B. MICKALITIS

Research Forester

PENNSYLVANIA WAS the first State to establish a Division of Forest Research and still is among the leading states in this vital phase of forestry work.

Research is as essential to the progress of forestry as in any other science. Unless based upon fundamentally sound principles, forest practice fails to accomplish consistent results. The Department of Forests and Waters, therefore recognizes forest research as an essential phase of its activities in the promotion of sound forest practices. The forest is a complex community of living things. On every hand unanswered questions demand our attention.

Study projects covering many phases of forestry work are given special attention at the present time. Among these are the large number of demonstration forests located throughout the State. Forest demonstration is the book upon which we depend more largely than ever as time goes on, to impart to the owners of woodlands the necessary lessons, step by step, in woodland improvements. Its leaves should unfold in a forest environment. Seeing is believing, and seeing seasoned with understanding, is the source of action. Helping the people, through visual education, to understand, is our desire. Bringing the forest to the people, and bringing the people to the forest, is our aim. Forest demonstration with observations on the ground is our ambition, based upon the desire to see and the willingness to adopt conditions as actually shown.

When the Commonwealth took up the rebuilding of our forests, the first steps in research with respect to forest management had to be worked out with the development of forest tree nurseries, which would permit the planting of trees with an assurance of ultimate profit. Nursery soils with the proper texture,

humus and acid content to produce vigorous seedlings in the shortest possible time had to be developed. Shading, weeding, storing, packing and shipping seedlings required experimental tests. Seed collection, extraction and storage were experimentally improved so that the entire State Forestry nursery technique today is considered in the forefront of the Nation's successful forest tree nurseries.

Research on forest plantings, at the present time, includes tools, time of the year for planting, species best fitted to definite soils and sites, advantages of pure and mixed plantings, and highest wood production of the most valuable species. To make possible these research studies, sample plots were established and remeasured at different periods, and a systematical record of each is filed. Reforestation in the State Forests is now successful and may be prosecuted on an increased scale with relatively little danger of failure.

The protection of forests from fire has been advanced through constant experimental improvement of fire towers, fire extinction tools and education. Among forest protection studies are methods of slash disposal, appraisal of forest damage, and huckleberry production with and without fires.

Probably the most outstanding research project inaugurated by the Department was started in 1933 and completed in 1939. With the assistance of C. C. C. personnel, an inventory of all the timber four inches in diameter at breast height and over growing on State Forest lands, was obtained. This was a huge undertaking involving the measuring of twelve million trees and determining the age, height and growth per cent of more than 150,000 sample trees. This enabled each district forester to make a

forest working plan and to determine the volume of wood which can be removed from a particular area within a specified time. The State Forests are divided into compartments which enable the foresters to develop markets among wood users with the assurance that they get a supply of timber each year. This tends to stabilize our wood-using industries and is expected to result in the development and maintenance of permanent forest communities. Our present utilization program, comprising the sale of one hundred million board feet of timber from State Forests, was largely made possible by the research studies in connection with this stock survey.

During the course of the forest stock inventory, thousands of trees felled on timber sale and stand improvement projects on both public and private lands were measured for taper. The largest and most comprehensive data ever assembled for constructing tree volume tables in the northern hardwood and oak pine forests types of the United States, have been obtained. More measurements of some species are still required. Wood volumes, in various units of measure, in average trees of any diameter and height can be calculated from taper tables, which are being prepared from the measurements. The tables will be highly valuable to farmers and other private woodland owners, extension foresters, federal and State foresters, and others interested in the proper management of forests.

A current research project involves the study of the kinds of wood needed and prices paid, together with the cost of cutting and transportation. This market study, in cooperation with the United States Department of Agriculture, is now being conducted in nine counties of the Commonwealth, particularly on farm woodlots. The purpose of this project is to build up a forest products marketing service for farmers and to provide forestry aid on the ground.

Another research project now under way is an experiment with certain Asiatic varieties of chestnut which are being

planted in plots to ascertain their hardiness and resistance to the chestnut blight, and adaptability to Pennsylvania climate and soil conditions. Chestnuts from native sprouts of vigorous growth are being gathered and planned as an experiment in the hope of developing an immune strain.

Research with respect to forest land ownership, use, and taxes in several counties, was conducted during recent years. Deer browsing damage to forest tree studies have been completed.

Post-war research projects now under consideration are those of reforesting denuded areas, especially in the anthracite and bituminous coal fields; timber stand improvement in various forest types; and a study of the effect of smoke on tree growth. Some of the projects, which have been temporarily discontinued, will be resumed.

The helpful cooperation of the Pennsylvania Academy of Science is very much appreciated.

## Rosin from Stumps

Throughout the vast pineywoods region of the South there are millions of tons of long-leaf pine stumps, many of which are now processing in turpentine and rosin plants in Louisiana and Mississippi for the extraction of such prized chemicals as pine oil (formerly imported from Sweden), acetone, rosin, camphor, and a byproduct vanillin. Other chemicals which tend to concentrate in the longleaf pine stump since it was cut 25 or 30 years ago have been isolated by research chemists and many believe that around these stumps an independent chemical industry can be built, which would include the manufacture of synthetic rubber and plastics.

Wood will replace over five million tons of metal in 1943. Most of this volume is to be used on the home front, although an appreciable amount will enter into direct war service.

FOREST LEAVES

## Pine Chemical in the Metal Industry

Use of a pine wood chemical has sped production of armor steel castings for combat vehicles by smashing a foundry sand bottleneck, Hercules Powder Company reported recently.

Faced with scarcity of the specially graded silica sand used in cores and molds to shape tough cast armor steel, foundries have greatly increased their use of mechanically-reclaimed old sand by mixing it with a pulverized resin. Before the war, production of each ton of cast steel required half a ton of new sand.

As an illustration of how much sand has been saved for re-use, the Hercules announcement cited one large foundry turning out 5,000 tons of steel castings monthly. By using the resin, which is extracted by Hercules chemists from southern pine wood, this foundry has sliced its new sand requirements from 2,500 tons to 600 tons.

The resin which is mixed either with new sand or mechanically reclaimed after casting, binds the sand grains together to form the core. The sand core must be strong enough to resist the molten metal when it is poured into the mold, and the binder must be destroyed by heat after casting to permit easy removal of the sand from the core cavity.

The resin core binder has shortened production time because it bakes faster than other type binders, the company stated, and it has been found especially effective with sands containing clays. Truline Binder, the Hercules resin, also provides unusual dimensional accuracy in the sand shapes for casting steel parts on tanks, tank busters, jeeps, weapon carriers, and other combat vehicles.

A total of twenty-three forest fire observation towers under the supervision of the Department of Forests and Waters were "manned" by women observers during the spring fire season.

JULY - OCTOBER, 1944

## The Paid Fire Crew

(Continued from page 3)

could pay for themselves many times over in fire extinction alone, for the fires would be extinguished quicker and less area would be burned. While I feel that there should be several crews of ten men each, stationed strategically in each District, even one Crew of ten men in each District would be a great help. I do not feel that we should abandon our volunteer wardens and crews, but I do feel that they should be called only in case of emergency.

The Paid Fire Crew during seasons when there is little or no fire danger could be used to great advantage in brushing out boundary lines and trails, maintaining our forest roads and telephone lines, clearing out fire hazards, burning safety strips and the like. By doing this necessary work on the forests they would become acquainted with the District and if a fire should be reported on Gobbler's Knob, they would know exactly where to go and what tools to take, and whether or not it would be necessary to take outside help in order to keep it from becoming a large fire. In a few words they would know their job, and could do it without wasting time.

The aim of every forester is to eliminate forest fires. Of course, we know that this is only a dream hoped for, but a big step towards realizing this dream is the Paid Fire Crew.

## EXPLOSIVES

Owing to the enormous quantities of explosives required in this war, wood pulp had also to be used for making nitro-cellulose explosives. Recently it was stated by Rear Admiral Clark H. Woodward, U. S. N., Chief of the Navy Incentives Division that "more than half of the smokeless powder used to fire the guns that are beating down the Axis, is made from the pulp wood produced in the United States and Canada. This means that the one other source material for smokeless powder—cotton—is now running second in the race."

Eleven

# Lumber Production in Pennsylvania

by G. LUTHER SCHNUR

Allegheny Forest Experiment Station

PENNSYLVANIA continues to lead the Northeastern states in lumber production. During the first quarter of 1944 almost 242 million board feet were produced which is more than one-quarter of the total production for the eleven northeastern states from Maine to Maryland inclusive. This is about 12 percent greater than for the same period last year.

In 1943 Pennsylvania produced a total of 469,924 M board feet of lumber or an increase of almost 18 percent over 1942. Monthly production figures for softwoods and hardwoods for 1943 are as follows:

Month	Softwoods		Total
	M Bd. Ft.	M Bd. Ft.	
January	8,840	20,778	29,618
February	8,546	21,977	30,523
March	12,025	26,118	38,143
April	8,186	23,712	31,698
May	9,105	34,434	43,539
June	9,300	33,164	42,464
July	9,420	34,087	43,507
August	8,230	38,335	46,565
September	9,736	39,395	49,131
October	7,472	35,246	42,718
November	9,193	27,767	36,960
December	5,732	29,126	34,858
Total	105,785	364,139	469,924

Production figures by species for the state are not available for 1943. The 1942 Census figures, however, show the following percentage distribution of lumber cut by species:

Species	Percentage of Lumber Cut in 1942
Oak	42
Hemlock	14
Maple	11
Beech	10
White Pine	10
Yellow Pine	2
Birch	1.5
Ash	1.5
Basswood	1
Hickory	1
Other	6
	100

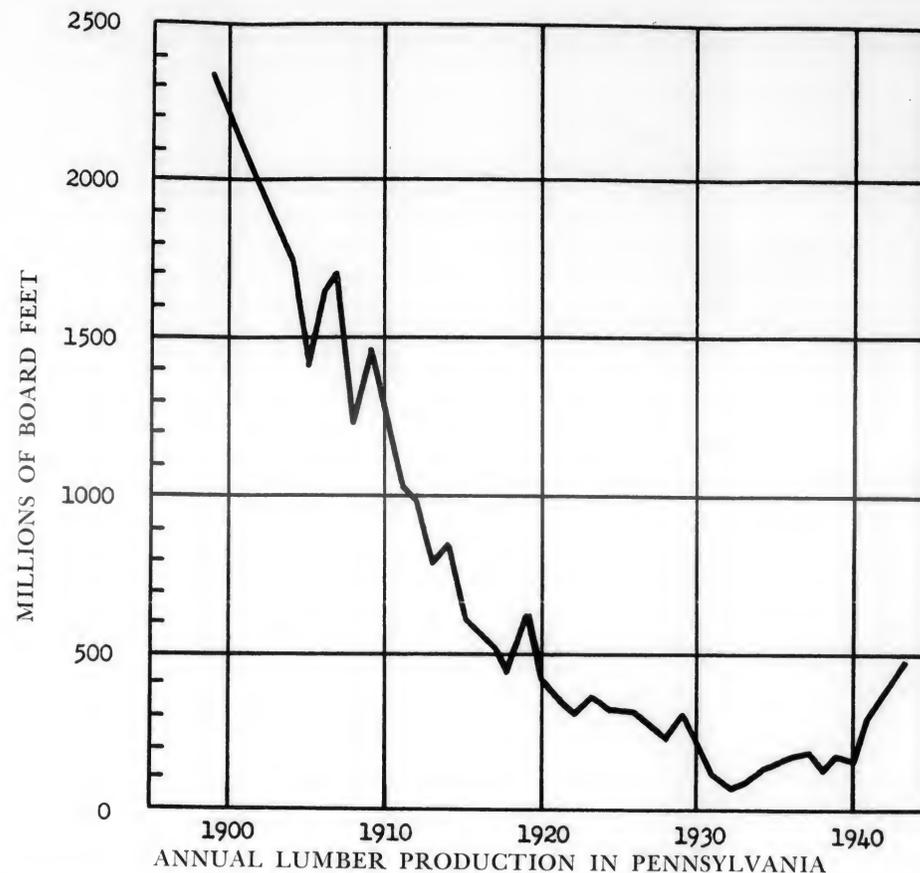
The 1943 figures indicate about a 4 percent increase in hardwood lumber production over 1942, but it is believed that the relation between species will be approximately the same for both years. Hardwoods make up three-quarters of the total production with oak by far the most important species group.

The trend of lumber production is now definitely upward in Pennsylvania. The accompanying graph shows the long downward trend from 1899 when almost 2½ billion feet were cut, to 1932 when the bottom was found with the extremely low production of 73 million board feet. Since 1932 the trend has been upward. The present cut of almost half a billion feet per year is more than double the annual growth of sawtimber in the state which is estimated at 226 million feet. After the war it is almost certain the production will again drop as it did in 1920. It should level off temporarily somewhere near the annual growth figure.

It will take a number of years to build up the growing stock or sawtimber capital in Pennsylvania. If something is done, however, to stop wasteful cutting practices and substitute practices which will keep our forest lands in a productive condition, there is no reason why the 15 million acres of forest land in Pennsylvania should not produce again 2 billion board feet of lumber annually.



FOREST LEAVES



## The Thrush Family

(Continued from page 2)

Pocono Lake preserve I was all alone in a deep hemlock woods. When the hermit began to sing I didn't try to see him, I just stood rooted to the spot. I knew instantly who was the singer. This thrush comes to us very early in the spring while the trees are still bare, and lingers long in the autumn after the leaves have fallen, but it is very shy and retiring and never sings during migration. I have only seen hermit thrushes once on my feeding table.

The other two thrushes, the olive backed and the gray cheeked, are so much alike that you have to look at the color of the eye ring to be sure which one you see. They both have olive backs and tails, but the gray cheeked has a whitish eye ring and gray lores, while the olive backed has a deep cream buff eye ring and lores the same color.

The thrushes eat both insects and fruits. The wood thrush is particularly fond of cherries and frequently nests near the European Bird Cherry tree (*Prunus avium*). It is a valuable bird on a farm and in gardens because it largely lives upon such insects as caterpillars, beetles, grasshoppers, crickets, cut worms and ants.

The other thrushes are usually found in deep woodlands so that they are not as valuable to the farmer as the wood thrush. The veery lives on beetles, snails and small fruits which it finds on the ground.

An interesting habit of the gray cheeked thrush is to eat insects in spring, and fruits and berries in the fall. In stomachs taken from the gray cheeked thrush sawfly larvae, ants, caterpillars, ground beetles and weevils were found.

The eating habits of the olive backed and hermit thrushes are similar to those of the veery and gray cheeked.

## Pennsylvania Nut Growers' Association

A Practical Body of Nut Growers Whose Aim Is to Stimulate Greater Interest in Nut-Tree Planting



Black Walnut Kernel

### Sound Advice

THERE HAS JUST come to my desk a copy of the tenth edition of the story of the American black walnut with the most up-to-date cuts of wise forestry practices. Don't fail to get your copy by writing to:—

Burdett Green, Secretary  
American Walnut  
Manufacturers Association  
Chicago 5, Illinois

And say you saw it in Forest Leaves:

Owners of Woodlots  
and Timberlands:

You and those who follow you in the ownership of your woodlands have much to gain by carefully observing the following recommendations:

1. Make your woodlot a source of continuous income. Never cut all the trees. Leave small, thrifty young trees for your next crop.
2. Harvest mature trees before they become overmature, rotten at the top, decayed and hollow at the base.
3. Protection is essential. Avoid fire, grazing, and other damaging agents, and thus add much to the quality and value of your future timber crop.
4. Improve your woods. Remove "weed" trees and "wolf" trees

from your woodlot. Cut out large defective trees that shade and suppress many young trees which will pay dividends if given a chance. Plant a seed or seedling to replace every tree harvested.

5. It takes thirty-five 11" cull logs to produce a certain number of dollars, but only ten 16" prime logs will produce exactly *four times as much* income. Therefore it pays both owner and log producer to retain small trees which will not produce a log 12" or larger at the small end.
6. Nails, fence wire, iron, and other similar material in trees cause accidents and serious damage to saw-mill equipment; iron and wire make trees almost valueless.
7. Our forester or any government forester will gladly advise you.

AMERICAN WALNUT  
MANUFACTURERS ASSOCIATION

### We Hear from Another

JOHN H. KITCH writes from France, August 10th, 1944, "We are getting into a part of France that seems to be very wealthy and the people seem to be better educated. As we go further, many more people speak English. The farmers are grand people and keep very neat homes and farms. The houses are no longer part of the barns, but separate, and have some of the most beautiful furniture I have ever seen. The further we move, the friendlier the people become and seem more glad to see us as we go along.

"They have many apple orchards over here and they aren't seedling trees. Their apple trees are grafted about five or eight feet from the ground and then about four or five shoots are allowed to grow which makes a very nice round head on the tree. The lower branches all are the same height from the ground. When the apples

get a little riper, I'll tell you how they taste. The Chestnut trees here in France are very plentiful and are laden with nuts. By the looks of the ones I've seen, no grafting or any other work has been done on them. I have't seen many black walnut trees. The Hazel bushes are very full and the nuts seem to be a very good size. I saw some shellbark trees the other day; they were full with a large nut on them. I did not get a chance to stop to see what the shell was like but when I get a chance, I'll break one and tell you what the inside looks like. The other trees in general are about like ours, oak, poplar, birch, but I have not seen many evergreen trees.

"A lady gave me a small pear last night which was delicious. If I can find more of them, I wouldn't have to eat G. I. chow.

"Tree crops over here are very good. The grain fields are beautiful and the wheat heads are some of the biggest I've ever seen. As yet, I haven't seen any tobacco.

"I never expected to see such farm machinery as I have in this part of France. The other day I saw a brand new side delivery hay rake and other new farm equipment much like we have at home.

"I can't say I enjoy being in France. Sometimes or always, you are in danger and kind of frightened."

### TO MEMBERS AND PROSPECTIVE MEMBERS OF THE

PENNSYLVANIA NUT GROWERS' ASSOCIATION

The annual report of the Pennsylvania Nut Growers' Association is just off the press. Be sure to send in your dues of \$1.50 so you may receive your copy.

Of particular interest to all nut growers will be the series of fertilizer tests prepared by Dr. J. Russell Smith. This appears on pages 9 and 10. "Picking Black Walnut Kernels" by G. J. Kern, is a meaty discussion of the more economical

methods of removing black walnut kernels from the shell.

Attorney-General Duff's observations on conservation which appear on Page 18 likewise should be read by all.

As you may or may not know, the following committees have been appointed to function until our next annual meeting:

#### EXECUTIVE COMMITTEE:

H. Gleason Mattoon, Narberth  
John W. Hershey, Downingtown  
Wilmer P. Hoopes, Forest Hill, Md.  
L. K. Hostetter, Lancaster  
Dr. Lewis E. Theiss, Muncy  
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C. A. Reed, Beltsville, Md.  
Joseph B. Gable, Stewartstown

#### FARM SHOW:

R. P. Allaman, Harrisburg  
J. W. Sheibley, Landisburg  
John Rumbaugh, Duncannon

#### FARM SHOW EXHIBIT ARRANGEMENTS:

J. W. Sheibley, Landisburg  
R. P. Allaman, Harrisburg  
C. V. Stein, Manheim

The restriction in the use of fertilizer, the lack of labor and the need to grow all of the food stuffs possible, have undoubtedly prevented some nut growers from carrying on the fertilizer tests so carefully prepared by Dr. Smith. Perhaps some of you can make a start this fall. If so, do write in and tell us of your plans.

H. GLEASON MATTOON,  
President

What is reported to be the largest amount of lumber ever used in a building, more than 27,000,000 feet, went into the cargo-plane assembly plant of the Austin Company, Chicago. There are 237,000 square feet of floor space unobstructed by columns or supports.

## CRAWFORD COUNTY FOREST

(Continued from page 1)

This spring Crawford County bought 20,000 seedlings, half and half red and white pine at a cost of \$2.00 per thousand, plus express charges. These planted about twenty acres to new forest. For labor Boy Scouts, County employees and inmates of the County Home were used, this being a year in which extra workers are scarce. Appropriate formal exercises were held for the initial planting and the first tree was marked for the benefit of posterity. It is planned to add to this tract year by year in larger acreages, probably limited only by the amount of labor available. Also, it is intended to include in the forest existing natural stands of useful trees; in fact, this was done this year. The result will be that in the future this County will have thousands of acres of forest trees, which, when marketable, should very materially help pay County expenses, and thus be a welcome relief to the taxpayers.

It may seem that a long time will elapse before any returns may be had from the venture. That is true. But in 20 to 30 years the forests may be thinned for pulpwood, and in 50 years, some trees should mature for lumber. From then on, there would be annual returns. Would that this project had been started years ago. From an employment standpoint, this may not seem too promising, yet for the future we envision the need for a County forester and lumbering foreman, with sawmill and crew in service the year around.

The County forest will put idle acres into production of wood products for which there is an ever increasing and varied need. To what other use can this land be put? It will be a thing of beauty, transforming bleak hillsides, poverty stricken fields and waste lowlands into a woodsman's paradise, it will provide recreation, preserve water supply, help prevent floods, be a game refuge, all adding to the moral uplift of the people; and in addition to the aesthetic values,

Sixteen

it will be a source of considerable profit to the County. It is hoped that it will also encourage private enterprise to put other waste land to like use.

In conclusion, let me state, that we believe the County Forest to be a worthwhile and substantial project. Crawford County would be glad to be of service to others wishing to undertake a similar one.

### FOR SALE

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Blight Resistant and Early Bearers, Sweet Like the Old American. Send for Catalog.

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When you're stumped as to how to make your farm pay, just write us for list of nut and crop trees and how to use them. Fifty years of experience in twenty gives us a good background as a consultant.

**NUT TREE NURSERIES**  
JOHN W. HERSHEY  
DOWNTOWN, PA. Box 65F

FOREST LEAVES

## Simple Arithmetic . . .

The PENNSYLVANIA FORESTRY ASSOCIATION now has members.	1200
If each of the present members secured	2
new members, the Association would have	2400
new members, or a grand total of members.	3600
The Association's annual income is now	\$ 5,500.00
2400 new members at \$3.00 each, would add	7,200.00
Making a total annual income of	\$12,700.00

With less than \$12,000 the Association cannot carry on the activities for which it was founded.

Won't you do your part?

### The Pennsylvania Forestry Association

Organized in 1886  
1007 COMMERCIAL TRUST BUILDING  
PHILADELPHIA 2, PA.

To support the activities of The Pennsylvania Forestry Association for the preservation of forest lands for wood production, outdoor recreation, regulation of stream flow and prevention of erosion, I enclose \$..... to cover membership for the ensuing year.

Membership Classes	Name .....
Annual member ..... \$3.00	.....
Club membership ..... 5.00	.....
Sustaining member ..... 10.00	.....
*Contributing member ..... 20.00	.....
Life member ..... 100.00	.....
Perpetual member ..... 250.00	.....
*If paid for five consecutive years the person automatically becomes a life member.	Date..... P. O.....

Forest Leaves, the Association's magazine, is sent to members in all classes.

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# FOREST LEAVES



THE PENNSYLVANIA FORESTRY ASSOCIATION

NOVEMBER-DECEMBER  
1944

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### THE PENNSYLVANIA FORESTRY ASSOCIATION

Founded in June, 1886

Laborers to disseminate information in regard to the necessity and methods of forest culture and preservation, and to secure the enactment and enforcement of proper forest protective laws, both State and National.

#### ANNUAL MEMBERSHIP FEE, THREE DOLLARS

One Dollar of which is for subscription to FOREST LEAVES

Neither the membership nor the work of this Association is intended to be limited to the State of Pennsylvania. Persons desiring to become members should send their names to the Chairman of the Membership Committee, 1008 Commercial Trust Building, Philadelphia. 2.

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## The Dutch Elm Disease

by J. C. KENEALY

THE AMERICAN elm has long been referred to as the Queen of American trees, and now it looks very much as if this most beautiful of all trees will be one more tragedy of this war. We can properly say it is the war because war time conditions have caused the research and field work designed to control the Dutch elm disease to come to a standstill. The major portion of this work was carried on under the direction of very capable scientists of the National Government.

Early during 1933, persons interested in trees, were stunned to read of the number of cases of dead trees in nearby states killed by this plague. More than 60,000 elm trees were found in one stage or another of infection and were removed and destroyed. This wholesale removal was of great aid in keeping this killer confined to a relatively small area. However, with forced relaxation in the control work, it is possible that the disease has gained a substantial foothold in Pennsylvania.

The first apparent symptom is the sudden wilting of leaves, either on an individual branch or a portion of the crown. The yellow or brown wilted leaves stand out in color contrast with the unaffected branches. In Pennsylvania this may occur anytime from mid June until August. It may take two or three years to completely kill the tree.

The disease is spread from tree to tree by a small bark beetle which carries the fungus either on or in its body. As the insect works its way through the bark and into the sapwood, the spores of the fungus are left and the tree is thus inoculated. This invasion

of the conducting tissues results in the plugging or stopping of the veins carrying water soluble plant food from the roots upward. The loss of circulation causes wilting and, unless proper steps are taken, the tree continues to weaken and gradually dies.

Whether there are many new cases of the disease in Pennsylvania no one knows because of the forced cessation of the work of spotting, purifying and removing infected trees. What is apparent, however, even to the casual observer, is the prevalence of bark beetles.

(Continued on page 8)



Photo by Livingston

Records say these fine elms were planted the day the Civil War ended. A confirmed case of Dutch Elm Disease has been found not far from them.



*The children's pond in the Tyrone community forest where they fish in summer and skate in winter.*



*A glimpse of the recreational area which is in the Tyrone forest.*

## Tyrone Sets An Example

by R. D. TONKIN

**T**HE EARLY settlers along the eastern slope of the Allegheny Mountains in the northern end of Blair County selected sites for their homes where they could enjoy fresh air, good water and mountain scenery.

The fresh air being so abundant at these elevations ranging from one thousand to twenty-four hundred feet above sea level, little thought was given to man's first requirement, AIR.

Not so with his second vital need, WATER. Farsighted residents of the growing villages at the foot of the mountain began to think and talk about water supplies. Many of these people realized the water possibilities of the territory covered by the mountain slopes. Nature, in her great upheavals, had thrown the sandstone and shales high on these slopes. These sandrock strata outcropped at high elevations on the eastern slope. These strata feed a series of small-ever-flowing springs of soft water that is the source of the water supplies for the borough and cities along the little Juniata River, and a part of the great water supply system of the Pennsylvania Railroad. The properties of these various systems extend from Cresson Summit northward to the Centre County line, and a large part of the area is owned by the Blairs Gap Water Supply Company, a subsidiary of the Pennsylvania Railroad, the Bellwood Borough with a small area within the Blairs Gap territory, and the municipally owned water plant and water shed belonging to the city of Tyrone.

This publically owned Tyrone water supply system has been developed to such an extent that the five thousand or more acres are put to a very high degree of usefulness to the community. The property originally belonged to the Tyrone Gas and Water Company, which finally came under the control of A. A. Stevens, Esquire, of Tyrone. He, being a farsighted man and a conservationist at heart, proceeded to purchase land on the water shed of Sinking Run where the principal reservoirs of the company were located,

and at the time of the purchase of this water supply by the municipality the acreage had been increased to slightly more than five thousand acres. The primary purpose of the water plant is to supply the community with good, wholesome water in sufficient quantities to meet its needs. This is being done and the residents of the town are proud to say that they have and enjoy some of the finest soft water within the state.

The land area has been free of fire for many years and is in a splendid state of growth. Roads and trails have been cut and are maintained through and over the property, as well as a cleared fire lane on most of the boundary lines. The land is well covered with growth, carries a reasonable amount of humus, and is in a splendid water-carrying condition.

About fourteen hundred acres of this property are set aside as a game preserve. This is a wise arrangement as it is a great help in controlling trespass on the water shed above the reservoir. The remaining part of the property above the game preserve is free to hunters, but restricted to the use of campers. The game preserve and the care afforded this hunting area has made this locality one of the choice hunting grounds within the state for both small and large game.

The lower end of the property, comprising the reservoirs and Reservoir Park, contains about one hundred acres, of which about sixty-five acres are devoted to park use. Here the people of town and surroundings have a place of which they are very proud. The Water Committee of Council has developed this park to a very high degree by equipping it with outside cooking places and splendid tables, benches, etc., most of them under roof, together with a pavilion with a seating capacity of about one thousand people. The children are not overlooked and the sandpiles, swings, slides, etc. are scarcely ever without some little tot somewhere on the scene. In addition to this, an old ice-

*(Continued on page 13)*



*The children's pond in the Tyrone community forest where they fish in summer and skate in winter.*



*A glimpse of the recreational area which is in the Tyrone forest.*

Two

FOREST LEAVES

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The land area has been free of fire for many years and is in a splendid state of growth. Roads and trails have been cut and are maintained through and over the property, as well as a cleared fire lane on most of the boundary lines. The land is well covered with growth, carries a reasonable amount of humus, and is in a splendid water-carrying condition.

About fourteen hundred acres of this property are set aside as a game preserve. This is a wise arrangement as it is a great help in controlling trespass on the water shed above the reservoir. The remaining part of the property above the game preserve is free to hunters, but restricted to the use of campers. The game preserve and the care afforded this hunting area has made this locality one of the choice hunting grounds within the state for both small and large game.

The lower end of the property, comprising the reservoirs and Reservoir Park, contains about one hundred acres, of which about sixty-five acres are devoted to park use. Here the people of town and surroundings have a place of which they are very proud. The Water Committee of Council has developed this park to a very high degree by equipping it with outside cooking places and splendid tables, benches, etc., most of them under roof, together with a pavilion with a seating capacity of about one thousand people. The children are not overlooked and the sandpiles, swings, slides, etc. are scarcely ever without some little tot somewhere on the scene. In addition to this, an old ice-

*(Continued on page 13)*

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Three

# FOREST LEAVES

Published Bi-Monthly by

The PENNSYLVANIA FORESTRY ASSOCIATION  
Disseminates information and news on forestry  
and related subjects.

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## Post War Recreation

THE PEOPLE of Pennsylvania should be grateful that McConnell's Mills, one of the most beautiful scenic spots in the western part of the state, is to be preserved. An option on 117 acres of this woodland area in Lawrence county was taken early in December by The Greater Pittsburgh Parks Association. With the completion of the transaction arrangements are to be made to open it to public use.

The mill, which stands beside lovely Slippery Rock Creek, ten miles from New Castle and forty miles from Pittsburgh, was purchased in 1860 by Thomas McConnell, the grandfather of the present owner, Thomas Hartman. In the area, which runs several miles along the highway, is an excellent stand of virgin hemlock. Gardner's Falls, down which the creek tumbles, is actually a series of falls of superb beauty. As soon as gasoline and tires are available, this densely wooded tract along the stream and surrounding the mill and race will unquestionably beckon to many thousands from miles around. Charles F. Chubb, Arthur E. Braun and others of The Greater Pittsburgh Parks Association deserve the thanks of the citizenry for this public spirited action.

Four

The preservation of the woodland beauty spots in Pennsylvania for recreational purposes has been a project of The Pennsylvania Forestry Association, which has over the years, borne fruit. We believe in saving them because they have more than ephemeral value. They are a sedative in a world whose tempo is too rapid for full living, since in them may be found relaxation and peace, qualities foreign to the work-a-day world in an industrial age.

At the other end of the State is an equally desirable tract, that should be preserved for public use and enjoyment. In Susquehanna county in the far northeast lies a natural body of water known as Silver Lake. It is a clear blue lake and from its shores upward extend virgin maple, hemlock, ash, and other species seeming to reach the sky in their great height. This area about eight miles from the New York state line, yet accessible to Scranton, Wilkes-Barre and other populous places, is now owned by a lumber company, the principals of which recognize its recreational value and have, therefore, withheld cutting, hoping that the State would buy it. All of the several hundred acres of virgin timber and as much as possible of the lakeshore should be purchased.

It is hoped the State will adopt a policy of recreational land purchase which may be adhered to from one administration to another until the total space devoted to forest recreation will be at least 100,000 acres. Even such an area may be taxed to care for the crowds that are only waiting for the end of the war and plenty of gas and tires to get out into the country.

With the peace time trend toward shorter hours and more leisure, recreation will be big business. In 1941 the last peacetime year, 10,000,000 visited the 101 recreational areas in Pennsylvania. It is not only conceivable but probable that with the return to normal conditions between 20,000,000 and 30,000,000 will use such areas if they are available and in so doing spend upward of one-half billion dollars. Pennsylvania should be prepared to attract and hold this business.

H. G. M.

FOREST LEAVES

## Eaglesmere Subject of New Pictorial Volume

EAGLES MERE AND THE SULLIVAN HIGHLANDS, by J. Horace McFarland, L. H. D. and Robert B. McFarland. The J. Horace McFarland Co., Harrisburg, Pa. \$3.75.

FOR A VARIETY of reasons this labor of love by a long-time friend of the Pennsylvania Forestry Association will interest the members. It is a guide to a popular vacation region; it discusses the historical, recreational and conservation aspects of Sullivan County, in which Association members have large land holdings, and it treats of the scene of the 1936 joint meeting of the Pennsylvania and American Forestry Associations.

Pictorially the book is distinguished by a generous selection from Dr. McFarland's splendid collection of photographs. Woodland scenes, waterfalls and some splendid tree and flower pictures are reproduced in large size and with excellent printing, supplemented by a few pages of resort-folder illustrations dealing with Eagles Mere's summer colony.

The first half of the volume—written from the viewpoint of a regular cottager at Eagles Mere—will make its greatest appeal to those who share this interest. The historical and geological background of the resort, the matters of transportation, hotel accommodations, sports, churches and local walks are discussed in great detail. A good "selling" job has been done in these pages, which will be appreciated by all Eagles Mere devotees, but it is in the chapters devoted to the Sullivan Highlands that Dr. McFarland has made his widest appeal.

High Knob, World's End, Rickett's Glen, famous throughout the country, are particularly interesting to those members of the Association who had the opportunity of visiting these spots, and other parts of the County, during the meetings of 1936. At this time the scenic road at High Knob was under construction, but had progressed far enough for the group to traverse it, with Dr. McFarland as an enthusiastic guide. World's End was nearly completed, and plans for the acquisition of the Ricketts property by the

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Commonwealth were under way. These features of the region are treated both descriptively and historically.

While the book, as the authors point out is "not a botanical discussion" the flowers and trees are not neglected, descriptively or pictorially. The conservationist will appreciate the treatment of important timber trees from the standpoint of wood use and status of the species, concluding with a report on the relationship between recreation and tree protection in the State forests.

PHILIP A. LIVINGSTON

1944 EDITION

PENN'S WOODS, 1682-1932

When this little book appeared in 1933 the demand was immediate, and the supply was soon exhausted. So many lovers of our oldest trees have asked for copies since, that it seems fitting to reprint it this year as a further mark of the 300th anniversary year of William Penn's birth.

A few notable trees have been added to the list since 1933 and a few then listed have gone. Purchases of the Tionesta Tract and Rickett's Glen and other interesting data are added in this edition.

It was hoped that the reprint could be in our hands before Christmas, but the printer now asks for more time, promising to start delivery on January 23, 1945. The price has not changed. Now \$1.10 postpaid. After January 25, \$1.60 postpaid. Send orders to the author at 4331 Osage Avenue, Philadelphia 4, Pa.

EDWARD E. WILDMAN

Walnut shells ground to a fine flour-like powder are being used extensively in the manufacture of plastic tools for airplane construction.

As early as 1626 the Plymouth Colony passed an ordinance prohibiting cutting of timber trees on colonial lands without official consent.

Five



Photos from Soil Conservation Service

*A drag-line scoop making the first cut in an average depth coal stripping operation. The floor of this cut is coal which will be removed by a powerful shovel.*



*Once a fine farm. Stripping the land for coal has ruined it. Note the ridges of subsoil that extend beyond the barn and silo.*

## Strip-Mining Replanting Law Needed

by H. GLEASON MATTOON

WAR PRODUCTION demands coal in spite of the loss of miners to the armed services and other industries. In order to meet the need with less labor, there has been a steady increase in the production of bituminous coal through stripping operations. This means the removal of the soil overlying the vein of coal and then the removal of the coal. Such mining is done with enormous drag line scoops or shovels, some of which hold as much as 31 cubic yards. Equipment of such size makes it economically feasible to remove as much as 70 feet of overburden in order to reach a 7 or 8 foot vein of coal.

The scoop digs a trench to the depth necessary to uncover the coal, piling the earth along one side in a continuous ridge. After the coal is removed, the shovel starts back removing the overburden of soil and rock from an adjacent strip and dumping this into the trench from which the coal has been taken. This process is continued until all of the coal underlying the area is taken out. The result, as may be seen in these cuts, is a series of unsightly and useless ridges and depressions, the surface of which is sub-soil that has been brought up by the scoop from a depth of 20, 40 or even 60 feet.

Many thousands of acres of land in 27 counties in Pennsylvania have been destroyed in this manner. Hundreds of land owners, who have received royalties for coal rights, are now little interested in paying taxes on property which has been rendered useless for pasture or crops. The tax delinquent land problem is, therefore, being aggravated, and the rest of the property owners are forced to pay higher taxes.

This disfigurement of the countryside is, however, more than a tax problem. Not only is it adding to the enormous acreage of abandoned land in Pennsylvania, but it also increases erosion, adds to the pollution of

streams and destroys land values. The accompanying illustrations convey something of the desolation caused by stripping for coal. Visualize what happens to the value of residential properties adjacent to a stripped area. While the apparent cost of stripping may be less than deep mining, the actual cost in destruction of top soil, blighted business, depressed values and reduced taxes might conceivably be double that of deep mining. Such a practice should not be permitted to continue without requiring stripping operators to leave such land in usable shape and to establish a crop upon it. This will not cost more than two or three cents for each ton of coal removed.

Due to the varying contours of the land in the soft coal region, it may not be economically feasible to return the soil to the original grade but the peaks of the spoil banks should be leveled and the declivities reduced in pitch to an angle that will check soil movement. The sloping of the "high bank" or last cut, would probably be the most expensive part of the operation but if the coal seam is to be covered to prevent the accumulation of acid water, little more labor is required to grade the entire bank to the angle of repose.

The Pennsylvania Forestry Association is sponsoring a bill in the coming session of the legislature, which will require stripping operators to do some regrading and replant land so destroyed. Fortunately some of the operators recognize the need for such a measure and have given us assurance of their support. Business men, industrialists, bankers, professional men, sportsmen, members of garden clubs, women's club members and others interested in the economic or social aspect of life in Pennsylvania should recognize the necessity for such a law.



Photos from Soil Conservation Service

*A drag-line scoop making the first cut in an average depth coal stripping operation. The floor of this cut is coal which will be removed by a powerful shovel.*



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Six

FOREST LEAVES

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Seven

## The Dutch Elm Disease

(Continued from page 1)

ties. During 1944 they noticeably damaged elms in Lehigh, Northampton, Berks, Bucks, Montgomery, Delaware and Chester counties, and to a lesser extent in other parts of the state. If any Dutch elm disease infected trees are standing in this area, the chance of an outbreak of epidemic proportions is not remote.

The very fact that Dutch elm disease is spread by insects is a strong argument in favor of keeping trees in high vitality. The elm bark beetle and other insects select trees of low vitality to attack. The prevalence of bark beetles and dying elm trees is an indicator that unless great care is exercised, the Dutch elm disease in the southeastern portion of Pennsylvania is going to be widespread.

The outward signs of infection are plain and easy to see, but only a laboratory test will confirm it. Available government funds are sufficient to carry on the required cultural work on twig specimens. The best specimen for this use is a small branch, one-quarter to one inch in diameter and six or seven inches long. These must be carefully wrapped and may be mailed to the Division of Forest Pathology, Washington, D. C., or the Bureau of Entomology and Plant Quarantine, 503 Main Street, East Orange, New Jersey.

This is a call to arms for the American elm. Individual owners of elms can contribute an important part in the war on Dutch elm disease by destroying all dead and dying elms and keeping the desirable trees in vigorous growth. Prune out all dead and weak branches. This work can be done at any season of the year. Insect infestations which defoliate trees such as the elm leaf beetle lower the vitality. All trees should be fed with a fertilizer, high in nitrogen.

Pruning, spraying, fertilizing and general diagnosis of tree conditions require training and equipment. Best results will, therefore, be achieved if the tree owner will secure the advice and service of a competent tree specialist. Call your County Agricultural Agent,

## The Wren Family

by MARTHA SERENE LEWIS

**N**EXT TO THE robin there is probably no better known bird throughout America than the house wren. The reason is that this busy little brown chatterer does not wait for an introduction, but establishes her home wherever she wishes whether the location pleases us or not. Affectionately known as Jenny, she is the member of the family who decides where to live and if her mate does not like the place she promptly chooses another husband.

Troglodytidae, the Latin name of the family, means cave dwellers. It applies equally well to the European species, which builds cave shaped nests, and to the American wrens which hunt natural cavities for their homes. Gourds, tin cans, holes in apple trees are their favorite nesting places. An instance of a house wren nesting in the hip pocket of a fisherman's trousers hung out to dry is recorded in "Birds of America."

Although there are 250 different kinds of wrens throughout the world, chiefly in the tropics, there are only 28 species in the United States. These, however, are found in every state in the Union. They are all small birds of brown plumage and 98 percent of their food is insects.

Nearly every member of the family is a good singer, but my favorite is the Carolina wren. Its song is loud and clear and sweet and bird lovers who like to give words to bird songs, imagine that it says "tea kettle, tea kettle, tea kettle." Outside my cabin in the Great Smoky Mountains in October, the Carolina wren sang all day long. For bubbling joy perhaps the house wren has no equal.

State Forester or local Tree Warden. They will be glad to advise.

A living tree, like a living animal, can best protect itself if it is maintained in healthy, vigorous growth.

## Needed Highway Zoning

by MRS. CYRIL G. FOX

**W**HETHER OUR trees and forests shall continue to serve as a back-drop for billboards and other unsightly roadside structures or provide the highway traveler with a healing balm for jangled nerves is up to Mr. and Mrs. American Public—especially Mrs.! We are told that women now hold the balance of power in civic affairs, so it would seem that the necessary legislation to insure adequate roadside protection is just around the corner. At least, that is the situation in Pennsylvania where the women have organized and become unusually vocal.

Under the guidance of the Pennsylvania Roadside Council (with its 35 member organizations which include farmers and urban business men as well as all federated club women, over a million residents of the state are calling upon their legislators in the coming session to provide zoning protection for Pennsylvania's two billion dollar investment in state roads. With a 500 million dollar post-war expenditure for new highways already in the blue-print state, the need for immediate action to protect them from characteristic and ruthless exploitation is imperative.

The "Highway Protective Area Bill" to be introduced into the coming session at the request of the Council is patterned after the "Model Bill" provided by the American Automobile Association, after an intensive survey and study of the roadside problem by its special committee of zoning experts, farmers, business men and civic leaders. It has been adapted to Pennsylvania legal procedure and is sometimes referred to as the "Strip-zoning Bill," to distinguish it from the zoning enabling law already in effect in Pennsylvania which permits 1st, 2nd and 3rd, class cities, boroughs and townships to zone against undesirable development.

Passage of the new highway zoning bill would provide zoning protection for rural highways outside the corporate limits of towns and villages which would otherwise

be subject to the "ribbon slum" development which now characterizes most town approaches.

The Pennsylvania Farm Bureau Federation, in its enthusiastic endorsement of the bill, calls on its 100,000 farm members for active support for the following reasons:

1. Promotion of public health, safety and welfare.
2. Decreasing and prevention of highway hazards.
3. Preservation and increase of the capacity of highways to bear traffic.
4. Preserving the Commonwealth's investment in highways by controlling the development and use of land along the highways.
6. Attraction of tourists to the highways of Pennsylvania.

It adds furthermore: "Too many bars have been let down until, paradoxically, too many bars are going up! The beer and juke joints and the honky-tonk dancing places are part and parcel of the whole nasty and growing mess of moral and physical disfigurement. Things that are glaring and blaring, flock together on the highways. Screaming headlines set the tempo and the atmosphere that breed indifference to natural beauty. Automobile junkyards, like a creeping sickness, come close to your property without let or hindrance. At the present time almost anybody can do almost anything short of sticking an ugly project out on the concrete or black-top road!"

The procedure of the bill is simple enough and follows the principles of true democracy. A State Highway Zoning Commission would be established, consisting of the Secretaries of Highways, Agriculture, Forests and Waters, Revenue and Commerce, an accredited Landscape Architect to be appointed by the Governor, a representative of the Pennsylvania Association of Planning Commissioners, a representative of the Pennsylvania State Association of Township and County Commissioners.



"Highway Protective Areas" would be established along State Highways, having a variable width, depending upon local conditions, with a suggested maximum of 1000 feet from the center of the highway. The Commission, within certain strictly defined limitations, would regulate within the Protective Areas the location, height and size of buildings and structures and the uses of buildings, structures and land for various purposes; would establish building and use set-back lines and would fix or approve the number, location, grade and design of access roads.

This regulation would be based upon the establishment of "Districts" in accordance with usual zoning procedure. The State Planning Board would prepare the plan for locating the boundary lines of the Protective Area, its several Districts, and set-back lines, etc. The Zoning Commission would not act until the State Planning Board had certified such a plan or part of such a plan. The Zoning Commission would not be bound by the Planning Board's recommendations, but would have to submit plan changes to the Board for comments.

There is proper provision for avoidance of unnecessary hardship, for public hearings, for appeal, for amendment and for enforcement. There is provision for issuance of building or use permits by the Zoning Commission **except for residential or agricultural purposes**, for which no permits are required. There is provision for harmonizing state and local zoning regulations in case of conflict.

The Protective Areas would be divided into Industrial Districts, General Business Districts, Roadside Service Districts, Recreational Districts, Residential and Rural Districts. Adequate provision would be made for every type of activity, but each type of activity would be guided into an appropriate District where it would be a community asset rather than a community liability. Residences or agricultural activities, which are not depreciating influences, would be permitted in all Districts. Naturally, any lawful building, structure or land use existing at the time regulations are established would be permitted to continue, except that non-conforming outdoor advertising (in which there is small capital investment and which may be readily relocated without excessive hard-



ship to the owner thereof) may be required to conform within a period of eighteen months.

There would be **absolutely no restriction** of the agricultural or home pursuits of farmers, except that they would be required to place all **new** buildings a reasonable distance away from the highway. Farmers could maintain roadside stands for the sale of articles grown or made on the property and could have a reasonable number of signs to advertise such products. Of course, farm land would be restricted as to other business or industrial use unless it was so classified.

The National Real Estate Board, in considering the problem at its 1940 Annual Meeting, unanimously passed a resolution which called for zoning protection against billboards and temporary roadside structures detrimental to real estate values in residential areas and to our vast investment in rural highways.

The rising tide of public opinion which is now sweeping the country and calling for intelligent planning for land usage has precipitated court decisions which clarify the picture of who owns what. Vermont's Supreme

Court has ruled that a land-owner has no inherent right to use or lease his highway property for commercial advertising unless such advertising applies solely to business on the property. A recent court decision in Pennsylvania ruled that billboards could be regulated on aesthetic grounds. In New York the Supreme Court pointed out that "there is a direct relation between the preservation of natural beauty . . . and the maintenance of the health and mental composure of the citizens of the State."

Thus the citizens of Pennsylvania are on solid legal ground in demanding relief from "highway pollution" and insisting that the happy motoring to which they are rightfully entitled is made possible. A sympathetic Administration and a Secretary of Highways who has publicly endorsed the program of the Roadside Council leaves the final chapter to be written in the Legislature. And it will be intelligently and effectively written if vigorous and persistent demand is expressed by the citizenry. Which means YOU, Mr. and Mrs. Pennsylvania! Write to your local State Senator and Representative TODAY in support of protective highway zoning.



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Eleven

# What Is A Community Forest

by H. GLEASON MATTOON

**A** COMMUNITY FOREST is a wooded tract owned and managed by a town, borough, municipality, or other local governmental unit, for the benefit of all the inhabitants, through the production of wood, the protection of a watershed, or the development of healthful recreational opportunities. The value of such a forest lies in its management for the economic, social or healthful benefit of the citizens of the community. This thought impressed itself on me while talking recently with a business man who proudly told me of a 4500 acre forest owned by the manufacturing community in which he lives. He said that it had been acquired 35 years before as cut-over land, but that time had changed it into a densely wooded tract with many trees now of saw timber size. This man spoke with enthusiasm of the fine stand on the property and commended the management for a job well done.

Inquiry as to the financial returns from the forest and other uses to which it had been put during the 35 years of ownership, brought a reply that nothing had been done with it, except to let the trees grow. Not even fuel wood had been taken from it except surreptitiously and, as for giving jobs to the unemployed during the depression, that had not occurred to the officials. To set apart a section of this acreage for a recreational area, so badly needed in a settlement in which no open spaces are available for play, was also taboo.

The evening following this talk I was reading of a town in New England of less than 1000 souls, that found itself in the late 30's, with no industries, a shrinking tax base, and a growing acreage of tax delinquent farm land on all sides. This was not untypical of hundreds of communities during the depression, but the manner in which the town fathers recognized that the solution of their economic problem lay in changing the acreage of abandoned land into an area of productivity is an inspiration to all.

The 900 acres that became the town forest, was made up of several farms and smaller parcels and contained some woodlots, but principally weedy pasture and hayland. In the first three years, with Yankee ingenuity, which in this case was simply, industry, a keen sense of values and close utilization of the wood products harvested, the town received cash profit of over \$5,500.00 after deducting all costs and had wood on hand valued at \$2,500.00. In addition 175,000 trees had been planted in the pastures.

It is not possible to compare these two areas; it is easier to contrast them, but which is better serving its purpose as a community forest? Is it the 4500 acres of fine timber that provided no jobs when men were on relief, and no fuel when homes were cold, or is it the group of abandoned farms that, in three short years, gave men work, restored their self-respect and put money in the town treasury? Is it the 4,000,000 board feet of saw timber locked up in the larger tract while service men from that village wait for gliders and rescue boats, or is it the few thousand feet of birch from the farm woodlots that were sufficient to finish two more bombers to carry destruction to Berlin?

The essence of a community forest lies in the extent to which it meets the needs of the people of a community. These are extreme cases, but it should be borne in mind that the mere acquisition of a tract of woodland by a borough, township or municipality, does not justify its classification as a community forest.

The depression is now over and in a matter of months, perhaps the war too will be a thing of the past. What will follow is a matter for conjecture, but it is reasonable to suppose that for a time jobs will have to be found for some part of the 1,000,000 Pennsylvanians who have been taken into the armed services. Many of these men will readjust themselves to civilian life more readily through healthful, useful, out-of-door em-

ployment, particularly if those jobs keep them near their families and friends.

Very likely there is not a community forest in Pennsylvania that would not be benefited by providing useful employment to some of these men. There are various types of self-liquidating projects which could be undertaken to fit the abilities of the men and improve the forest. Re-planting, thinning, trimming, recreational development, fuel wood, pulpwood, and timber cutting are but a few of the things that might be mentioned.

Such post-war projects will be doubly valuable to the community because they will create new values in the forest and will furnish worthwhile jobs for local service men. It is not too early to prepare the plans.

## VEGETABLE OIL MILLS

Large areas of the pineywoods of Louisiana and East Texas are now growing tung nuts in increasing quantities. While considerably behind Mississippi (which leads the nation in this field) it is probable that Texas and Louisiana, in a strip about 150 miles deep and 100 miles inland from the Gulf of Mexico, will expand commercial tung culture appreciably.

Growers of the area report incomes of \$100 to 200 an acre from properly managed tung groves planted to the right strains on the right soil types. The guess being overcome as result of research conducted at the United States Field Laboratory for Tung Investigations at Bogalusa, Louisiana, where budding of desirable varieties is likely to develop into a new industry of great importance to all the South.

## Annual Meeting

The Executive Board of the Pennsylvania Forestry Association has announced that the Annual Meeting will be held at the Penn Harris Hotel, Harrisburg, on February 6 and 7, 1945. Early hotel reservations are advised. Announcement of the program will be made to each member by mail.

The next issue of Forest Leaves will contain some of the papers to be presented at the meeting.

NOVEMBER - DECEMBER

## Tyrone Sets an Example

(Continued from page 3)

pond, originally on the property, has been set aside as children's fishing ground, grownups being prohibited from fishing in this pond, as they must take their pleasure from seeing Johnny land his first fish. This pond is also used as a skating pond in winter, and old and young enjoy it together.

The water supply and the recreational feature of this property cannot be measured in dollars and cents, and it would be difficult to place an estimate on the value of these two things derived from this property. The timber growth is comparable to other land areas on this slope. Some saw logs and pulpwood have been taken from the property most every year, together with a large quantity of fuel wood produced in the improvement cutting on the forest, and as this program is carried on the area will develop to a point where a sustained yield program can be carried out which will further reduce either taxes or water charges to the residents of Tyrone.

In the final analysis, the people living in Tyrone own a property that is unique in its use, as it furnishes them an abundance of first quality water, scenery unsurpassed, where rhododendron and hemlock reign supreme beside the oak and poplar, some of the finest hunting within the state, together with the recreational features of a park within walking distance, where man and nature have combined to make it one of the show places of Central Pennsylvania.

The legislature of 1874 made it possible for municipalities to acquire water works property from public utilities and laid down the manner in which these properties could be taken over. This idea was developed in Tyrone until it came to a head in May, 1926 when an election was held on the question, "Shall the Borough of Tyrone proceed to acquire the water properties of the Tyrone Gas and Water Company?", with the results of 1789 votes for and 288 against. This interest has continued until the present time when most of the people in the town feel they have a personal interest in the water properties, and it is an outstanding example of pride in ownership.

Thirteen

## Pennsylvania Nut Growers' Association

A Practical Body of Nut Growers Whose Aim Is to Stimulate Greater Interest in Nut-Tree Planting



Black Walnut Kernel

### Persimmons as You Like Them

by JOHN W. HERSHEY

THE FOLLOWING letter was written because I kidded him about the size of the fruit. Here's the story.

Last spring he wrote me telling that he is 74 years old and "just interested" that's all and gave me his persimmon story, which he repeats here. He offered to show me the clump of persimmons if I came up. I countered with a request for cions. They came but cut so late they were cracked open. I held them a couple of weeks and used them in top workings. Four of five grew. He sent samples this fall of fruit measuring 1 3/4 inches across with the story that they were only 3/4 normal size due to drought. As I never measured any larger in the great persimmon belt of the south, I replied I would willingly call him a liar if he wasn't such a fine old man. The letter is HIS reply and story. Do we have any more willing to tell of their love for nature by dirtying their pants and skinning their shoes and shins to make contact? Let us hear from you.

These trees are on the Jersey side of the Delaware at Stroudsburg. A remarkable find for northern planting.

Rio Grande, N. J.  
October 5, 1944

Dear Mr. Hershey:

I'm glad you decided not to call me hard

Fourteen

names, but darn it, don't call me an "old man." I'm trying to persuade myself I'm a young "feller" and now you go and spoil it. As to the persimmons, there is a group of about 6 or 7 trees from 3" to 6" in diameter growing in a dense tangle of green briar. As it was Sunday, I had good clothes on, but I was tempted to "shinny" up the tall trees where I could see some, maybe a bit larger than the samples sent to you. However, after tearing my way to the base, I looked down and found my new shoes were scratched and my suit had a new nap, so I took only what I could reach from the smallest tree, 3" in diameter. As to flavor I thought you would understand when I explained that the soft ones were blown down by the hurricane some two or three weeks ago and, therefore, immature and insipid. As I once told you, I had in East Stroudsburg, Pa., Lambert, Josephine and Early Golden, but the last named was killed by winter. The Bedford (thanks), when mature, is in my judgment, superior to Lambert and equal or better than Josephine in sweetness and flavor.

How do you account for a half dozen trees in a group all bearing the same fruit? I doubt they are root stolens. Maybe they became trees from seed, which seldom happens.

Do you bud or graft a certain proportion from a staminate tree and advise patrons to buy at least three pistillate and one staminate to insure pollination? Otherwise, persimmons, being dioecious, would fail to fruit unless purchasers lived within bee flight of wild trees. In my case in East Stroudsburg, my staminate tree, being in the rich soil of the poultry farm and fearing it would die, I grafted a branch of pistillate in the garden; however, the staminate remained lusty. Maybe budding one branch of each pistillate with a staminate would do it. However, the persimmon has the habit of shedding many branches. You can believe me when I tell you the samples I sent were smaller than the average at present on the trees and considerably smaller than two years ago. Last year was too dry, as was this year.

Yours truly,

(signed) GEORGE K. BEDFORD

P.S.—We have had 10 degrees below here, so trees are hardy.

FOREST LEAVES

Woodstown, N. J.  
October 8, 1944

Mr. Hershey:

Your letter received—I will try and give you what information I can. The first pecan tree I set out was a seedling I received through our Congressman at Washington, D. C., about forty years ago. It commenced to bear at about six years of age, but the nuts being very small, were of no account.

I commenced to experiment with nut trees about thirty-five years ago by setting out different varieties of chestnut trees that did very well, bearing some very large nuts. I had some that were as large as a silver dollar; some of these trees got to be quite large. I had over 40 at one time; then the Chestnut blight struck and I lost every one of them. I don't know of a single Chestnut tree in this section now. I tried the filberts with no success growing to a very large bush, but would not bear, needing another variety to fertilize them, I suppose. Then I had the hardshell almond—nothing more than a peach tree that bore very heavy—the peach staying on the trees till very ripe then drying up and cracking the peach fruit, but no good. Then I commenced on the English walnuts, setting out seedling trees which took too long to bear. Then I commenced to purchase the budded or grafted-on black walnut varieties. Marquette and Franquette did very well. I had over 150 walnut trees at one time, most of them purchased from the J. F. Jones Nursery of Lancaster. I also was buying pecan

trees with these walnut trees, a few every year that I thought were doing very well till I had six acres in nut trees and 1500 grapes of different varieties and many peach and pear trees. Then in 1923 I started quite a pecan grove, setting out 140 pecan trees of different varieties: Marquardt, Niblock, Busseron, Indiana, Green River, Posey and Stuart. Of these, the Stuart, Green River, Busseron and Indiana did well with me, setting them 38' apart. Most all of these trees I purchased from the Bass Nut Nursery, Lumberton, Georgia, but not certain about the town. These trees grew and did very well and just coming into bearing when I sold the farm and the purchaser of the farm inside of one month had every one of these trees pulled out. He was not interested in nut culture. I had the cash, but it made me feel very bad to see all those trees I had tended so many years, and just commencing to profit, go so quickly. If I was a young man again, I would certainly go into the nut business as I think it will become quite a profession to anyone who will study it and tend to the business. I have never seen either the pecan or the English walnut winter kill an inch here, but I believe one will have to spray to be successful. I never did. There is a caterpillar that gets on the trees in the spring and will hatch out and soon spread over the tree, eating the foliage—a very fuzzy worm about 1 1/2" long that I have never seen on any other tree but the pecan. Then, I think, one will have to spray for the worm that gets in the kernel. I was never troubled, but I had two shell

Winter Meeting

### Pennsylvania Nut Growers Association

THURSDAY, JANUARY 11, 1945 — 10:30 A. M. — 1:30 P. M.

Assembly Room—Chamber of Commerce Bldg.  
114 Walnut Street  
Harrisburg, Penna.

The Farm Show Building is not available this year, hence the change in location of meeting. Be sure to be present. No other notice will be sent you.

Come prepared to join in a round table discussion.

NOVEMBER - DECEMBER

Fifteen

bark trees, the nuts being very large and the shell hard, but hardly a nut was good, the worm eating a hole through the hard shell just like a chestnut worm. The farm that used to be known as the Pecan Farm, Lewis M. Morgan, is no nut farm now. I used to have over 250 pecans, 150 English walnuts, many peaches, 1500 grapes, pears, etc.; all are gone now, but about three pecans near the house and two or three walnuts. I sold the farm about ten years ago and live in Woodstown, since I am a man now 70 years old.

I hope I have answered your questions.

(signed) LEWIS M. MORGAN

PVT. WALTER L. SMITH

Mohnton, Pa., writes somewhere in England:

**H**OW IS everything going with the Hershys at Downingtown? I hope you are all fine. I'm doing all right at present and expect to keep on just that way. In my off time I've been studying the flora and fauna so to speak. There are some fine oaks and copper beech here; Chinese or Siberian elm seems to be a weed over here. They use it for hedge. Of course, the thorn takes top billing for that job. There are a few Paul's Double Red Flowering Thorns here, though not many. Tree roses seem common because they do not need winter protection. Several types of ornamental locust and very few commercial varieties. Their walnut seems to be different from our own. I haven't had a chance to more than look at them. I'll write more later when I find someone who knows something about them. Their evergreens are not worthwhile mentioning. So far I've seen at least 12 varieties of oak and no duplication of our own yet. It is one of their best trees. There are some real old yews and boxwood. If I see more I will write to you about them. If I see more I will write to you about them. I'll tell you about their architecture, too, later on. I've seen some buildings over a thousand years old. Imagine that!

If I come back this way after this fuss is over I'll try to collect some seeds of the more interesting trees and plants. Then when I

see you we can decide what to do with them. I'm sure I'll find more interesting things to write about after we reach the continent. In the meantime there is very little to report from over here; things are rather quiet at present and I'm glad for the lull. So please take the best of care of yourselves and I'll do the same until we meet again. The best of everything always.

(signed) WALTER L. SMITH

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FOREST LEAVES

## Simple Arithmetic . . .

The PENNSYLVANIA FORESTRY ASSOCIATION now has members.	1200
If each of the present members secured	2
new members, the Association would have	2400
new members, or a grand total of members.	3600
The Association's annual income is now	\$ 5,500.00
2400 new members at \$3.00 each, would add	7,200.00
Making a total annual income of	\$12,700.00

With less than \$12,000 the Association cannot carry on the activities for which it was founded.

Won't you do your part?

### The Pennsylvania Forestry Association

Organized in 1886  
1008 COMMERCIAL TRUST BUILDING  
PHILADELPHIA 2, PA.

To support the activities of The Pennsylvania Forestry Association for the preservation of forest lands for wood production, outdoor recreation, regulation of stream flow and prevention of erosion, I enclose \$..... to cover membership for the ensuing year.

Membership Classes	Name .....
Annual member .....	.....
Club membership .....	.....
Sustaining member .....	.....
*Contributing member .....	.....
Life member .....	.....
Perpetual member .....	.....
Date..... P. O.....	

\*If paid for five consecutive years the person automatically becomes a life member.

Forest Leaves, the Association's magazine, is sent to members in all classes.

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