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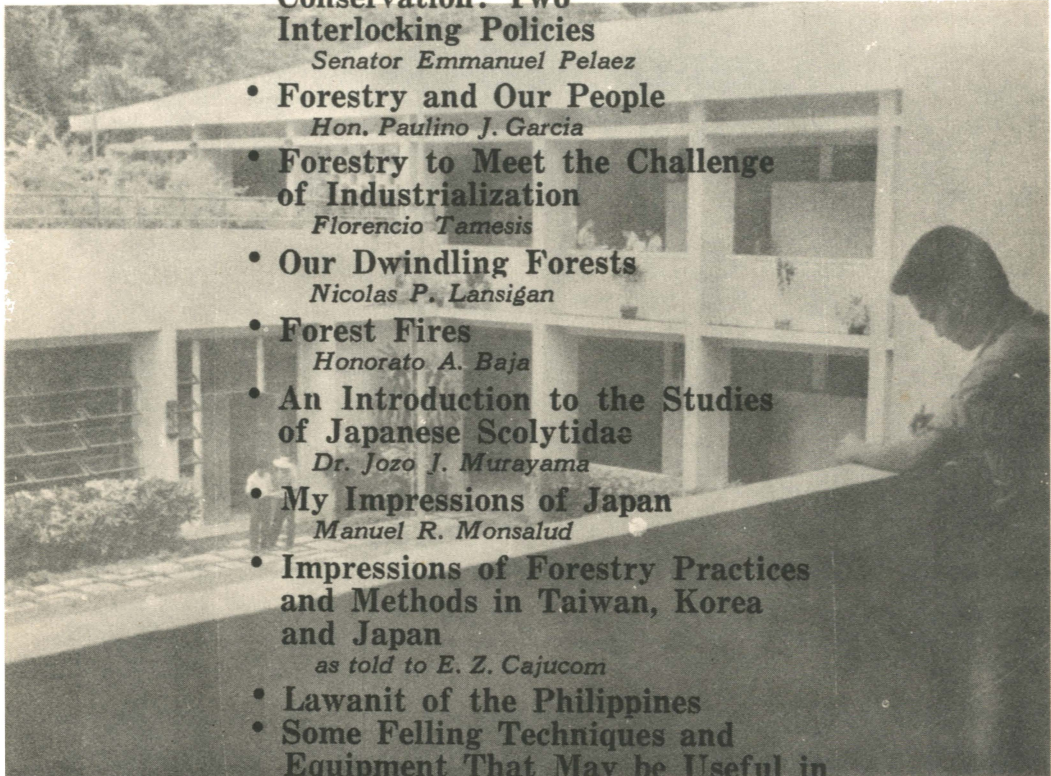
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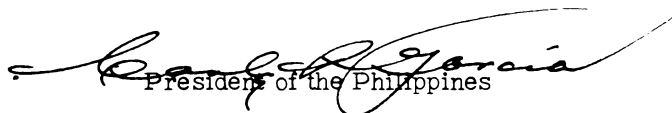
**MALACANANG
MANILA**

M E S S A G E

I am happy to congratulate FORESTRY LEAVES for putting out this special edition on Arbor Week.

The annual observance of this event directs public attention on the importance of trees and the need for systematic conservation of our forests. Wood is easily the most popular building material we have in the Philippines not only in the construction of houses but also in furnishing our people with facilities and implements for daily living. With our wealth of forest resources, therefore, we should see to it that none of this God-given treasure goes to waste.

May the significance of Arbor Week be instilled in the mind of every citizen who ultimately stands to profit by helping in the continued propagation, preservation and care of our beneficial trees.


President of the Philippines



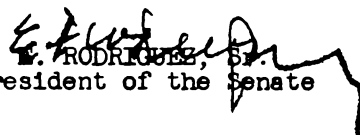
Republic of the Philippines
Office of the
President of the Senate

M E S S A G E

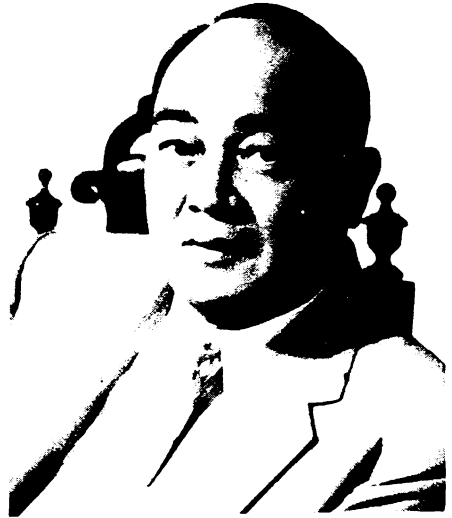
On the occasion of this year's celebration of Arbor Week, I take pleasure in addressing this message to all readers of the "Forestry Leaves".

Our forests constitute one of the biggest sources of our national wealth. God has endowed our country with bountiful timber resources, and it is our duty not only to utilize and exploit these resources, but likewise to conserve and protect them so that they will provide as much wealth to our children and descendants so many decades and generations from today. So that while we should be concerned with lumber production now, we should never lose sight of the intention to keep intact and productive our forests and timberland.

The theme for this year's celebration of Arbor Week is community and industrial development. Yet to my mind, we should also make as part of that theme, forest conservation and protection, for there still is much to be desired in this effort. Let the Philippines of tomorrow possess as much wealth in forests as the Philippines of today does.


W. RODRIGUEZ, Sr.
President of the Senate

Manila, Philippines



H. R. No. 3

REPUBLIC OF THE PHILIPPINES
HOUSE OF REPRESENTATIVES
MANILA

OFFICE OF THE SPEAKER

M E S S A G E

The Forestry Leaves deserves warm commendation for its active participation in the observance of Arbor Week this year. It is a fact little appreciated by our people that trees are one of the most precious gifts of nature to man, who has through the ages derived from them untold material benefits and great spiritual solace and enjoyment. I hope that with this celebration, we will all realize the importance of trees in the task of nation-building and in the enhancement of our moral and material values.


DANIEL Z. ROMUALDEZ

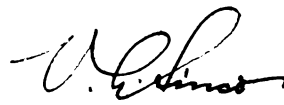


UNIVERSITY OF THE PHILIPPINES
QUEZON CITY

M E S S A G E

I understand that this year's Arbor Week celebration will be concerned with community development and the growth of vital industries in our country. The connection between the two aims is quite obvious. Forests represent one of the most essential resources of a nation. From them we derive much of the raw materials of economic progress. It would be an interesting study, indeed, to find out how many of our industries today draw their main support directly from our plants and trees. My guess is that a good majority of these industries do.

It seems to me extremely appropriate, therefore, that public consciousness be directed to the wise utilization of our forest resources. For this purpose, tree planting, the activity with which we celebrate Arbor Week, need not take place only once a year. In the same measure that we derive life from our mountains and forests everyday, we should give unceasing protection to these God-given gifts.


V. G. SINCO
President



M E S S A G E

It is gratifying to know that more young people are interested in preparing themselves to practice the profession of forestry, as evidenced by the increasing enrollment in the College of Forestry.

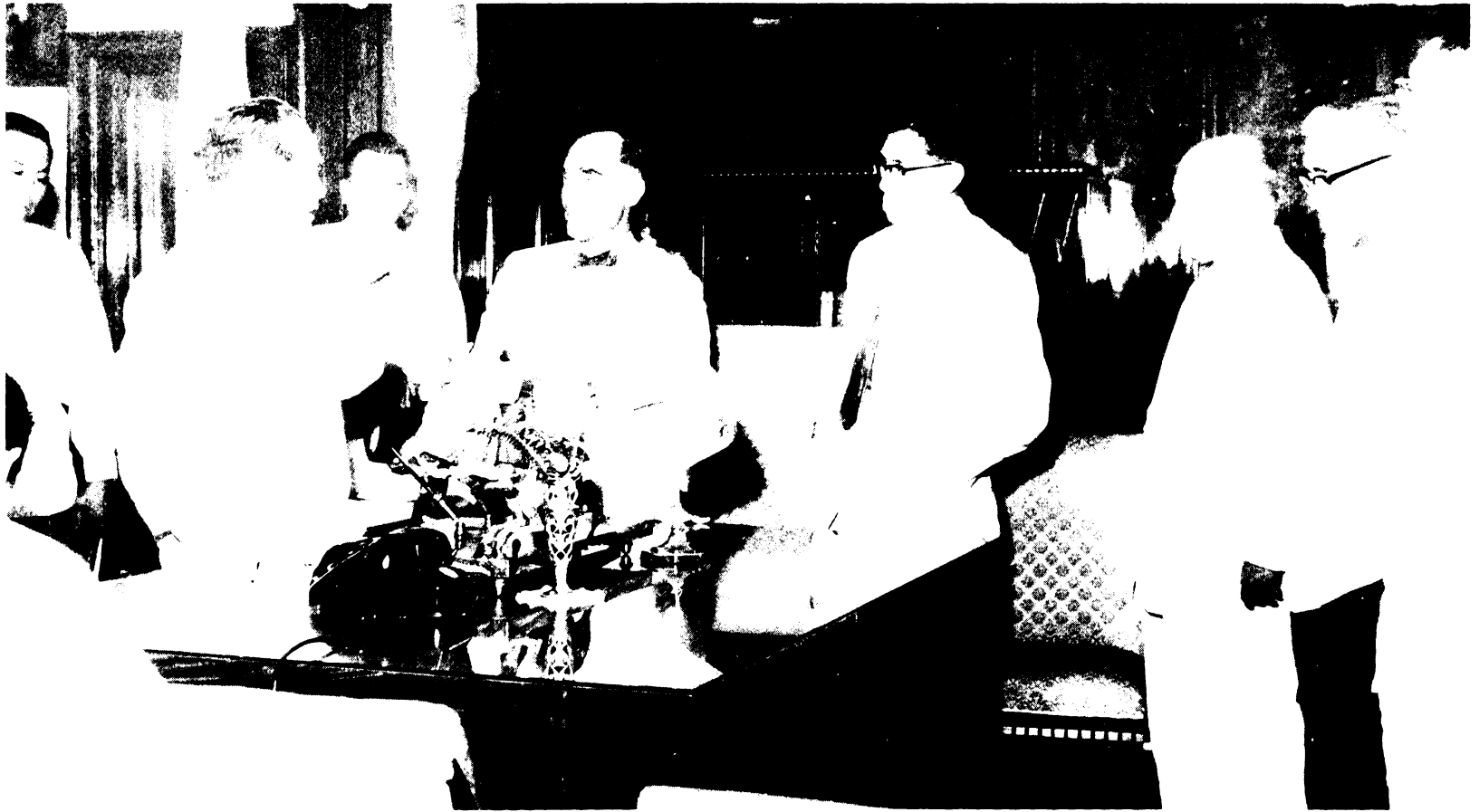
It is also gladdening to know that the College of Forestry, by revamping the curriculum, is keeping abreast with the growing needs of an advancing practice of forestry and forest products utilization in this country.

A healthy growth in the interest of wood enterprises in practicing forestry in their operations is also noted. More and more of our college trained graduates are being taken by the industry.

Since government and private enterprises are inseparably needed to develop the forest resources for the benefit of the people owning them, and at present there is a greater preponderance of employment of College of Forestry alumni in the Government, I, for one, would encourage our young men to look forward to practicing the profession in private industries.

Through the "Forestry Leaves", which is now an institution by itself, I feel greatly honored again to be given this opportunity to give a message to the students, which is, that the student has a bounden duty to his country to study, train and discipline himself in college so that he will be prepared to render useful service to the community, whether in private or public service.


FELIPE R. AMOS
Director of Forestry



PRESIDENT GARCIA CHATS WITH DR. TOM GILL, EXECUTIVE DIRECTOR OF THE CHARLES LATHROP PACK FORESTRY FOUNDATION, AND OFFICERS OF THE PHILIPPINE LUMBER PRODUCERS' ASSOCIATION ON THE OCCASION OF THEIR COURTESY CALL ON THE PRESIDENT.

In the picture: (1) President Garcia; (2) Dr. Tom Gill; (3) Mr. Carlos P. Fernandez, Vice President PLPA; (4) Mr. Antonio de las Alas, President, PLPA; (5) Mr. Florencio Tamesis, Director, PLPA and Mr. Pacifico Ocampo, secretary, PLPA.

The Forests of the Philippines*

By DR. TOM GILL

Tonight, I would like to talk about a subject I have been working in and writing about for more than 30 years. I mean the forests. But more particularly, I would like to talk about the forests of the Philippines — what they represent to the country, is happening to them, and what the consequences are likely to be.

You already know that your forests here are among the finest in the world. You have here in the Philippines as good an example of tropical tree growth as exists on earth. They are outstanding not so much in their extent, although that too is impressive, but in the valuable timber they contain, in their growth rate, and in the ease with which they can be reproduced. All of these are favorable factors that many a country would give a great deal to possess. Your timber species are well and favorably known in the world's market. Your forests, if cut with reasonable care and protected, will reproduce themselves naturally so that this source of national wealth will never cease, and the great forest industries need never fear the day when the last log rolls down to the mill. So that I think this is the first fundamental factor we have to deal with—magnificent forests capable of producing wealth and jobs for all time. The second fundamental factor is that you are destroying these forests faster than any country in the world.

Now I know there are reasons and excuses for this destruction — the most popular being population pressure and the need for expanded food production. But it may be well to see if this wastage is really solving

any problems and what the cost is likely to be. For the loss of the forests themselves, serious as that is, may not be the worst. It is the destruction of the soil itself that often follows, and the soil is the basic source of the world's wealth. Not wealth in temporary things such as pesos and Cadillacs but wealth in its real and fundamental sense of something necessary for our very existence.

Man, in mishandling this delicate film of earth, has created deserts over large areas, and set the stage for disastrous floods.

Some weeks ago, I flew over and visited Cebu, Bohol, and Negros. Parts of these islands made me think I was back again in Korea, North China, or the man-made deserts of Mexico. For I saw thousands upon thousands of hectares of cut-over, burned-over, and abandoned land, pock-marked with red and yellow scars of bare earth at the mercy of sun, wind, and rain. It will take a long, long time and many million pesos before these hectares ever add one centavo to the national wealth or one handful of corn to the food supply. Yet, these same hectares might have been a permanent source of wealth and employment.

For the long term consequences of these clearing and burning processes aren't always confined to the wrecked hectares themselves; sometimes they reach far beyond.

The City of Mexico is an example of these far reaching effects. Mexico City is a very modern capital with millions of inhabitants and skyscraper buildings and traffic jams; but one of the first things you notice when you get there are the broken, irregular pavements, the wavy streets, and many buildings that are leaning at an angle instead of standing upright. Worse still is the fact that the

*Talk by Tom Gill to Members of the Philippine Lumber Producers' Association and the Manila Hoo-Hoo Club — Fetal Room, Manila Hotel, February 27, 1959.

city itself is actually sinking at the rate of 10 inches every year. And here are the reasons: The Mexican people, years ago, cut down all the forests on the hillsides for many kilometers around the city. They then allowed sheep and goats destroy the grasslands. Then they tried to raise agricultural crops on slopes so steep, that they are fit only for forests. Meanwhile, Mexico City lies in the huge crater of a volcano and rests on a semi-liquid mass that is being robbed of its liquid content by countless pumps that are taking the water out. Because of the denudation of the hills above the city, the land itself is packed hard, so there is no chance for the rains to seep in and renew the water content. The result is cracked buildings, broken pipes, sewers unable to function and floods — a problem that is still unsolved.

Across the world from Mexico, in Japan, is another instance of what can and did happen when a steep forested slope is stripped of trees. About 10 years ago, a wide strip of forest was cleared of all its timber from the bottom of the valley to the very ridge top. Nothing was left on that strip but the tree stumps. And among the stumps they planted agricultural crops. Then as the years went by, men began to point out that the strip of land, steep as it was and bare of all trees, was just as stable as the forested areas on both sides. There was a little more erosion perhaps but the soil even though filled with rain to saturation showed no tendency to creep. So here apparently, was a contradiction of the need for trees as soil stabilizers. But seven years after that cutting, the ground again was soaked with one of Japan's torrential rains and suddenly the whole strip slid down into the valley while the uncut forested areas on both sides held firm. All the crops on that strip were destroyed, as well as much of the riceland, in the valley beneath. You may already have guessed what happened. The roots of the cut trees had been holding that soil in place during those seven years. But when these roots finally disintegrated, down came the landslide and nature

had given another costly lesson in what follows the improper use of land.

Here in the Philippines it is no longer an academic question of what may happen if the forests are destroyed. In all too many places, it already has happened. Hectares which once supported one of the finest timber types the world knows are now a useless wasting asset; not only useless but a menace to the agricultural land beneath wherever erosion has begun to claw away the soil of the steep slopes and hurl it down upon the croplands of the valley.

This creation of man-made deserts has been going on since pre-history. North Africa once supported a prosperous agriculture and proud cities. They probably felt that their culture and their civilization were as permanent as we do today. Maybe more, for they had no atom bombs. But first they cut the forests at the headwaters of their streams, then they completed the wreckage with herds of goats, then water ceased flowing out of the hills, their cities died of thirst, and today the silence of the desert holds all that once fertile area.

I know one region close to the Great Sahara Desert that once was dotted with villages of primitive people, whose lives had been made possible because of the protection afforded by the forests against the drifting desert sands. But because of forest denudation, the desert is now moving in closer and closer year after year. The people are almost surrounded, facing the end of their way of life, facing the choice of extinction, or joining the homeless nomads of the world. And I could tell you tales of regions in Mexico where records still exist from Spanish times showing that timber permits were granted to cut forests. But there are no forests now, nothing except cactus and lizards and shifting sands.

Now I know that forest devastation isn't happening to every hectare in the Philippines but it is going steadily on — and with an ever upward curve. The rhythm of destruction is heightening and if history has any lesson for us, it is that there comes a point in the wreck-

age of forest resources where human life just is not worth the effort.

Well, so much for what is happening to the forests. Now what is happening to the forest industries — the third major export industry in the country giving a direct livelihood to nearly half a million people. Here, as in the case of the forest themselves, industry suffers from a lack of stability. Companies have very little security either as to the amount of timber they can count on or the number of years they can stay in business. Squatters riddle the concessions practically at will, reducing the available supply of timber, making it necessary to revise cutting plans, making efficient management practically impossible and jeopardizing the entire economic outcome.

In addition to the lack of certainty as to the quantity of timber available, many logging companies find it difficult to obtain the long-term leases necessary to justify the investment. I could learn no legitimate reason for that nor do I know of any other country in the world that imposes this unnecessary hardship. It adds an extra hazard to a business that is hazardous enough, adds enormous difficulty to practicing sustained yield, and would seem to serve no legitimate end.

The situation of the timber concessionaire today is a little like that of a man who signs a contract of employment for 10 years at ₱20,000 a year. Then at the end of two years, he is told he will only get ₱12,000 or ₱8,000 and at the end of three years, he is told that the length of his contract has been reduced to six years. It hardly makes for good business relationships. Conditions like these are not likely to encourage a company to make any great effort toward conserving or perpetuating the forest, nor to establish a permanent industry. Why risk pesos financing industrial undertakings, however sorely needed, if the resource on which they depend cannot be protected? I know of one company that of its own volition took over an area of grassland, planted it to trees, and established a flourishing plantation. They car-

ried it along for about 30 years, then the word was given to settlers: "Go in and occupy," and in 24 hours the work of 30 years was wiped out.

A number of years ago, another company began reforestation. They wanted to stay in business perpetually. Conditions for growth were favorable, so they spent funds and labor establishing plantations. Suddenly, the land was opened for agriculture, the plantations of young trees were cut and burned, the land briefly cultivated and later abandoned. The company is now buying logs and can see the end of its operation in sight. When it goes out of existence, about 10,000 people who for years have depended directly on the forest for a living will be looking for a livelihood. But what a different story it could have been! A permanent industry providing thousands of jobs. A permanent community and hectares of thrifty trees adding to the national wealth instead of a played out, desolate, abandoned countryside.

Meanwhile, what is happening to the Bureau of Forestry — the group entrusted by the Government with the huge task of protecting, administering, and improving the forest resource, a resource valued at over 25 billion pesos, four times more than the value of all other resources put together. I think the Bureau of Forestry could be best described as undermanned, underpaid, unsupported at top levels, and opposed and threatened at local levels, frustrated in its attempts to carry out its allotted tasks. Under existing conditions, I can't see that the Forestry Bureau has the slightest chance of fulfilling its obligations to the forests, the forest industry, or the Filipino people. The foresters lack essential equipment — in most cases they depend on concessionaires for transportation; even, at least in one case, for the very paint they use to mark the trees. Small wonder then that trained men are not entering the Bureau at a rate to compensate for the numbers that are leaving. Yet, here, if anywhere, is a crying need for competent, trained men, adequately equipped and decently supported. Any program of forestry may

succeed or fail depending on the technical competence of the men who carry out that program. No matter how carefully the forest policy of a country may be written, no matter how complete the forest laws, all these will avail very little unless they are administered by a body of foresters well trained technically and imbued with a sense of professional integrity. But financial and moral support they must have.

With the invasion of squatters on an ever larger scale, with constant removal of forest land for agricultural purposes, forest management becomes impossible. For forest management is a very long time affair and must have continuity of policy, purpose, and administration. At present there is not least assurance that the forest under management today may not be released for agriculture tomorrow — here, in the instability of the forest and in the impossibility of any rational management, is the very essence of the Philippine forest problem.

The Bureau has initiated a selective system of cutting which entails leaving a certain number to form the nucleus of a new crop so that another cutting may be made again in 30 or 40 years on that same area and may be repeated again and again. It is a good system for, if well applied, it means that the land will always bear trees and be a source of perpetual revenue. The lumber companies are cooperating in this system although it means some financial sacrifice. But what happens as soon as the cut is finished? Squatters swarm in and destroy the remaining forests; the work of the Bureau in marking the trees, the values left by the lumber company are all wiped out and a young thrifty forest has been destroyed. That's a pretty high cost for two or three meager corn crops.

Finally appropriations for the work of the Bureau are pitifully inadequate. Succeeding Congresses have been very willing to finance Bureau activities that contribute directly to revenue, but little or nothing to activities that go to perpetuate the source of that revenue. Thus, funds have been willingly granted for scaling logs, inspecting and grading export

timber; but woefully meager amounts for forest management or for reforestation denuded watersheds and practically nothing for protection against squatters. Actually that amounts to saying in the plainest possible language, "We are interested in today's revenue from the forest; we're not in the least interested in perpetuating the forest."

Yet your Supreme Court has ruled that "forests and other natural resources constitute the exclusive heritage of the Filipino people." Certainly the Supreme Court could not have meant only the People alive today. What then are the Filipinos of tomorrow and the day after tomorrow — your own sons and daughters — what are they to think of a stewardship that deprived them of a heritage that could so easily have been theirs? How are they going to feel at being forced to take over and rehabilitate a wrecked environment just because we of today were only interested in the pesos we could squeeze out of it — no matter what the cost.

The old Biblical saying about the sins of the fathers being visited upon the third and fourth generations could come true with a vengeance.

Now, one hears much about the pressure of population on the land as a cause for all this. Undoubtedly, there is pressure but I have not been so impressed with that as I have with quantities of unused agricultural land. Not abandoned land, but land capable of raising permanent crops. Much of it is still unused or only partially used. I believe, more intensive, more efficient agricultural practices would go further toward increasing the food supply than stripping steep slopes of valuable forest growth. One wasteful process, yet a very usual one, is clearing and burning 10 or 12 hectares by a farmer who then pokes around the area looking for good soil and possibly finds one or two hectares while the other 9 or 10 are left idle.

Now, I think part of the difficulty — how much I don't know — but part of the difficulty arises from two popular misconceptions. The first misconception lies in the belief that forests are a hindrance, an obstacle

to agriculture, a burden on the land that should speedily be got rid of. Most nations go through this period. And where forests are occupying needed agricultural soil, this is entirely justified. The trouble comes when forests are removed from non-agriculture land and the soils begin to deteriorate; erosion sets in; floods, silt and drought follow; and human life throughout the region is degraded.

I'm thinking now of parts of India where the forests have been cut off for miles around. There's absolutely no fuel wood, and indoor heating is unknown. Yet, temperatures fall into the low 40's, and since there are no fires and no place to go to keep warm, you put on all the clothes you have, and go to bed. It's an uncomfortable but excellent object lesson in what the absence of forests mean for up where I was working the nearest fuel wood was more than a day's distance, and almost worth its weight in gold.

Until I had seen India, it had never occurred to me how much time and human activity can be wasted when forests are not available. But there it came to me very forcibly how profoundly human effectiveness, as well as human health and human happiness, are involved. Every man who spends two days bringing in a load of fuelwood has lost out of his life two precious days. He has contributed nothing to the world except one load of wood, which could have been got in a half hour if forests had been close at hand.

But the absence of forests had further effects. With wood so scarce, the Indians burned cattle dung to cook their food; and each evening you could see a dense pall of smoke over the little villages, and you knew that thousands of pounds of potential manure were being burnt, instead of returning the rich fertilizer to the earth. The result is an ever-increasing impoverishment of the soil, and poorer agricultural yields. The absence of trees had another bad effect, for the earth lay bare and dry for hundreds of miles, and when the wind blew, the dust was often so heavy, you could scarcely see. You lived in a world of dust; it covered your food and crept

into your lungs. And because India is a very old country, it was a highly infectious dust, so that few of us escaped inflamed eyes and throats during the weeks we spent there.

The discomfort and dangers of infectious dust are well known in Mexico. In the City of Mexico even at midday if the wind is up, you may have to turn on the lights of your car for dust storms are swirling across the city, blown from nearby lake beds once filled with water but now dry as any desert because of forest destruction. Those vanished lakes, instead of being a source of water so bitterly needed by the farmer and by the great city itself, today are a source of discomfort and disease.

In the early days of my own country, thousands of acres were stripped of forests; now we are spending millions of dollars to buy some of those forest lands back and we are spending additional millions to repair the damage done, in order to protect our streams, our reservoirs and dams, and agricultural lands.

This concept of the forests as something to be burned and got rid of exists here in the Philippines very strongly, and worse than that it has been industrialized. It is being used methodically by individuals and groups interested in gaining possession of land.

The second misconception has to do with the general attitude as to what constitutes agricultural land. Apparently, any patch of earth that will grow one or two crops of corn is considered agricultural. All that has made those two or three crops possible is the stored up fertility laid down by years of forest cover. It is very easy to make the error of believing that any soil which can produce luxuriant forests, such as the magnificent rain forests of the Philippines, must necessarily be of surpassing fertility; but actually much of this soil is not fertile at all. The fertility that sustains these great forests may lie, not in the soil but in the vegetation that covers it. The soil is often little more than a foothold for roots and a passageway for nutrients. The fertility comes from the decomposition of dead plants, leaves, and forest litter. Take

away the dead and decaying plants as you do when you clear the land for agriculture; and in a very short while, you have only a very sterile, inhospitable soil unfit for food crops.

But here there seems to be a belief that you can create agricultural land by legislation. And of course you may call almost any hectare of forested land, agricultural, and alienate it and raise a few dwindling harvests. Then one of several things will happen. It will be abandoned and may, with luck, return to trees. But more likely it will be taken over by cogon. This may be burned for a few years for pasture until the grass becomes too sparse. By now the soil itself has been killed, turned to a liability instead of an asset. If those hectares happen to be on steep slopes, they may begin a destructive cycle of erosion, menacing the agricultural lands beneath, silting up dams and reservoirs — in a word making the region less habitable for human living.

So firm is this belief that you can create agricultural soils by legislation that along the national highway from Agusan toward Davao, the land for six kilometers on either side of the highway has been set aside for classification. But the general belief there is that the land has been designated agricultural and is being settled for that purpose, although it includes steep hills, absolutely incapable of continuous food production.

This clearing of land of trees is a dangerous practice unless you understand the consequences. In Brazil 5,000 hectares were cleared of trees and sub-divided for agriculture. The country needs more agricultural land and these 5,000 hectares were fairly level and supported a flourishing forest, so why not convert it to agriculture? But once the protective cover of trees was removed, the rains leached out the fertility and the sun baked the surface until it was of brick-like hardness. Today not a tree, not even a weed, can grow there. Those hectares have been added to the deserts of the world and the food supply has not been increased by a single handful.

In my own country, the danger of removing the protective covering from soil and exposing it to rain, sun, and wind, was largely over-looked until nature herself brought the lesson home. Thousands of hectares had been cleared in the center of the United States in order to plant agricultural crops. It was a land of sparse rainfall but all went until drought came to the area. The soil became powder-dry. Then came days of strong winds that lashed over the unprotected land, and tons of the most fertile soil rose high in the air and began drifting toward the sea. The sun was blotted out for days.

But, in a way, we were fortunate. For the dust-cloud reached Washington, D.C. and when our Congressmen and Senators awoke one morning and were unable to see across the street, it brought home to them the power of erosion in a way no spoken or written word could ever have done and it wasn't long before money was appropriated for the U.S. Soil Conservation Service. If that wind had been in the other direction, the history of soil conservation in the United States might have been different.

Now in all this, I certainly do not want to seem unsympathetic to making use of every hectare of agricultural land for food crops, provided they are suitable for permanent agriculture. I share wholeheartedly our common interest in increasing food producing; but I see little hope in that direction from the present policy of encouraging squatters to destroy a great national resource. Nor is there any conflict between forestry and agriculture. They are not competitive. Forests are the great ally of agriculture in regions where the stabilization of upland soils is necessary to prevent the loss of agricultural land by erosion and flood.

One of the great tragedies of Mexico lies in the fact that tree cutting in the high upland forests has led to floods and erosion that bring down silt and cover the croplands in the valley. So that each year Mexico has 600 thousand more mouths to feed and less and less agricultural lands to grow food on.

Throughout the world and throughout the centuries, attempts to establish and grow crops on forest lands have always ended in disaster. Disaster to forests, to the crops, and to the soil itself. It has been one of the costliest errors man has ever made and is still making. For in some regions, it means the very death of the soil. It means the creation of man-made deserts. A permanent liability instead of a permanent asset.

My own belief is that the legitimate landless Filipino, sincerely looking for a place to make a home, is being rapidly replaced by professional squatters organized very often by someone higher up. The present pattern seems to be squat, burn the forest, plant a crop, sell the land, move on and squat again. If these lands, when cleared, were suited for permanent agriculture and could contribute to the public welfare, there would be some justification. But most are not.

The result is that here in the Philippines we are witnessing a land grab that could go down as one of the most notorious in history — a nation being robbed of the very thing that makes existence possible — the soil and the productivity of the soil. Land-for-the-Landless which was a great humane principle can become Land for the Lawless.

Well, in the face of all this, what is to be done or, better, what can we reasonably hope can be done within the existing political, economic, and social framework. Well, of one thing I am sure. The overwhelming factor is the invasion of forested land by kaingineros and the failure of government to deal with this gigantic loss. It is this situation that dominates the whole picture. Fundamental to any solution of the forest problem then is the enunciation of a rational land policy that would proclaim the areas of permanent forest land that the nation requires and protect these areas inviolate from all-trespass. Unless this stability and protection are given, all other measures scarcely matter. It's like treating a patient for dandruff who is slowly but steadily bleeding to death.

There is a bill now pending providing that no forest land shall be alienated without the

consent of Congress and the passage of this bill should do much to stabilize the forest situation. But proclaiming permanent forest is not enough. Once proclaimed it must be protected from squatters, from theft, and from trespass. That means implementation and enforcement. For laws alone do not protect forests. There must be the will and the machinery to translate law into action. Without this, it is far better to pass no law at all. For forest laws that are not enforced breed contempt for all laws and are destructive to the very foundations of government.

Forest legislation then must accept the principle that whenever self-interest conflicts with public good, a system of penalty must be invoked and the penalties must be adequate to discourage offenses.

Second to stabilizing the forests, there is an urgent need to provide greater stabilization to the lumber industry and greater security of tenure. I believe this could be done by giving long term leases and a guaranteed amount of timber so that a company can feel reasonably justified in making the financial outlay necessary to efficient operation. I believe, too, it should be given the authority and the responsibility for protecting the lands under each lease. Today, the lessee cannot protect himself from trespass because the land is government land; but if the lessee himself were given the responsibility for protecting the timber as part of the contract, he could deal much more effectively with the squatters. I think, too, that if the local governments could realize a certain percentage of the money received for timber cutting as well as fines collected from forest violations, it would be a very practical incentive to these local governments to cooperate in the fight against the squatter. The United States has adopted this policy with proper safeguards and it has worked well in winning the interest of local governments in the value of permanent forest and changing their attitudes toward forest destruction.

Third, I believe there is great need to build up the Bureau of Forestry in order to make it possible to function properly and to

give it the dignity and authority and competence that should be given a body of men in whose hands have been placed the welfare of your greatest renewable natural resource.

Now, I would be omitting one very pertinent factor if I fail to mention the need for a campaign of public education that would carry the lesson of the value of forests to economic and human welfare. For beyond the steps that I have already talked about, lies an immense need for education. This includes the many forms of conservation information for adults and the inclusion of resource teaching in the schools. One thing is certain — until a far greater portion of the Filipino people is made to realize their dependence on the land and its resources, little permanent progress can be hoped for. To change public attitudes toward the abuse of land and forests is the only final solution. It cannot be effected by legislation alone. It must come as a result of education. In saying this, I realize all that is involved here. The long tedious process of education, the need for new attitudes on the part of government, if any program of conservation is not to remain a dead letter in official archives but is to be translated into action out on the nation's burned and abandoned hectares. For in a very literal sense the Philippines is engaged in a race between education and disaster. And however difficult the task, there must be created a national will; and you cannot create until the people realize the importance and the extent of the problem and can relate it to their own way of life.

Legislation must come first — legislation and enforcement — for we cannot wait for the long term process of education and, of course, enforcement in itself is a kind of education. So I would say that legislation will be needed, plus enforcement, plus a rational land use policy, plus better conditions for the lumber industry, plus the building up of

the Forestry Bureau to a point where it can redeem its responsibility as the protectors and administrators of the people's forests.

Now, I don't believe that the forests of the Philippines will be obliterated. You still have large areas of forest remaining. How large they are and how much timber they contain, are matters of dispute. But the exact extent of your forests today are not nearly as important as the fact that we are destroying them at an ever increasing rate, that we are misusing them in such a way that they cannot reproduce themselves. So long as those conditions continue no matter how much forest you have, it is only a matter of time when the end will be in sight; and whether it is 20 years or 200 years, the impact whenever it does come will be just as devastating to human life in the Philippines. There is nothing in the scheme of things to prevent the same fate that has happened on Cebu and parts of Negros from happening anywhere else in the islands. I don't believe that will happen, for I've met enough forward-looking individuals and groups like this who are fully aware of the problem, and I've met members of the press who are already doing a splendid service in keeping this problem before the people. And all these make me believe that some day a halt will be called to this destruction. But the question is, when? For time is of the essence. Every year's delay makes the task of rehabilitation more costly and less rewarding. Delay itself becomes a kind of a failure and there is no need to fail — you have the forests; you have men in the lumber industry, eager to perpetuate the source of their livelihood; you have trained men in your Forestry Bureau. Your forests can add immeasurably to the national wealth if they are protected and not wrecked. But the decision whether to wreck or protect — like all great national decisions — must lie with the Philippine Government and the Filipino people.



THE IMPORTANCE OF COURAGE

"The biggest aid to success in business," remarks a management engineer, "is courage. With courage a man is willing to take a chance on deciding a thing one way or another, even though he may be wrong. At least half of his decisions are probably right and the result is that he gets something done — more, at any rate, than if he had too great fear of being wrong and kept postponing action." — **Oscar Allison**

Forest Exploitation and Conservation: Two Interlocking Policies

By SENATOR EMMANUEL PELAEZ

Friends:

I am deeply honored that you have asked me to participate in your annual convention today. I know that foresters, by temperament and by training, are far-sighted and appreciative of long-range policies. It is always exhilarating to meet and discuss problems with men endowed with foresight.

A speech, according to Bishop Fulton Sheen of New York, should contain at least one idea. Today I plan to do the good prelate one better: my address shall contain at least two ideas.

With your permission, I would like, first of all, to discuss however roughly the framework of a proposed Forest Conservation Act. And second, I wish to adapt the ringing declaration that President Theodore Roosevelt issued in 1905: "Conservation is a great moral issue for it involves the patriotic duty of insuring the safety and continuance of the nation."

The crisis now buffeting our forest industry to its very roots is, in the final analysis, only the fragment of an even larger crisis, namely, the dissipation of that moral sense of personal responsibility, that moral sense of stewardship, which has always been one of the bulwarks of our freedoms. The deterioration of this ideal of stewardship is especially tragic because the decay has taken place largely in the highest official circles of the land.

Before this gathering of distinguished specialists, I feel there is no need to stress both the basic and the growing importance of forests in an industrializing country. Nor is there any necessity for reviewing the array

of alarming statistics that indicate the appalling rate of forest destruction.

It is enough to recall that our technicians from the Bureau and the U.P. College of Forestry, and our forester-friends from the United Nations and the International Cooperation Administration, are all agreed on one grim conclusion: We are draining our forest resources faster than any country in the world. What is worse, we are not exerting any serious effort either at stopping this criminal drain or replacing destroyed stock. As a people, we still have to learn the wisdom of the remark made by that ancient Roman naturalist, Seneca: "In a moment, ashes are made; but a forest is a long time in growing."

At this juncture, it might be pertinent to note that we are frittering away not only our forests; as a matter of fact, we are wasting practically every resource we possess. Our fabulously rich fishing grounds, for instance, are depleted daily by rampant illegal fishing methods. Our foreign exchange reserves, hard-earned from exports have been whittled away in the splurge of luxury imports or misappropriated by men interested only in preparing for their future. Our valuable top-soil has been eroded through reckless agricultural methods.

In short, we seem to have no understanding of the basic axiom that our economy will become productive, and remain so, only if it rests on the twin policies of exploitation and conservation. Exploitation must interlock with conservation; each is useless without the other.

Dr. Lowdermilk, former assistant director of the U.S. Soil Conservation Service, has made several interesting observations on this point. Among other things, he said:

"A just relation of people to land rests not on exploitation but rather on conservation; not on dissipation of resources but rather on restoration of the productive powers of the land. . . . If civilization is to avoid a long decline, like the one that has blighted Africa and the Near East for 13 centuries, society must be born again out of an economy of exploitation into an economy of conservation."

Now, in the sphere of forest legislation, I feel that a Conservation Act could be divided into three main sections: first, a declaration of policy; this would be followed by a second section providing for forest protection and, finally, a third section regulating the use of forest products. The proposed Act would, thereby, cover the three essential sectors: objectives, conservation and controlled exploitation.

There are people, I know, who sincerely believe that a declaration of policy, like a political convention, does not accomplish very much; a statement of policy, they say, has no punitive clauses; it has no immediate practical effect.

I believe otherwise. If the action of government agencies has been ineffective and fragmented, if a sense of apathetic bewilderment grips the country, it is because we lack comprehensive and well-defined purposes. We do not possess a clear vision of the problems and our responsibilities towards resolving those problems. Unlike the communists, we often fail "to think out our acts and act out our thoughts."

A policy declaration, reflecting our deepest aspirations, will provide both a guideline for planning and a yardstick for measuring the effectiveness of future programs of action. And after discussions with foresters, I feel that our policy statement could very well run along these lines:

"The Philippine Government recognizes that forests are indispensable for the welfare of the Filipino people and that with proper management and protection these benefits can be enjoyed for all time;

"The Philippine Government further recognizes that the perpetuation of forests is inescapably linked to the maintenance of the country's economic stability and her continued existence as an independent nation of free individuals;

"The Philippine Government finally recognizes that forests serve the two major purposes of protection and production; therefore, public welfare requires that forests, whose chief function is protection, be safeguarded from wanton destruction while forests for production shall be placed under scientific management and thereby be maintained as a perpetually renewable source."

Now, insofar as protection of timberstands is concerned, we face two handicaps: the slow, almost turtle-like, pace of classification work and the politics-ridden system whereby Malacañang releases to administration favorites even areas which should be kept under permanent forest-cover.

Prudence and foresight requires that we set aside sufficient areas of timber land, consistent with our rapid population growth, to meet our production and protection needs in the years ahead. I am informed by our scientists that 42 per cent of our total land area must be kept under forest cover, if the soil is to last. I am also informed that as of June 30, 1958, we still had 14,650,892 hectares of unclassified land — and I may add, land where squatters and migrants are steadily moving in, due to the absence of clear-cut boundaries and inadequate protection measures.

Here, we have the makings of an incendiary situation: land-hungry people are marching into areas that may be unsuitable for agriculture and therefore should be set aside as permanent forests. But if classification teams fail to keep ahead of these migrants, if the lines of classified permanent forests are not held against the infiltration of squatters, a tug-of-war will develop between

these landless people on one hand and the government on the other.

Experience has shown that in such a tug-of-war, political pressure inevitably comes to play; and, as we have learned to our sorrow, it is the government that usually buckles under the stress. And the result is, our fast shrinking forest line retreats even some more.

I would suggest therefore that a Forest Conservation Act provide fullest support for classification work. Furthermore, once an area is proclaimed a permanent forest, it should not be released for other uses except by an Act of Congress. This will prevent the repetition of anomalous incidents like Malacañang's release of timber land to Nueva Vizcaya farmers early last year — land that had just been reforested at great cost to the government.

Our bill should also contain, I think, a provision against the juggling of reforestation funds. A stale and standing joke in forestry circles asserts that these funds are often distributed to repair the denuded political schemes of politicians rather than devastated or cut-over areas.

In turning to the production aspects of our forests, we should first recognize some basic facts. Professors Fentoney and Farnsworth of Cornell University, for instance, have asserted that "a national resource like timber is always wastefully utilized or carelessly destroyed if it brings a low price at the market." This is true. And it is equally true that raw materials do not command a price similar to that of finished products.

It is therefore important that we set up conditions to accelerate the foundation and operation, by private enterprise, of industries that utilize wood. This will not only create new jobs; these plants will help the cause of conservation along for experience has shown that forest protection measures must-er better support when wood, as an industrial material, acquires a reasonably higher value.

One of the major objectives of our proposed Act therefore should be to replace the present system of timber-cutting concessions with a system of long-term leases. The pre-

sent practice of short-term leases discourages qualified investors from putting in sufficient capital because they do not have enough time and elbow-room to recover their outlays. Furthermore, short-term leases dampen efforts at scientific research on new uses of wood. Research is a long-term proposition; it will be carried out only when a reasonable assurance of stability is given the investor.

Short-term leases, as we all know, have only encouraged fly-by-night concessionaires who are out to make a quick killing. Very often, this killing is made at the cost of total destruction of all the timber within the concession.

I would therefore suggest that leases for non-industrial timber cutting be confined to areas not suited for development of forest industries. And, of course, timber-cutting permissions should always be subject to bidding, thus doing away with the obnoxious practice of reserving, under the table, choice concessions for certain favored individuals.

You will recall that one of the basic principles of democratic government is the principle of subsidiarity. Simply stated, this principle requires that government should never assume those functions that can be handled by private individuals.

Applied to timber concessions, this principle requires our bill to place the responsibility and the authority for protecting the forest under lease upon the leasees, not on government. Such a provision will shift part of the protection chore from the shoulders of our hard-pressed foresters to that of the operators. And we have seen that legitimate operators are only too willing to assume this job since their own interests are bound up in the continued productivity of their concession.

Within forestry circles, there is a school of thought that argues, quite convincingly, that implementation of existing laws, not new laws, is needed. I agree that our present laws basically do reflect sound conservation principles. But I wish to point out that these laws suffer from one major, if not fatal, defect: they place the burden of implementation on the centralized agencies of national

government instead of securing the cooperation of local governments through the grant of broad, autonomous powers.

Our forest laws were drafted in the context of highly-centralized government which, incidentally, is one of the hang-overs of our colonial past. These laws therefore withdrew from local government the authority they needed to conserve and protect the forests within their jurisdiction and lodged that power in Manila. This concentration of power has worked to destroy whatever interest local communities may once have had in their forests. And yet, many people are still surprised to discover that local governments are indifferent, sometimes openly antagonistic, to forest programs. Why should local governments be interested in projects where they feel, rightly or wrongly, that they have no stake in?

Public administration specialists tell us, and numerous case-histories bear them out, that public programs succeed most when there is a wide network of effective government units cooperating at the local level. Behind this principle is the truth that national government can not do anything unless local government backs it up. Hence, I feel that our proposed Conservation Act should correct this basic flaw and, in the best democratic traditions, return to local governments the power and the autonomy that rightly belong to them.

Specifically, I would propose that the Bureau of Forestry draw up a program that will de-centralize its functions so as to provide field offices with adequate authority. To give local governments an incentive for enforcing forest laws, all fines collected for violations of these laws should be retained in the local treasury. I would suggest further that 10 per cent of all revenues derived from timber-cutting be retained by local governments. These funds should be spent for essential facilities like roads, schools and for forest protection. It is my personal belief that if local governments are given a share in these revenues, the number of cases involving evasion of timber taxes will decline.

My friends: I have been a legislator for ten years. And in that span of time, I have acquired a deep awe for the power of law. But it is an awe that is tempered by the realization that laws are as good as the men who enforce them. Many times, I find myself quoting Justice Learned Hand who once said:

I often wonder whether we do not rest hopes too much upon constitutions, upon laws and upon courts. These are false hopes; believe me, these are false hopes. Liberty lies in the hearts of men and women; when it dies there are no constitution, no law, no court can save it; . . . While it lies there, it needs no constitution, no law, no court to save it.

I bring up this point not because I believe a new Forest Conservation Act will avail nothing. On the contrary, I hold that realistic up-to-date laws are important. But I wish to emphasize that the successful operation of good laws depend, to a very great extent, on the men and women who set the moral tone of the society we live in. The most comprehensive legal codes can be defeated by an environment that praises the ten-percenter. There can be no law-enforcement without law-abiding leaders. For remember that "a nation achieves the kind of greatness it understands and seeks; a society only produces great men in those fields in which it understands greatness."

In our present-day life, the moral tone of our society is influenced to a very great extent by the men in public life. And you need only read the newspapers today to realize that the late President Magsaysay's insistence on moral integrity and dedicated service from public officials has crumbled before an insidious policy of official exploitation and public plunder. Magsaysay's cry for "missionary zeal" has given way before the bare-faced *apologia* of "preparing for the future."

Some 30 years back, the Spanish philosopher Ortega y Gasset wrote a perceptive book that throws some light on the situation we now find ourselves in. Ortega drew pa-

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Forestry And Our People

PAULINO J. GARCIA
Chairman,
National Science and Technology Board

The recent-enforced scheme of power rationing in the City of Manila and neighboring areas has aroused public consciousness more effectively than any publicity program could have done to the need of conserving our forests. If only because it has helped forcefully to dramatize the serious danger of the wanton destruction of forest that is steadily taking place, these highly inconvenient "brown-outs" might be considered as a blessing in disguise.

For sometimes now our scientists have been pointing to the imperative need of zealously safeguarding our forest areas. Six months ago, I had the opportunity of listening to an address by an illustrious and world-renowned American forester, and I well remember his remark that the Philippines has some of the most valuable forests left in the world and yet nowhere has he seen a more rapid destruction of forests than in this country. Attentively I listened to the authoritative appraisal and careful analysis of Dr. Tom Gill, and I could not but help feeling a great responsibility to make our people aware of the great menace that forest destruction is bringing about to our country.

When you invited me to be with you this noon, I was very glad to accept your invitation because it gives me an opportunity to discuss with you this responsibility which you, the foresters of the Philippines, share with us the members of the National Science Development Board.

As I analyze this pressing problem of deforestation and trace it to its ultimate causes, I am convinced that the root source of our difficulties lies in the psychological attitude

of our people. It is not enough that you, the foresters of the Philippines, after long and painstaking investigation, should be convinced that for the preservation of the fertility of our agricultural lands and for the normalization of our weather, it is imperative that we should preserve our forests; that we should stop the ruinous practice of burning our vegetation and that we should eradicate once and for all the age-old practice of KALINGINS.

I submit that it is our patriotic obligation persuasively to convince our people of the utterly suicidal path our present practices are leading us to and of the urgency to take remedial steps to save our country from inevitable devastation and ruin.

It is said that the life of a nation as a human society might be studied as a series of challenges and responses. Every generation has its own particular challenges, and to the extent that the nation meets those challenges successfully or unsuccessfully, its civilization progresses or deteriorates. The conservation of our forests is so important that, I believe, it is one of the main challenges facing our present generation of Filipinos.

I dare say our handling of this insidious problem will decide whether we shall be a modern, progressive nation or we shall be condemned to be a perpetually stagnant and economically backward society.

That forests are the source of raw material for lumber, building materials and pulp for paper is already well known, and as our population grows, our need for these materials becomes more critically important. What is still not obvious to everybody, however, is

the great function which forests perform in safeguarding the fertility of the soil by preventing erosion and floods, in normalizing the weather by making rainfall more even. Primitive man did not consider forests a friend. In fact in many ways forests were a hindrance to his existence and he had no scruples in hacking and burning it. Modern man on the other hand considers forests a great ally and a good friend. As one examines the condition of the forests in the highly developed industrial nations of North Europe and North American and compares it with the situation in the industrially backward countries of the East and in the Tropical Belt, he becomes at once convinced that the state of a nation's forests is an unflinching measure of that nation's progress and advancement.

This phenomenon of correlation between forest conservation and economic advancement and industrial progress is, I believe, very important and highly pregnant with meaning. The state of forest conservation in a country is a symptom of the scientific attitude among the people in that country. We often hear that to preserve our forests,

we should employ the constabulary and even the army to arrest and imprison those who violate our forestry regulations. I say that no amount of policing can ever effectively defend our forests if our people are not convinced that those regulations are for their own good and that those forests are essential for the continued existence of a modern, progressive Filipino race.

But it is impossible to attain this objective unless we succeed in changing the state of mind of our people, and making not only the high intellectual elite but the common man, the ordinary layman adopt a scientific attitude and make him follow the compulsions and restraints demanded by the laws of science. It is in this area where you, the foresters of the Philippines, and we of the National Science Development Board, must join together in a common endeavour to enlighten our people and save our country from future devastation. We know our responsibility; we know ours is a difficult task. But we must have faith and courage to carry out this noble mission.

FOREST EXPLOITATION...

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parallels between certain aspects of Roman and Western civilization. And he concluded that we faced the threat of a collapse as shattering as that of Rome.

And the reason why such a collapse could come, Ortega wrote was not the presence of barbarians from without; we are raising our own barbarians today, he said—namely the men and women who take for granted the many benefits of modern society: its facilities, its cultural exchanges, its rich resources and its freedoms. The modern barbarian feels no personal responsibility for the society that made these things possible; he forgets that he is merely a steward and is expected to use these goods, these liberties and conserve them for next generation. The modern barbarian, in short, is the counterpart of the for-

est vandal or the unprofitable steward of Holy Scriptures.

It is my personal conviction that Ortega's man is reflected in the foresters and the lumbermen who are attending this conference in a spirit of dedication to the common good—men and women who have strength of mind to perceive the extent of their obligations to the values that made their freedoms possible and who have the moral stamina to accept the responsibilities for winning the endless battles that freedom entails.

It has been a rare privilege to address this audience and to cooperate in your heroic work of raising the moral issue of conservation. I shall look forward to working with you in a "Grand Alliance" of protecting our nation's forests and in holding the line against the assault of today's barbarians.

Thank you very much.

Forestry to Meet Needs of Industrialization

FLORENCIO TAMESIS
General Manager
Philippine Wallboard Corporation

I noted in the program that I am to talk on "The Challenge of Industrialization". I suppose it has reference to Forestry Industrialization. As forestry industrialization covers many specific lines, may I be permitted to digress a little from the printed title and approach the subject on the basis of 'Forestry to Meet the Needs of Industrialization'.

We foresters and wood-using industrialists cannot help but gaze through the veil that hides the future, and the more are we justified in doing so especially when discussing forest industries. There are two main reasons: firstly, forest industries are dependent on a wood harvest that takes decades to reach maturity and consequently all planning must be done long in advance; and secondly, forest industries in this country require larger capital investments as compared with most industrial enterprises. As a matter of fact, in the pulp and paper industry, one of the branches of forest industry, investment capital per worker is considerably higher than the corresponding figure for the forest industry as a whole. The greater an industry's capital requirement, the greater the need for accurate estimate of the future trend since the risk of failure is proportional to the size of the investment.

It is for this purpose that we have to look with varied concern on how we could plan for the proper management of our respective forest areas, on a permanent basis. This is one of the most complex and exacting tasks confronting professional foresters and industrialists alike. Lack of knowledge about the silvicultural requirements of a

multi-specied forest, such as we have is a definite hindrance to initiating proper management measures. And this difficulty is aggravated by utter lack of funds and properly trained personnel, both in the Government projects as well as in private ventures.

One of the most striking aspects of tropical forestry to date has been the manner in which the problems created by the rich flora has been dealt with. Impressive and outstanding success has been attained by a concentrated forestry attention and effort upon a relatively few large tree species. Fortunately, we find that in our forest one or more of the group species which are very often found gregarious and with adequate silviculture features have considerable commercial values. Indeed, current tropical silviculture can almost be written in its entirety in terms of a small number of such superior species or species groups like our dipterocarps. Progress, indeed in forestry activity, has been dependent primarily in its initial stage on the discovery and recognition of such species, beginning with their commercial qualities and advancing towards concentrated efforts on learning their commercial values and uses. It is regrettable, however, that before we are ready to undertake the enrichment or replacement of a mixed forest through natural or artificial regeneration in favor of these desirable species, the land that is ecologically suitable for them is immediately taken over by squatters.

It is our experience in the handling of virgin multi-specied Philippine forest that the main problem is how to utilize all the wood-producing species growing therein. Since we

can only utilize with profit those species that meet the requirements of our industries, we generally leave the forest in such a condition as to produce the next cut in the same condition as we found it. If possible we try to convert it into such a character that it will continue yielding the desirable species that are found adequate to produce the quality and quantity necessary for our products. We realize that the problems we have to face in planning are novel and intricate. We are confronted particularly by the difficulties arising from the mixed character of the tropical forest and from the great lack of knowledge in handling and managing properly our forests except by hit or miss method due to limited experience.

It is our opinion that the planning for economic development in agricultural and industrial activities must be balanced. What makes the role of the forest so important in the tropics is that here, more than elsewhere, the forest is basic both in agriculture and forestry. We suggest, therefore, that it is necessary to decide first the relative emphasis to be given on agricultural and industrial development; second, the place of the forest (either permanent or temporary) in relation to the picture of rural development and farming proper, keeping in mind not only soil conservation and land capability but also particular land practices such as the shifting method of cultivation; and third, the place of forest industries in the general industrial development. The forest, as a renewable natural resource, has a primary rather than secondary importance. Many countries now recognize it.

Before decisions can be made on these matters, as a definite categorical governmental policy to a preliminary full-scale planning, detailed areas must be studied. The first principle that must guide the foresters in the tropics is that forestry in tropical areas must not be regarded only in the absolute. Save in certain rich and densely populated areas, the possibilities of forestry must always be appraised against the local characteristics of soil, climate and vegetation, and against local

customs and traditions, practices and rights of usage that cannot be abruptly changed or abolished. They must in fact be reconciled with the general agrarian structure and a comprehensive program of soil and water conservation, together with the over-all economic development possibilities of the area, and a program of balanced agricultural and industrial expansion. Today we are confronted with the "brownouts" and lowering of water level in many places which are attributed to forest destruction.

Without deciding on a fixed policy for the proper handling of such forest under concession, no industry could rest assured of sustained yield production in view of the menaces of releases of any portion inside the concession which may be considered suitable for agriculture. This state of affairs continues to be a big problem in all areas under concessions in the Philippines and makes it impossible to effect a comprehensive economic planning for the improvement and conservation of forest resources. This is just one side of the picture.

The other side shows that despite the fact that we have tapped our forest resources for over fifty years, we still lack a forest inventory which, we all know, is the basis of all planning for the real practices of forestry. This alone, if for no other reason, has caused the drawback in the proper handling of our forest resources.

As a matter of fact, planning is not possible without some understanding of the relative value of the species composing the forest. In the tropics, with few exceptions, the present and especially the future value of the forest capital is hard to assess. Any development scheme based on forestry which must perforce be long-term must, therefore, be drawn up on the forester's appraisal of the forest, on his plans treatment and management, and on his assessment of the type and quantities of products that he expects to obtain.

Unfortunately, however, what aggravates our problem is the utter lack of silvicultural

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Our Dwindling Forests

NICOLAS P. LANSIGAN

Executive Secretary, Society of Filipino
Foresters

"You are destroying your forests faster than any country in the world."

This is the verdict of Dr. Tom Gill, executive director of the Charles Lathrop Pack Forestry Foundation, who recently came to the Philippines on invitation of our government to look over our worsening forestry situation. Coming from one who is a recognized authority on international forestry, his pronouncement should shock every Filipino to do some fast soul searching.

This observation is not an isolated one either. Nearly every forester visiting our country is appalled by our abuse of our magnificent forest, or what there is left of it. Neither is this abuse unknown to our own foresters nor have they been slow in pointing out the need for fast remedial measures. But their pleas have fallen on deaf ears.

Frankly, it is already much later than we think. Indeed, for many parts of the country today, it is already too late, much too late. In many regions and provinces today, the protective forest is gone or almost gone—bare hills and mountains stand as mute testimony but damning evidence of our reckless abuse of our forest resources. Almost everywhere in the country, one sees desert-like landscape and miles and miles of waste cogon lands and eroded terrain. And more are in the making!

In such places, the land is so worn out even the most hardy crops refuse to grow; here the chain reaction of tired land, hard living and poverty inevitably operates; here the task of making amends to shortsightedness must follow. And even the initial cost of such amends—in the form of reforesta-

tion alone — is already onerous and frightening!

We would wish to be the last person to be labelled a "prophet of gloom" but the deterioration of our magnificent forests has reached such an alarming point that our people — and the authorities — must be apprised of it so that further destruction could be stopped and remedial measures set into motion.

Critical Land Imbalances

Very appropriately, our laws give the bureau of forestry broad powers as to how much and what lands it is to keep for forest uses. No land of the public domain could be released unless this bureau certifies that it does not need such land for forest purposes. The public therefore has every reason to expect that this being the case provision would be made for the retention of enough forest lands to meet our national requirements for timber and other forest services and to maintain the desired balance between agricultural lands and forest lands.

Unfortunately, there are already critical imbalances and the imbalances are getting worst. For the Philippines, the bureau of forestry goes by the so-called 58-42 plan, i.e., for a normal balance between forest land and agricultural land, 58 per cent or 17.2 million hectares of our total land area of 29.7 million hectares shall be dedicated for agriculture and 42 per cent or 12.5 million hectares are to be kept permanently under forests. Under this plan, a ratio has already been worked out for each province, depending on the potentiality of its lands for agriculture. In general, a province that is fairly level gets

a bigger percentage of its land area for agriculture, but for a mountainous province more of its lands are to be kept under forests.

Take Nueva Ecija for example. This is a fairly level region and out of its total area of 549,170 hectares, 372,370 hectares or 68 per cent are for agriculture while 176,800 hectares or 32 per cent are for forestry. It has a 68-32 ratio under the plan. Now take a province of rather rough topography, like Zambales. It is on the 36-64 ratio, i.e., of its area of 364,560 hectares, 132,060 hectares are for agriculture while a greater portion, 232,500 hectares will be retained as forest lands.

Thus, carrying the examples further, Abra has 60-40 ratio; Isabela, 52-48; Pangasinan, 80-20; Quezon, 53-47; Camarines Sur, 75-25; Marinduque, 78-22; Bohol, 65-35 Leyte, 70-30; Davao, 59-41; and so on for each province of the country. On the basis of the entire country, the national average is 58-42.

If this ratio is the plan for the country — if not, has any other plan been worked out? — then matters are not proceeding according to plan. A comparison of the remaining forest lands in many provinces with the established ratios reveals glaring forest shortages. And what is worse destructive logging, squatting and kaingin making have not abated as would further aggravate the imbalance.

In the Philippines today, there are 31 forest-deficient provinces some so far below that the situation is scandalously alarming; in 8 provinces, the balance is about normal; and only in 13 provinces is there actual excess of forest. Even in still forest-rich provinces — Cagayan, Quezon, Isabela, Surigao, Palawan — forest destruction goes on and it is only a matter of time, if nothing is done in the meanwhile, when their forests would recede to the danger line. (See Table 3 showing typical forest land deficiencies in varying degrees for some provinces).

For the entire country, we have still 44 per cent of our land area in forests, or a little still above the 42 per cent normally required. But this is beside the point. Forest

lands are peculiar in that present excesses in some provinces or regions do not solve the erosion and waterflow problems of the forest-deficient provinces and regions. For instance, one cannot expect the extensive forests of Cagayan or Palawan to solve the erosion-waterflow problems of Cebu or the Ilocos.

Sobering Facts

Let us look at some facts squarely and realize once and for all that our forests are no longer the inexhaustible and extensive resources we thought they were. So-called official statistics had led us to thinking that we still had 16.5 million hectares of forest lands (55% of our total land area) and that these contain 458 billion bd. ft. of timber. It was even thought that our forests were growing at the rate of 1.5 per cent a year, which in plain words meant around 7.0 billion bd. ft. was being added every year. Since we believed this is to be so, there were not much qualms for more timber cutting and more kaingins.

And here is the rub! We do not have as much as we thought we had.

Actually, (a) we have no more than 9.5 million hectares of commercial forests and only 7.3 million hectares of this is accessible (b) that instead of 458 billion bd. ft. of what the public thought is utilizable commercial timber, we have no more than 382 billion in our commercial forest; and (c) the wood growth of 7.0 billion bd. ft. a year is only wishful thinking.

To those of us who like to think our forests are limitless, the knowledge that we are fast sliding down to the level of countries low in forest per capita may prove sobering (See Table I). We are almost in the same level as the forest-poor countries of Greece, India, Israel, China and Pakistan.

Many also think that we could go on draining our forests because our reforestation program would make everything all right again. A few facts on reforestation would be revealing. There are over 3.4 million hectares of open grasslands. To reforest even

only the so-called critical watershed areas aggregating 1.39 million hectares at the 1957 Bureau of Forestry rate of 6,000 hectares would take us 230 years or until the year 2188 A.D. And the cost would be from P300 to P670 million! Not only that: for every hectare we could plant, at least two new hectares of forest lands are destroyed to become potential areas for replanting—making our reforestation efforts a hopeless race against deforestation.

There are even those who still think we are an exceptionally timber-rich country. The truth is, we barely have around 40 cubic meters per person. Compared with other countries, we are not very well off. Finland has 273 cubic meters; Thailand 157, Indonesia 106, Burma 49. (See Table 2).

Why Save Our Forests

It is not for a blind love for nature that our forests must be saved. Our concern is anchored on the cold solid fact that we need our forest for our economic well-being. Many of us still think that the sooner we get rid of the forests, the sooner would it be better

for the country, — in terms of more lands to till, more food production, *et cetera*.

By all means let us clear the forest! But let us do so with some sense or reason. First, let us clear out the forests in lands that would be good for permanent agricultural crops by reason of soil and topography. The bureau of forestry knows where these lands are and has been releasing them to the bureau of lands for disposition to the public. Second, rather than simply destroy the trees on such lands by kaingin and burning, let us cut them in an orderly fashion for their timber, for the tax on the timber, for the jobs that will be created, etc.

Third, let us leave the forests on the sloping lands, on the hills and mountains; let us keep them there to control soil erosion, to regulate stream flow, for our relaxation and of course as a source of timber and other products we cannot do without. It is these forest lands that could be scientifically logged as to make them our perpetual reservoir of these products and services.

On the purely monetary side, let us look at what our forests yielded us in a single year (1957):

Value of 4.6 million cu. m. of logs cut at P30/cu. m.	P138 million
Value of rattan, firewood and other forest products	15 "
Forest charges and other direct forest fore revenues	11 "
Value of logs, lumber, plywood, etc. exported	96 "
Investment in the logging industry	75 "
Investment in the sawmill industry	54 "
Investment in the plywood industry	45 "
Investment in the lumber yards	86 "
Annual payroll of the lumber industry	125 "
(Labor employed: 75,000)	

Threats to our Forests

Dangers to our forests come from two directions: irresponsible lumbermen and the kaingineros. There is still a rush for forest concessions. Already over 5.0 million hectares are in the hands of 1,670 operators. More grants are still being processed.

While some lumbermen are decidedly of the desirable type who are frankly worried about the fate of the forests and the future of their investments — and are doing their best to log the timber properly — many are plain timber miners of the cut-and-get-out variety. To the latter type, public interests be damned! They cut as they please, causing costly forest damage. You ask: why can't we stop

their destructive logging? The bureau of forestry is doing its best, but it does not have enough men to supervise logging operations. In fact, it is so short of scalers (men who measure the logs for revenue) that our 1,000 timber operators of the smaller class themselves measure and report what logs they are supposed to have cut. And to allow them to do so by themselves could mean so much revenue leakage.

And the kaingineros! They are now the lords of the forests. Many of them have taken the "land-for-the landless" policy as the green light to squat at the nearest forest land. Whether or not the land they enter and clear are national parks, forest reserves, proclaimed timberlands, or communal forests do not bother them at all.

Once in, they would agitate for the release of their clearings from the forest zone. Someone could always be found to plead their cause, and more often than not the bureau of forestry has to give way and release the area. Things have come to such a pass that even one of our man-made forests — planted at so much expense was recently parcelled to accommodate so-called settlers. Salinas is a reforestation project to remember.

Kaingineros are that pampered. Forest officers have grown tired hailing them to court. When before around 10,000 kaingin cases a year used to be apprehended, now only few cases are reported — and this by no means indicate kaingin making has abated. On the contrary, they have increased. Since that ill-fated day one President on the spot released some kaingineros from jail, the situation has never been the same. Squatters are literally sticking out their tongues at the poor forestry men heroically doing their duty.

Monumental Public Indifference

The tragic part is that the general public whose interest and welfare are thus prejudiced just stands by, little realizing the portents of disaster coming. Maybe the public feels quite smug that our forests are still inexhaus-

tible or perhaps it reposes an abiding faith that the government agency charged with the custody of these resources knows its business and has the situation well under control.

To put it bluntly, the cause of forest conservation has been giving way in many a front. True it is forest officers still keep doing their duty day after day. But these men know from bitter experience that the squatters could not be budged out, that even land impossible for permanent agriculture had been carved out from forest zones, that they are too few to be doing justice to the vast tasks they are asked to perform, that they miserably lack facilities and funds, that they are thwarted in all directions, etc.

Urgent Remedial Measures Needed

To repair past mistakes and to save what forests we still have demand leadership of a high order. Forestry concerns with the future and only the farsighted leaders could think beyond the present. Very fortunately, there are still some of these. They could not be unaware of the sad plight of Philippine forestry; the country looks up to them to set remedial measures into motion.

Briefly, what are needed are bold measures relating to: (a) an adequate system of forest protection; (b) set aside as fast as we can all permanent forest lands and give permanency of status to these lands; (c) the immediate halt to destructive logging practices in all permanent forest lands and an all-out application of a sound selective logging system; (d) an effective and practical reforestation program; (e) provide the Bureau of Forestry with adequate facilities and funds to carry out its essential functions and (f) launch a vigorous and systematic educational campaign to awaken public appreciation and support to forest conservation.

Plans and programs are not waiting for these measures. But we have to act soon. It is already much later than we think. Here, as in many others, an ounce of prevention is worth a pound of cure.

Table 1. *Philippines Compared with some Countries in Extent of Accessible Forest*

	Hectares of accessible Commercial forest per capita	Per cent of total land area in accessible forests
Finland	5.1	67.8
Argentina	3.3	56.0
Sweden	3.2	56.0
Norway	2.0	21.7
Cambodia	1.6	34.5
Burma	1.3	37.3
United States	1.2	22.2
Indonesia	0.8	42.7
Thailand	0.8	37.8
New Zealand	0.4	2.6
Philippines	0.3	24.6
Greece	0.2	14.6
India	0.1	14.9
Israel	0.06	4.4
China	0.06	3.0
Pakistan	0.03	2.4
World Average	0.7	13.7

Table 2. *Philippines Compared With Some Countries In Timber Stock Per Capita*

	Total Timber (Million cu. m.)	Population (Million)	Cubic meter per person
Finland	1,159	4.24	273
British			
North Borneo	93	0.37	251
Thailand	3,187	20.30	157
Indonesia	8,710	81.90	106
Norway	321	3.42	94
United States	14,630	165.27	89
Sweden	1,820	28.98	63
New Zealand	123	2.14	57
Burma	955	19.43	49
Philippines	900	23.32	38.6
Argentina	504	19.11	26
Japan	1,574	89.10	18
Cambodia	77	4.56	17
Greece	129	7.97	16
India	894	381.69	2

Table 3. *Remaining Forest Areas In Some Typical Provinces As Compared With What Each Should Normally Have*

	Area of Province (Has.)	Normal forest needed (Has.)	Area of Remaining forest ¹ (Has.)	Extent of forest shortage (Has.)	Deficiency Per cent
Bohol	407,840	143,800	24,940	118,860	83
Ilocos Sur	268,540	120,400	25,060	95,340	79
Cebu	486,850	144,900	39,980	104,920	72
Antique	267,930	135,900	53,810	83,090	60
Masbate	407,000	170,400	68,580	101,820	60
Negros Occ.	774,070	314,600	165,980	148,620	47
Cotabato	2,296,790	959,500	509,520	449,980	47
Marinduque	92,030	20,600	11,920	8,680	42
Romblon	132,700	52,900	32,380	20,520	39
Abra	380,990	153,300	99,020	54,280	35
La Union	137,290	33,700	21,850	11,850	35
Bataan	133,900	89,100	64,440	24,660	28
Albay	256,230	55,800	40,790	15,010	27
Pangasinan	523,380	103,900	75,450	28,450	27
Negros Oriental	391,680	224,000	186,570	37,430	17

¹ Includes both commercial and non-commercial forests.

Table 4
*Forest Land Goal By Regions And Major Islands
 Compared With Actual Remaining Forests*

Region or Island	Forest Land Goal	Compared With Remaning Forest Areas	
		All Forests (H e c t a r e s)	Commercial Forests only
Ilocos Region	460,900	298,780	107,710
Cagayan Valley	2,935,100	2,535,300	1,893,730
Central Luzon	936,800	690,430	529,290
Southern Luzon	750,700	767,540	560,000
Bicol Region	312,900	333,770	290,750
Mindoro	506,200	525,150	322,100
Palawan	622,300	1,131,290	624,730
Panay	425,600	117,850	47,620
Bohol	143,800	24,940	8,600
Samar	414,200	687,950	453,600
Cebu	144,900	39,980	19,050
Leyte	235,500	284,490	214,220
Negros	538,600	352,500	2,59,500
Northern & Eastern Mindanao	2,031,900	1,542,880	2,051,670
Southern & Western Mindanao	2,542,100	2,589,390	1,791,740
All Others	413,700	965,370	154,950
Philippines	12,515,200	13,887,600	9,329,280

FOREST TO MEET...

(Continued from page 16)

and management practices evolved and tested by our Government forest researchers and which could be used as a guide by the different concessionaires and wood-using industrialists in handling their respective forests.

Take our case for instance. We are obliged to conduct a small experiment in the way of developing a plantation stand of desirable species that could adequately help us meet the problems of sustained production in our integrated industries. But this is a make-shift proposition. Because, as you know very well, no industry can afford to devote a full-time job on forest research. What we are doing today are mere test plantings and we hope that the Government will take interest in our work, improve on it and continue enlarging it so that the results of the research studies

would benefit not only those concerned but the whole country.

Being a forester myself, may I state in broad terms what I believe should be our concern in the handling of tropical forest for the benefit of our industries: *First*, the improvement of existing stands; *second*, the gradual conversion of mixed forest into less heterogeneous types; and *third*, the transformation of mixed growing stock into pure stands, if necessary. There seems to be many objections to the latter, but we find that it is a *must* in order to attain quality control of the final products.

Therefore, we may say that tropical forestry must, whenever possible, seek to convert heterogeneous growing stock into a readily and economically usable type, but conversion techniques must have due regard for climatic, soil and vegetation conditions, so

(Continued on page 38)

Forest Fires

HONORATO A. BAJA
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Forest fire in the Philippines has already caused considerable damage to the forest of the country, yet, sporadic outbreaks of forest fire still occur so frequent in many regions that they are now a menace and a drawback to the practice of forestry. For the fiscal year 1957-1958 alone, there were detected by forest officers, 152 forest fires involving 15,243 hectares.

The failure of the Bureau of Forestry which is called upon to prevent destructive forest fire may be attributed to two main reasons. These are public apathy and lack of government personnel to apprehend the malefactors. The Bureau at present has under its employ 933 technically trained men and 665 forest guards. Dividing the area of the Philippine forest of 10,367,200 hectares among all the technical men and forest guards, each technical man has to manage 19,503 hectares while a forest guard has about 30,000 hectares to patrol. Obviously, the area under each man is too vast wherein one individual can exercise effective supervision and control. Without the help and cooperation of the public especially of the inhabitants of nearby forests, the Bureau of Forestry is fighting against tremendous odds in reducing the man-made fires to the lowest practicable minimum.

Causes and Effects of Fires

Severe fires that occur in the forests are due to a variety of causes. Foremost of these causes is the fire which develops in the process of making a kaingin. A kaingin is a portion of a forest cleared for planting with seasonal crops by cutting down big trees and burning the remaining vegetation.

Most often in making a kaingin the fire goes out of control. Particularly during summer and after a long drought the forest is dry and virtually a fire hazard. One has only to gather a few dry materials such as grass, leaves and branches of trees, and a small fire can be started which, when favored by a strong wind, can develop into a conflagration capable of burning a big area of forest. Especially in the mountains of the Northern provinces where pine trees are the dominant species, a fire can be very serious. Pines are highly inflammable due to the resin present in the bark and leaves.

Next to the kaingineros, the incendiaries are also perpetrators of large forest fires. These people are the disgruntled laborers in logging camps and squatters who start fires just to give vent to their hurt feelings. Pasture permittees who burn the grass in their pasture to improve their grazing conditions, and hunters who start fire to drive out games to facilitate hunting, are also causes of forest fires. In logging operations, sparks from railroad locomotives and logging machines, when falling on dry litter or grass along the right-of-way, have been reported to cause occasional fire.

Every forest fire, even how small it is, causes the destruction of commercial timber and young reproduction which is the future reserve of timber supply. It also inflicts injury to the soil. The humus is burned out resulting in the impoverishment of the soil. Due to the absence of vegetation and litter on the ground to absorb rain water, the top soil is eroded to the streams, rivers and farms below. It may take about fifty years to pro-

duce a vegetation that can restore the fertility and normal condition of the soil.

A forest fire, when it goes out of control, causes damage to adjoining areas. In Sitio Tumakad, Maligne, Basilan City, a fire in a kaiñgin destroyed the adjacent coconut plantations, orchards, and the houses in the Sitio, valued at half a million pesos. It may even cause the loss of the life of a person like what happened in a logged-over area in Plaridel, Cotabato, when a forest officer while fighting a fire with his men met an accident and subsequently died.

Many of our floods which cause havoc to life and property annually may be attributed partly to the presence of large deforested areas caused by kaingineros. In some reforestation projects, the work of many years has been wasted by fires started by men who give little regard to the young growth produced in the course of reforesting open forest lands.

Remedial Measures

Cognizant of the grave threat posed by forest fire to the forest resources of the country, the Bureau of Forestry has adopted varied measures. It does not hope to put to a complete stop the occurrence of forest fires, due to inadequate personnel that could be assigned to the work, nevertheless, the measures will minimize the drain on the forest. Licensees are required to employ forest guards to augment government personnel in detecting fires and apprehend forest violators. Those using locomotives and logging machineries that are operated by steam are constrained to use spark arresters to prevent emission of large live sparks.

In reforestation projects, where cogon and other grasses are fire hazards, fire lines and

trails are constructed. A fire line localizes the fire while the trail facilitates the work of the men of getting over the area in case of fire. In addition, fire guards are employed to assist forest officers in protecting the project.

To suppress illegal kaingin, forest officers always bring to court kaingineros apprehended by them. Those found guilty suffer the following penalties:

1. For an offense committed in a forest reserve, the offender pays four times the regular forest charges for the timber destroyed and imprisonment of not less than four months nor more than six months.

2. In proclaimed timber and commercial forest and commercial pasture, the fine is three times the regular charges and imprisonment of not less than two months nor more than four months.

3. In other public forest, the fine is two times the regular government charges and imprisonment of not less than one month nor more than two months.

If the offender causes destruction to a reforestation project, the Bureau of Forestry may, in addition to the preceding penalties, double the cost of the actual damages to the land and vegetation.

To win public support of these measures, the Bureau of Forestry is conducting educational campaign especially in rural areas by explaining to the people the need for conserving the forest by wise use. Forest Officers give talks whenever an occasion arises and distribute posters and pamphlets in remote barrios. This is done to win the cooperation of residents of nearby forests. Only with their cooperation can the Bureau hope to succeed in its forest fire prevention work.

"If I were to choose the sights, the sounds, the fragrances I most would want to see and hear and smell—among all the delights of the open world—on a fine day on earth, I think I would choose these: the clear, ethereal song of a white-throated sparrow singing at dawn; the smell of pine trees in the heat of noon; the lonely calling of Canada geese; the sight of a dragonfly glinting in the sunshine; the voice of a hermit thrush far in the darkening woods at evening; and—most spiritual and moving sights—the white cathedral of a cumulus cloud floating serenely in the blue of the sky — Edwin Way Teale "*The Lost Woods*"

An Introduction to the Studies of Japanese Scolytidae

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INTRODUCTION

Though the damage by Scolytid-beetles was known from olden times in Japan the true cause was not elucidated for a long time.

SYSTEMATIC STUDIES

The collection of Scolytid-beetles in Japan with the objective of scientific study was began by R. Hiller, a German teacher who was employed by Yamaguchi prefecture for education in the Meirin School at Hagi (1860-67). The specimens collected by him were sent to Germany where Dr. W. Eichhoff studied them, gave them scientific names, described their characteristics, and published an account of 9 new species in the entomological journals in Germany.

During this period about 1870, von Schonfeldt collected a few specimens around Hyogo. The largest collection, however, was made by George Lewis who visited Japan twice, travelled on foot all around the Country and made his celebrated "Industrious collection" (1872, 1880-81). A part of his specimens were studied by F. Chapuis and W. Eichhoff, and 15 new species were described (1874, 1878). The largest part of the collection of G. Lewis was studied by W.F.H. Blandford, who established 72 new species (1893, 1894). This entomologist actually laid the corner-stone of the systematic study of Japanese Scolytid-beetles. Of these studies the number of the species reached 95.

From the beginning of the twentieth Century, the study of this insect group was taken over by Japanese entomologists. Dr. Y. Nijima published an account of 45 new

species, principally from Hokkaido (1908-13, 1941-43). J. Murayama determined also other 67 new species (1925-58) and studied the distribution of these species in the Far East. Meanwhile H. Eggers described 15 new species.¹ Another 47 species were determined, less than 10 species respectively, by several other men. At present two or three younger students of entomology are studying the classification concerned.

Summing up the insect species described from Japan until today we have 43 genera and 269 species. The number of species in each subfamily is shown in Table I.

As shown in this table, the specific number of bark-beetles is about the same as that of ambrosia beetles, and that of *Xyleborinae* is one fourth of the total number.

From this point of view the Japanese Scolytid-fauna have more affinity to the South than the North. It is natural to come to the same conclusion as Blandford who stated that he was inclined to think that the Oriental forms predominate in Japan.²

This is the systematic side of the study of Japanese Scolytid-fauna. For an exact comparison of these facts to those of the Philippines, my present knowledge on the Scolytid-fauna of the Philippines is not sufficient, and this is why I have come here this time to ask for the help of the entomologists of this land. However, a short account based on my present knowledge is given the last part of this paper.

¹ This number does not contain those cancelled afterwards as being identical.

² Rhynchophorous Coleoptera of Japan, Pt. III *Scolytidae*. Trans. Ent. Soc. London, 1894, p. 55.

TABLE I
New Species of *Scolytidae* from Japan

Subfamily	Chapuis & Eichhoff	Blandford	Niijima	Eggers	Murayama	Others	Total
<i>Scolytinae</i>	2	4	3	0	1	1	11
<i>Hylesininae</i>	3	14	3	2	10	13	45
<i>Sueinae</i>	0	0	0	0	1	0	1
<i>Cryphalinae</i>	2	4	13	1	8	7	35
<i>Crypturginae</i>	0	0	1	0	0	1	2
<i>Eidopherinae</i>	1	1	1	0	0	0	3
<i>Polygraphinae</i>	0	3	9	1	4	1	18
<i>Xyloterinae</i>	0	2	2	2	4	2	12
<i>Pityophthorinae</i>	0	1	0	0	0	1	2
<i>Ipinae</i>	2	1	0	1	3	8	15
<i>Dryocoetinae</i>	2	8	1	5	6	5	27
<i>Thamnurginae</i>	0	0	0	0	1	0	1
<i>Xyleborinae</i>	11	20	11	2	23	5	72
<i>Ernoporinae</i>	0	0	1	1	1	0	3
<i>Scolytoplatypinae</i>	0	5	0	0	0	1	6
<i>Platypodidae</i>	0	9	0	0	5	2	16
Total	23	72	45	15	67	47	269
Year	(1874-78)	(1893-94)	(1908-13, 1941-43)	(1926, etc)	(1925-58)		

BIOLOGICAL AND PRACTICAL STUDIES OF SCOLYTID-BEETLES

Entomological studies in Japan have been largely stimulated by the practical side of Scolytid-beetle problems. Recently, Japan has encountered two serious practical problems caused by Scolytid-beetles: one is the damage to pine forests by so-called "pine bark-beetles"³ and the other is the future damage expected to be caused by the adventive insects imported every day into Japan together with logs from foreign lands.

During and after World War II, Japanese people cut down the forests extensively, particularly their red pine trees because of the increasing needs. Formerly the Japanese red pine (*Pinus densiflora*) was the most com-

mon tree; it covered the whole of the land with beautiful green clothes, and most of the buildings, utensils and daily fuel were supplied by this tree species. The diminution and devastation of these forests were accelerated by the war and the reconstruction of bombarded houses as well as of the damage by the typhoons periodically overtaking Japan. On the other hand the large demand for pine tree was recently increased by the wish for material for manufacturing wood pulp. Previously, the pulp manufacturing industry needed as wood material soft timber, such as firs and spruces, but during the wartime, as a result of the progress of the chemical treatments of material it has extended to red pine tree. These many factors resulted in a heavy cutting down of forest trees throughout Japan. Felling without aftercare against the development of insect attacks caused the serious damage by the so-called pine bark-beetles. Two

³ This term has been used by foresters after World War II, as connoting all the beetles attacking under the bark of pine trees, including four species of *Scolytidae*, four of *Curculionidae* and two of *Cerambycidae*- not scientific.

TABLE II.

Damages caused by the "Pine Bark-Beetles" in the Pine Forests in Japan.

Year	Area (Cho)	Tress (Hon)	Volume (Koku)
(1932) Showa 7	4,007.00	164,429	42,954
(1933) " 8	4,113.00	174,088	57,478
(1934) " 9	3,017.00	140,843	60,829
(1935) " 10	4,844.00	245,360	68,403
(1936) " 11	21,383.00	299,742	80,210
(1937) " 12	36,066.00	374,886	109,691
(1938) " 13	34,423.00	1,401,628	587,793
(1939) " 14	42,456.00	1,637,948	699,273
(1940) " 15	68,363.00	2,281,143	949,678
(1941) " 16	78,629.00	2,847,952	1,135,301
(1942) " 17	80,471.00	4,116,394	1,697,256
(1943) " 18	109,287.00	2,312,618	1,500,280
(1944) " 19	55,518.00	2,031,624	1,589,161
(1945) " 20	48,700.00	1,525,756	1,427,188
(1946) " 21	57,232.00	3,169,609	3,334,855
(1947) " 22	175,875.00	5,685,497	3,863,794
(1948) " 23	196,145.00	8,039,064	4,615,558
(1949) " 24	115,983.00	7,978,207	4,609,764
(1950) " 25	141,116.58	5,835,722	3,775,788
(1951) " 26	145,463.01	3,654,027	3,314,691
(1952) " 27	211,823.44	3,511,054	2,612,027
(1953) " 28	137,264.53	2,113,657	2,094,001
(1954) " 29	176,970.54	1,956,996	2,073,411
(1955) " 30	130,264.24	1,838,963	1,183,332

TOTAL 2,079,571.69 63,337.257 41,472,716 = 11,531,837 cub. Metre.

cf. Koku = Cho = 2.45 acre = 9917.335 m.²
0.2783 m³

years after the War when I was repatriated from Manchuria to Japan, on every side the former green lands were seriously devastated, and the greater part of the pine forests were dying. The total amount of damaged trees is shown in table II. As shown in this table, the damage attained its peak on 1948; since then it descended gradually until 1955, and at present, it begins anew to rise little by little.

Against this damage, every control measure possible has been taken until today without success, so persistent was the attack of this insect group. Cutting, peeling and burning methods and the prohibition of the transportation of unpeeled timber was already executed legally by the Japanese Government. Spraying, dusting, and fumigation were also tried. Mr. R. L. Furniss, entomologist from the U.S. Bureau of Entomology and

Plant Quarantine, visited Japan twice in order to observe these conditions and to give some recommendations for control measures.

Because of this controlling work, generally speaking, the study of Scolytid-beetles, particularly that of the biology of this insect group has progressed. However, the larger part of the basic problems is left untouched. Originally speaking, these direct control methods are immediately needed as the surgical operation of forestry to be taken for reducing the insect population in a short time. But removing and killing the patients is not the true control work against pests. The true remedy should be realized by the rescue of the trees from diseases. Starting from this point of view, I organized a group of specialists of botany, soils and entomology in order to study thoroughly in an experimental forest which is just at the beginning of bark beetle infestation (1948-51). After four years' experiments and investigation we developed a method of controlling insects through the special treatment of the forest, called by us the "P.B.C. treatment". This is a method of bringing up the forest, for a long period to give it the ability of resisting insect infestation. This method is gradually extending in the forest management of Japan, overcoming various difficulties.⁴

⁴ This investigation was executed under the sponsorship of the Department of Education. See the "Studies in the Pine Bark Beetle Control" (1953).

As already stated, Japan has imported a large volume of timber from foreign lands, principally from the U.S.A. the Dominion of Canada, the USSR, British Borneo, and the Philippines. Table III gives the details.

The import of wood has not only been continuing but growing larger and larger every year. As the American logs are straight and long they are principally appropriated as piling or scaffolding poles. The Soviet Union timber is used ordinarily instead of Japanese pines, firs, and spruces. The large logs from the South are employed for manufacturing plywood and veneer. Recently the application of plywood and veneer has largely extended in Japanese life for various parts of buildings and utensils. Although some part of the manufactured products has been exported to America, a considerable part is used at home. The largest amount of imported timber is from the Philippines, as shown in the Table IV, which is calculated from the figures in Table III.

As shown in the table the import from the U.S.A. is comparatively stationary, those from the USSR, British Borneo and the Philippines are increasing year by year. Through these years the importation from the Philippines has always been the largest, and occupies from one half to two thirds of the total. When the devastation of the pine forests in Japan will be recovered, the importation from the USSR and other Countries may

TABLE III
Total Volume of Timber Recently Imported into Japan

Exported Country	In Kg.			In m ³			
	1951	1952	1953	1954	1955	1956	1957
<i>Temperate Zone</i>							
U.S.A. &							
Alaska	8,706,878	21,769,238	129,920,324	174,151	85,885	89,886	146,035
Canada	34	6,360,382	25,237,899	274,043	13,387	3,858	16,644
USSR				2,455	20,534	81,192	173,436
Korea				6,913	338,631	142,323	16,517
Others	2,251,275	10,163	1,261,145	49,977	587,597	17,885	13,133
<i>Torrid Zone</i>							
Indonesia	809,041	4,932,763	4,666,780	2,554	8,706	13,850	16,833
Brit. Borneo	11,944,840	7,457,014	22,829,557	116,313	154,905	181,349	258,891
Thailand	550,499	13,244	179,234	11,038	5,830	949	2,097
Philippines	411,259,876	400,333,850	877,403,154	1,092,191	1,496,022	1,856,397	1,583,208
Australia		749	259,775			18,094	387
Others	162,449	109,833	1,594,826	44,424	1,102	6,078	19,561
TOTAL	435,684,892	400,987,836	1,063,352,244	1,774,059	2,712,599	2,441,861	2,246,742

TABLE IV

Percentage of Timber Recently Imported into Japan

Country	Y e a r			
	1954	1955	1956	1957
U. S. A.	9.8	3.2	3.7	6.5
USSR	0.1	0.8	3.4	7.7
Brit. Borneo	6.6	5.7	7.5	11.5
Philippines	61.6	55.1	77.0	70.5
Others	91	35.2	8.4	3.8
Total	100.0	100.0	100.0	100.0

be unnecessary, because the amount of pine trees damage by the pine bark-beetles in the years 1954 and 1955 was one third of the imported timber in each year respectively.

These are our problems from the standpoint of the forestry and industry of Japan. There are other problems, one being the import of insects together with these logs; and it may be more important than all the others.

Thirty-nine ports are prepared at present for receiving officially these logs. The logs from the South come into Japan by boats, and

are distributed principally to the ports situated in the southern half of Japan, but some part goes far north to Hokkaido. The logs from the northern lands come into Japan by boats or as rafts. They are distributed in the ports of the northern parts of Japan. Sometimes, however, they go further south. All these logs are thrown into the sea water when they arrive in the ports. For over ten years I examined these logs which were floating on the sea water of the ports and intercepted insects from them with the help of the officials of the Plant Quarantine Office in Japan. The insects obtained by this method seem to be more than one hundred species. Some of them were determined by me during my stay in the Smithsonian Institution.⁵ However, the majority of them were still unknown because of the insufficiency of specimens to be compared. Table V shows my idea of probable number of species.

⁵ Pan-Pacific Entomologist, XXXIII, No. 1 (1957),

TABLE V

Number of Insect Species Imported with logs into Japan

Family	Country						
	U.S.A.	Canada	USSR	Formosa	Philippines	N. Borneo	Peru
<i>Xyctidae</i>					1		
<i>Curculionidae</i>	1						1
<i>Bostrichidae</i>					4		
<i>Scolytidae</i>	15	1	2	1	69	9	1
<i>Platypodidae</i>	1			1	51	5	1
Total	17	1	2	2	125	14	3
	18			ca. 143			
Determined spp.	18			15			

On the problem of importing wood-boring insects, the members of the Plant Quarantine Offices are earnestly working from the standpoint of forest protection with the help of the present writer.

Whether or not these adventives may become established in a new environment is a problem of future concern. Since cases of introduction and establishment have already been found in Europe and America, as well

as in Japan, a knowledge of the species being transported to Japan over the sea or continents is at the present time considered to be of primary importance. The connection of the Scolytid-beetle fauna between Japan and the Philippines is not only to be deduced from the comparison of their specific names but recognizable from the actuality of the transportation by human agency.

Recently I have been investigating the Japanese species which were hitherto believed as endemic but have some affinities with tropical species or to be considered propagated from their fatherlands in tropical districts. Those found until today are *Xyleborus adumbratus*, *X. atratus*, *X. badius*, *X. compactus*, *X. interjectus*, *X. lewisi*, *X. minutus*, *X. validus*, *Diapus aculeatus*. A thorough study in the future of the Oriental species will give more accurately the facts.

RELATION BETWEEN THE SCOLYTID-FAUNA OF JAPAN AND THE PHILIPPINES

By the calculation of the number of species in each Subfamily of Japanese Scolytid-beetles we can distinguish southern characters and northern. Table VI is the result of this calculation of percentages based on the

number of species found until today, and belonging to the Subfamily of having ten species respectively. According to this table we can recognize that the Subfamily having northern characters are: *Scolytinae*, *Polygraphinae*, *Xyloterinae* and *Ipinae*, and southern are *Xyleborinae*, *Dryocoetinae*, and *Platypodidae*. *Cryphalinae* and *Hylesininae* to be considered common to both sides.

This consideration seems to me to be applicable to the relation of Japanese and Philippine *Scolytidae*.

The total number of the species belonging to each Subfamily shows the predominance of the southern element in Japan, which coincides well with the conclusion of Blandford mentioned above. The Subfamilies with northern or common characters contain the species tunnelling under the bark of trees, excepting *Xyloterinae*. Three Subfamilies with southern characters are all pin-hole borers in the wood feeding on ambrosia fungi, which require much moisture and a high temperature. *Xyleborinae* and *Platypodidae* are good examples of this mode of livelihood. From this fact of the prosperity of the Subfamily with tropical factors, the southern inclination of the Scolytid-fauna of Japan is recognizable. In this respect the Scolytid-fa-

TABLE VI
Specific number of the Principal Scolytid-Subfamilies in Japan
Excepting those Imported Recently

Subfamily	Number and percentage of species						Difference of Percentage	Remarks
	Total in Japan		in Kyushu		in Hokkaido			
	No.	%	No.	%	No.	%		
<i>Scolytinae</i>	11	100	3	-27	10	+91	+64	Northern
<i>Polygraphinae</i>	18	100	3	-17	11	+61	+44	"
<i>Xyloterinae</i>	12	100	3	-25	7	+58	+33	"
<i>Ipinae</i>	15	100	4	-27	8	+55	+26	"
<i>Cryphalinae</i>	35	100	8	-23	13	+37	+14	Even (Com.)
<i>Hylesininae</i>	45	100	17	-38	19	+42	+4	"
<i>Dryocoetinae</i>	27	100	11	-41	6	+22	-19	Southern
<i>Xyleborinae</i>	72	100	44	-51	17	+24	-27	"
<i>Platypodidae</i>	16	100	13	-81	3	+19	-62	"
TOTAL	251	100	106	-42	94	+37	-5	

N.B. + Northern element, - Southern element

TABLE VII
Comparison of Specific number of Scolytid-beetles

Family Subfamily	Japan		Philippines		Borneo	
	Gen.	Species	Gen.	Species	Gen.	Species
<i>Ipidae</i>	42	253	37	262	22	120
<i>Scolytinae</i>	1	11	3	4	2	3
<i>Hylesininae</i>	17	45	6	24	3	6
<i>Sueinae</i>	1	1	0	0	0	0
<i>Cryphalinae</i>	3	35	7	46	5	10
<i>Crypturginae</i>	1	2	0	0	0	0
<i>Eidopherinae</i>	2	3	1	3	0	0
<i>Polygraphinae</i>	1	18	0	0	0	0
<i>Xyloterinae</i>	1	12	0	0	0	0
<i>Pityophthorinae</i>	2	2	4	8	0	0
<i>Ipinae</i>	3	15	3	7	2	2
<i>Dryocoetinae</i>	5	27	5	28	5	17
<i>Thamnurginae</i>	1	1	0	0	0	0
<i>Xyleborinae</i>	2	72	6	128	3	77
<i>Ernoporinae</i>	1	3	0	0	0	0
<i>Scolytoplatypinae</i>	1	6	1	6	1	2
<i>Diamerinae</i>	0	0	1	8	1	3
<i>Platypodidae</i>	3	16	4	41	5	51
Total	43	269	41	313	27	171

una of the Philippines and Borneo, even with my own insufficient material known until now, naturally gives more extensive examples.

Table VII is a comparison of the number of species of Scolytid-beetles belonging to each Subfamily from these three Countries and also shows well the predominance of the ambrosia beetles there.

Starting from this fact I found a close connection and affinity between these Countries and Japan, and I feel deeply the necessity of thorough studies in southern Countries.

SCOLYTIDAE FROM THE PHILIPPINES AND BORNEO AND THEIR ADJACENT DISTRICTS

As mentioned above, the various conditions of Japanese Scolytid-fauna suggest to

us the necessity of a knowledge of the entire Scolytid-fauna of the Philippines and Borneo for the thorough comprehension of the Japanese *Scolytidae* and their position in the Oriental Region in general. The number of the species described until today from these districts seems to be a merely fragmental piece from the entire sources. Many more species must surely be found when we search for them thoroughly. Three hundred thirteen species from the Philippines and 171 from Borneo must be doubled or tripled by the searches in the future. As regards this point I tried to compare the general situation thought influential to the fauna of Scolytid-beetles. Table VIII is an example of this comparison.

According to my long experience the number of species of Scolytid-beetles in a district correlated with the area and the number of species of plants, and is counter

active by the population of the land they live. On this assumption I constructed a tentative formula for calculating the number of species of Scolytid-beetles in a given area.

$$\frac{A \times P1}{\text{Pop.}} = \text{Coefficient of the number of species}$$

Where: A = Area of the allotted land in the percentage to the known land (Japanese area in this occasion)

P1 = Number of plant species, do.

Pop. = Population, do.

Table IX gives the result of the calculations according to this formula, based on the number given in Table VIII.

Here I presume that the number of species of Scolytid-beetles in the Philippines may be raised to approximately three times the number of those described up to the present, and twenty times that for Borneo. I believe that the study of this multitude of species cannot be completed without the collaboration of all the coleopterists living, in these districts.

TABLE VIII

Comparison of Area, Population, Plants and Scolytid-Beetles of Japan, Philippines and Boreneo

Country or District	Area in sq. mil.	Population	Species of		
			Phanerogamous Plants	Scolytid-beetles	
				Gen.	Sp.
Japan	147,700	80,171,000	3,694	43	269
Formosa	13,832	6,384,000	4,300	35	113
Hainan	13,500	3,000,000	2,660	?	?
Philippines	114,830	19,964,000	8,120	41	313
Borneo	390,285	2,900,000	7,201	27	171

TABLE IX

Calculation of the Coefficient to the Number of Species of Scolytid-beetles of the Distircts Adjacent to the Philippines

Country or District	Area	Population	Species of		Presumed number of Species of Scol.-beetles
			Phan. plants	Coefficient	
Japan	100.0	100.0	100.0	100.00	269
Formosa	9.0	8.0	116.4	130.0	352
Hainan	9.0	3.7	71.5	174.0	468
Philippines	79.7	24.4	219.8	385.0	1,046
Borneo	196.0	3.5	197.6	1,199.0	3,225

My Impressions of Japan

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Chief

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I made a three-week trip to Japan last June. I had my headquarters in Tokyo but was able to travel in and outside of this city, considered the biggest in the world in point of population. Recent estimate places the present inhabitants of Tokyo at more than 9,000,000. Tokyo is really very crowded.

In my trips outside Tokyo, I passed thru the heart of industrial Japan, thru such cities as Yokohama, Ofuna, Odawera, Yugekawa, Atami (famous for its hot springs and suicide cliff, where love-sick people often jump off to escape their mundane existence), Mishima, Numedzu, Yoshiwara, Fuji, Shizutaka, Toyohagi, Nagoya, Kyoto (old capital of Japan) Osaka, and others. In these trips, I noted several things:

(1) Factories, big and small, grow up like mushrooms in many a city in Japan producing diversified consumers and capital goods (machinery).

(2) Japanese agriculture is far advanced than ours in the Philippines. Practically every square foot of available land is intensively cultivated, heavily fertilized and adequately irrigated. Judging from the sizes of their agricultural crops like radishes, apples, carrots, etc., the average Japanese farmers must be using certified seeds and not plant any seed he could lay his hands on during the planting season. Their cultivated fields are almost weedless.

(3) Denuded hills are practically non-existing in Japan. Their mountain and hill-sides are properly reforested or afforested. Hence, their streams are never dry.

(4) The Japanese people, by and large, are very industrious and hardworking. It is understandable. They have got to be that way in order to survive. Japan has a very big population living on a very limited area of arable land.

(5) The ordinary diet of the masses, although comparatively low in fat, is quite balanced. Very often one sees the Japanese eating sea weeds, pickled radishes, ginger, etc. and raw fish. To them such a viand as raw fish is a delicacy.

(6) Before one enters a typical Japanese house or hotel, one must remove his shoes, an unmistakable sign of cleanliness.

(7) I saw in tramcars, trains, and along the streets several people with their mouths and noses covered with white gauze, understandably to prevent them from inhaling and exhaling germs.

(8) English is being widely taught in schools in Japan. Nowadays, most students could read and write in English. They may find difficulty in speaking. Their language of instruction is naturally Japanese. Literacy in Japan is very high.

(9) Judo for self-defense, calisthenics, and games such as baseball, tennis, basketball, etc., are widely indulged in by pupils and students. Even adult workers in factories or offices, if they have access to playgrounds, often play ball after lunch, between 12 and 1:00 p.m. or after work. As a result of these physical exercises the ordinary Japanese is quite muscular and active.

(10) The Japanese people absorb Western science and technology like a sponge. Their government and private industries very often send technical trainees and students abroad in Germany, U.S., England, France, Australia, Canada, Sweden, etc., to take up post graduate courses or to undertake technical training. Government laboratories in Japan, it seems to me, are adequately supplied and staffed with competent personnel and equipped with modern apparatuses for research. All these contribute, to a large measure, in the rapid rehabilitation of Japan and in her being, without doubt, the industrial giant in Asia. Her government and people know that they must work hard, study diligently in order not only to survive but also to be the leader in science and technology in this part of the world.

(11) Transportation in Tokyo and suburbs is handled very efficiently by electric trains, buses, tramcars and taxis. Telephonic communications, including long distance calls, are also very easy to effect — usually within a few seconds to a few minutes.

(12) People in Tokyo are like ants in number. I took the train at the Tokyo Central Station a few times before 9:00 a.m. and I stood near the Simbashi and Shibuya stations late in the afternoon and at midnight. I estimated hundreds of thousands of people from all walks of life, young and old, male and female of the species, rushed past me to or from their offices. At night, they come mostly from cabarets, nightclubs, bars, coffee shops, movie houses, restaurants, etc., eager to rush back home to get rest and prepare for tomorrow's daily chores to eke out a living.

(13) Salaries and wages in Japan are comparatively lower than those in the Philippines but prices of essential commodities over there are also much lower than those in this country.

(14) Generally, neither streets nor houses are labeled or numbered in Japan. One usually encounters difficulty at first in locating a house or a street.

(15) Very few consumers' goods are imported into the country. The manufacture and sale of cigarette and cigarette paper is a government monopoly. Heavy rice importation is made every year. Rice is efficiently distributed by government agencies. There are no rumors about graft and corruption involving the sale and distribution of these commodities.

(16) The Tokyo tower, reportedly 20 ft. higher than the Eiffel Tower of Paris, is easily the most favorite spot of the tourists. It is not in the exact center of the City but from its observation floors, one can see, during clear days, practically the whole of Tokyo and beyond, including the famous Mt. Fujiyama lying in the southwest.

(17) I was informed at the time I was in Japan that in Tokyo alone about 2,000,000 persons were jobless. Work was not easy to secure.

I do not mean to say that the Japanese people are perfect and without fault. They are human beings and therefore are susceptible to human shortcomings, but certainly they have for ages harnessed their human and natural resources in such a way that now they are the acknowledged leader in science and technology in this part of the world.

"Our universities generally do not encourage research or do so only without proper inducement. They overload their professors with work and compute their pay according to the number of courses they teach. And they teach a minimum of five or six periods. In some universities professors teach as many as eight, or more periods (30 hours a week) in order to earn enough money to support a family. Our university professors cannot be creative producers under that kind of dispensation, and no wonder they have no time to read new books in their fields of specialty, and no wonder, too, that they have no time to think, much less to write. This is the most expensive kind of economy." — *G. F. Fabella*

Impressions of Forestry Methods and Practices in Taiwan, Korea and Japan

As told by Dean Zamuco to EDDIE Z. CAJUCOM

Dean Zamuco of the College of Forestry and five Bureau of Forestry personnel under the guidance of Mr. Paul Zehngraff, Forestry Advisor of ICA Manila left for Taipei, the capital of Taiwan on May 8, 1959 to observe reforestation, erosion and stream control and other forestry methods and practices. The trip was made possible under the sponsorship of ICA-NEC under the so-called Third Country Training Program. The Bureau of Forestry men were Carlos Cunanan, Forestry Supervisor II, incharge of reforestation projects in Central and Southern Luzon; Rafael Navallasca, Forestry Supervisor II, incharge of reforestation projects in the Visayas; Conrado Verendia, Forestry Supervisor II, incharge of reforestation projects in Mindanao; Folicarpio de la Serna, Senior Forestry Research Scientist of the Cebu Forest Experiment Station, and Domingo Jacalne, Senior Forestry Research Scientist and Chief of Section, Forest Research Division. Dean Zamuco, together with these BF personnel, made an on-the-spot inspection and observation of the different reforestation projects in Taiwan, Korea, and Japan.

TAIWAN: (May 8-24)

He said that although most of the areas in Taiwan had been deforested due to the planting of bananas, tea and citronella and the cutting of timber for fuel wood and construction purposes, yet these areas are rapidly being replanted with seedlings raised in either private or public nurseries. Reforestation in Taiwan, according to Dean Zamuco, is not a difficult problem unlike in the Philippines because they have the so-called private forestry associations that help in the reforest-

ation work whether it be solely private or public as long as it will be for the interest of the community, for the people in Taiwan are forestry-minded.

The reasons why reforestation there is far more advanced than in the Philippines are the following: (1) the cost of labor is cheap; (2) women labor is utilized in weeding and planting; (3) the existence of village forestry associations; and (4) the fact that the people are convinced that forestry pays.

In the Philippines, it is the government alone that is engaged in reforestation work so that it can not catch up with the rate the illegal *kaingineros* and unscrupulous lumbermen are deforesting our forests. Many of the concessionaires are interested only in the extraction of the timber for huge profit unmindful of its regeneration. This is not so in Taiwan where extraction and reforestation are both given priority in order to keep the land productive and green.

"They don't only plant trees along hill-sides but also on sand dunes along the sea coasts where they plant mostly agoho (*Casuarina equisetifolia*) both for windbreaks and reclamation," the Dean said. He stated further that although virgin forests are quite far and hardly accessible due to rugged topography and high elevation, yet they are also able to extract timber like Hinoki (*Chamaecyparis taiwanensis*) and Benihi (*Chamaecyparis formosensis*) by power logging. These species are good for construction purposes because their wood is said to be resistant to any or termite attack. With his brief stay in Taiwan, Dean Zamuco also visited the National Taiwan University Experi-

mental Forest which occupies an approximate area of 34,000 hectares or about 19 times the area of Mt. Makiling. He said that out of the income of this experimental forest they were able to construct a forestry school building bigger and more beautiful than the U.P. College of Forestry building.

KOREA: (May 25-June 2)

From Taiwan, the group (excepting Mr. Zehngraff who was asked to prepare a management plan for the National Taiwan University Experimental Forest) proceeded to Korea where they observed reforestation, work and erosion and stream control, which were more serious than those in Taiwan as an aftermath of the devastation caused by the last war. Fuelwood is in great demand especially during winter when the weather is extremely cold.

According to him the soil is very loose and is therefore very susceptible to erosion. But to check or at least minimize soil erosion they are rapidly reforesting the areas with sturdy species especially in the watersheds. Stream channels and dams are also built to regulate the flow of water especially during rainy days when the downpour causes great destruction to economic plants and other favored species.

Korea, like Taiwan, has also the village forestry associations which help the government in various reforestation and erosion control works. The residents of the provinces and municipalities take active participation in the construction of canals and dams to regulate soil erosion and stream flow. For erosion control they build terraces and plant fast growing species. Sometimes the slopes are covered with straw. To regulate stream flow they build some sort of canals with rocks and dams along creeks and other passage of water.

It is interesting to note that the police force, whose main function is to maintain peace and order, also takes active part in the planting of trees along roadsides and other public places .

JAPAN: (June 3-11)

From Korea Dean Zamuco and his party then proceeded to their next destination — Japan. "Japan is far advanced in forestry for the reason that the people are forestry-minded and employ the modern techniques of forestry improvements", the Dean commented. They practice intensive forest management, unlike here in the Philippines. Hydroelectric plants are very common in Japan because they have well-protected watersheds and skillfully constructed irrigation canals and dams. Most of their railroads and other mechanical operations are electrically operated as electric power is readily obtainable from these hydro-electric plants.

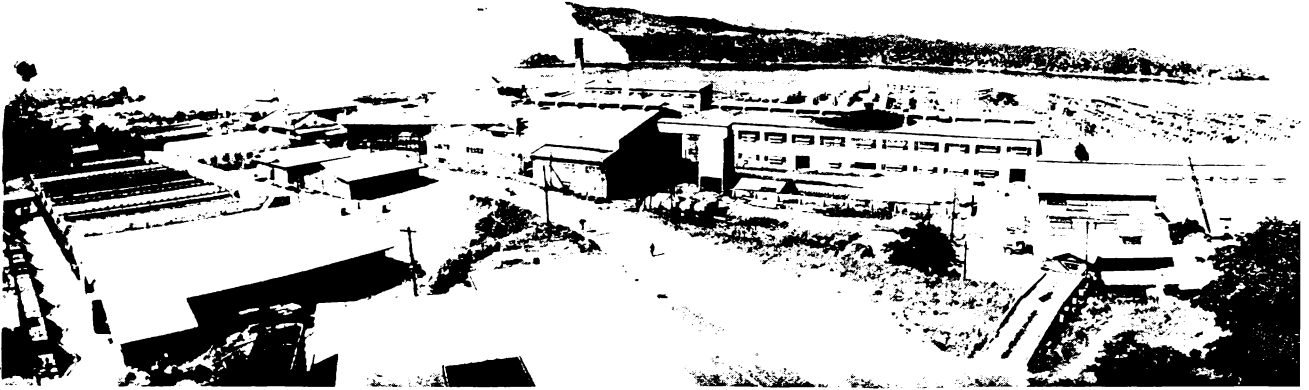
"To control or regulate stream flow they build sort of ditches embedded with rocks along gullies. Erosion is not a serious problem because most of the deforested areas had been reforested with important species. Furthermore, they cut their mature timber in small patches of about two hectares in order to minimize erosion."

"They employ cable hauling system of logging, using very light equipment and small cables. Felling and bucking are mostly done by one-man power chain saw. Although they practice clear-cutting, the cut trees are soon replaced with desirable species in conformity with their reforestation program," he explained.

He further stated that in the Philippines only private entities are directly engaged in the extraction of timber both for export and local consumption. In Japan, however, both public and private entities are engaged in logging and the extracted products are sold at public auction thereby preventing the monopoly of the timber products by private entities.

Dean Zamuco feels that his stay in Japan was so brief and the program so tight that he was not able to visit a single forestry school in order to observe methods and practices which might be useful to the U.P. College of Forestry.

Lawanit



PANORAMIC VIEW OF THE NASIPIT SAWMILL AND THE LAWANIT FACTORY

This is the integrated compound of the Phil. Wallboard Corp. plant and the Nasipit Lumber Company's sawmill at Nasipit, Agusan. The long building in the foreground is the Lawanit factory with the laboratory building in the right foreground, and the power house in the center foreground in front of the smoke stock. The series of uniform buildings at the left of the picture is the dry kiln plant and the farthest building directly above it is the sawmill building.



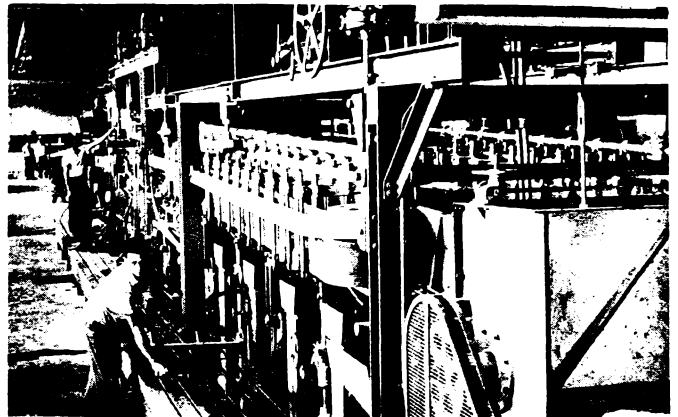
CHIP CONVEYOR

Raw materials such as waste from the log pond, sawmill and yard are conveyed to the chipper house where it is sliced into thumb size chips. Regular size chips are conveyed by means of this belt conveyor to the Chip Bin at the main Lawanit plant.



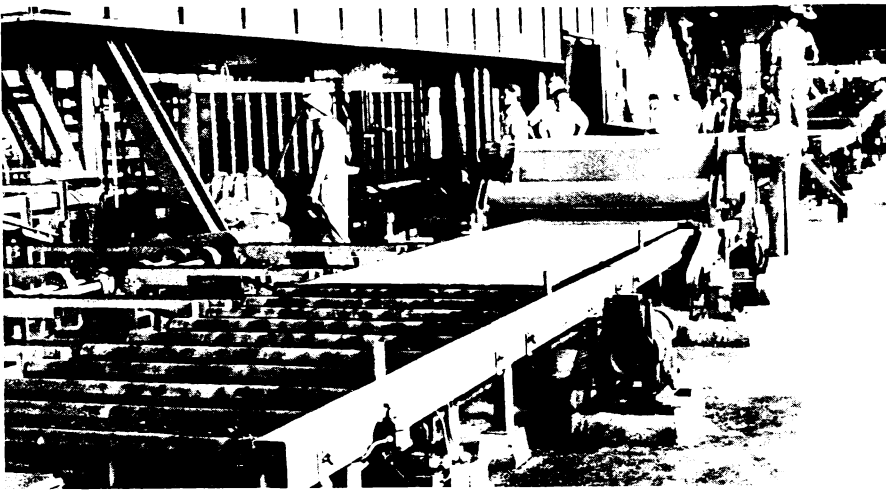
DEFIBRATOR

From the chip bin, the regular size chips are fed to the preheater chamber of the Defibrator thru the screw feeder, where high temperature and under pressure steam is introduced to soften the fiber bonding material of the wood. Chips are then conveyed by means of screw conveyor to the grinding chamber which breaks the wood fiber into pulp.



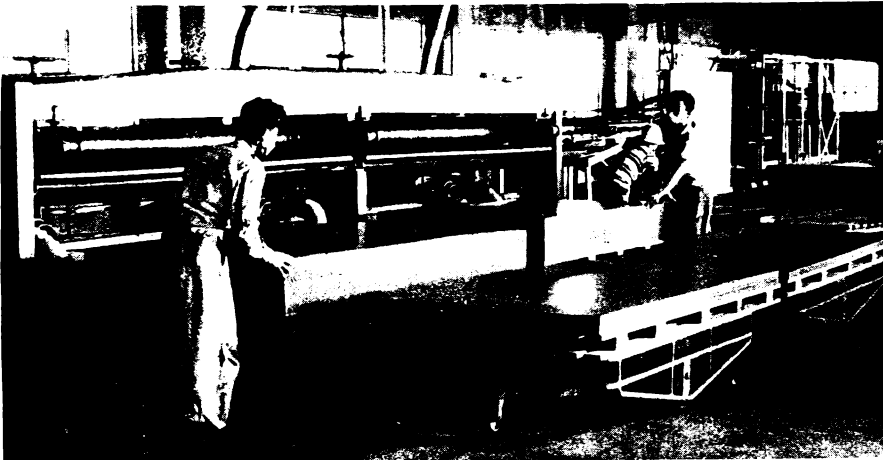
WET FORMING MACHINE (FOURDNIER)

In the Fourdnier machine, a "Wet Lap" is formed. This wet lap resembles a thick sheet of pulpy wet felt. On account of too much water, it is pressed under 3 rollers of gradually increasing pressure to remove the free water as much as possible.



GENERAL VIEW (from Wet Forming Machine to Press)

From the farthest end a continuous supply of wet lap leaves the Fourdnier machine and travels on a chain driven conveyor where a wet lap cutter automatically cuts the wet lap to a length of 18 feet. At the nearest end of the picture the caul plate covered with wire screen travels along another conveyor underneath the wet lap conveyor at the same speed. At a certain point the wet lap and the caul plate meet, and the wet lap slides gently into the wire screen. The caul plate now carrying the wet lap is transferred to the loading hoist of the hot press.



FINISHED BOARDS

Boards of 18' long, edge trimmed to 4' wide, are re-conveyed to an outfit which consists of two adjustable circular saws which cut the board to usual sizes of 1 pc. 2 ft. long and 2 pcs. of 8 ft. long, and some times to only 1 pc. of 8 ft. long and 1 pc. of 10 ft. long in accordance with the order of Sales Division who takes charge of the demands of the demands of end users.



CRATING

Lawanit board for shipment are crated 10 to 12 pcs. to a crate to prevent damage to edges, surfaces or corners. Careful steps are done by the crating crews to prevent mis-labelings and wrong markings of the types and sizes of the board.

(Courtesy Philippine Wallboard Corporation)

LAWANIT of the Philippines

A new industry in the Philippines is transforming countless tons of waste lumber into millions of square feet of building board. The sales of this product last year alone were valued at 1.39 million U.S. dollars. It is produced by a 100 percent Filipino private business firm, and is believed to be the only wallboard of its type made in the Far East.

Called "Lawanit," it is manufactured by the Philippine Wallboard Corporation. This firm is a sister organization of the Nasipit Lumber Company in Agusan, Mindanao. A multi-million dollar logging and sawmill enterprise, the Nasipit Lumber Company was started by two brothers—Jose and Carlos P. Fernandez in 1946, to fill an acute need for lumber to be used in postwar reconstruction.

In 1949, this company expanded its timber concession and formed its first affiliate—the Agusan Timber Corporation. Together, their operations grew rapidly. But disposing of the large amount of waste resulting from their operations became a growing problem.

Determined to solve it, the company officials studied and worked, and after 32 months, they developed a unique method to make use of all the thinnings and chips from the top-grade logs cut and sawed by their mills. Thus, in 1957, their Lawanit producing corporation was born. Today, the assets of this plant alone amount to \$3.9 million.

Because Lawanit is made of the residues which make up about 58 percent or more of every hardwood log used in logging and lumber operations, the product can increase to 100 percent the use of each log of this type processed from Philippine forests. It therefore increases the economic value of the vast forest resources of the Philippines, which cover over one fourth of its land area, and is the source of its third most valuable export.

The Lawanit plant which is located beside the Nasipit enterprises at Agusan started operating on a commercial basis in August 1957. In its second year, it produced nearly 26 million board feet, valued at \$475,072. Today, the modern plant and its sister companies provide work for about 5,000 employees. The monthly payroll for Lawanit workers alone is about \$170,000.

The first process for the manufacture of hardboard was accidentally discovered by William Mason in Mississippi, U.S.A. His discovery set off a series of research studies perfecting what is now known as Masonite Hardboard, and producing a machine known as a "Defibrator."

In the first step in the making of Lawanit, the defibrator reduces the wood chips to wet pulp. After being subjected to a high temperature, the pulp is conveyed for grinding to a "wet lap pulp forming machine." From here, the softened mass is moved to an automatic cutter which clips it into lengths of 18 feet. The material is then subjected to tremendous pressure, and next, still in crude form, it is moved to an enclosed chamber heated to a temperature of 350 degrees Fahrenheit. From here the board is taken to a "humidifying chamber" which equalizes the moisture in the board, thus preventing it from warping. Fourteen hours after the paste is fed into the plant, the Lawanit fiberboard emerges, ready for trimming to desired sizes.

Rich brown in color, dense and hard, Lawanit has glossy fibers from such Philippine hardwoods as lauan, tangili and other choice woods from the lush timber forests of Mindanao.

Orders for Lawanit from markets such as Hong Kong, Singapore, Guam, Honolulu and
(Continued on page 38)

FOREST MEET . . .

(Continued from page 22)

that the new stands to be formed shall be stable and safe. Unfortunately, again, on account of the lack of silvicultural and management studies in this country, whatever I may suggest in this paper will be purely hypothetical but I do believe that sound forestry practices must be approached from a point which will properly lead to gradual conversion of stands thru improvement by normal silvicultural methods. However, making habitual changes under proper safeguards should not be precluded, such as artificially inducing native or exotic species to improve the stand, even in the case of protective forest, although here the concept of stability is of cardinal importance and must be the prime concern of the forester.

At this stage we may attempt to clarify established principles underlying industrial developments in tropical areas, planned or already underway, though this lies somewhat apart from forestry proper. There are two principles which should govern the management of our forests, the one a corollary of the other. *First*, total utilization of the wood supply, in the tropical forests, and *second* integration of forest industries. Our experience has shown how difficult it is to put either fully into practice. Total utilization and integration remain the best means of attaining the desired objectives; but they are, in themselves, objectives to be achieved at any price in the first stages of industrialization.

During the early development of a country such as ours, where the direction of economic orientation is not fully determined, it is financially impracticable to establish a series of properly integrated forest industries or special industries that can utilize all available products of a forest. Planning must be on a practical business basis and the initial industries should be designed with a view to

Moreover you must walk like a camel, which is said to be the only beast which ruminates when walking. When a traveller asked Wordsworth's servant to show him her master's study, she answered, "Here is his library, but his study is out of doors." — HENRY DAVID TOREAU

LAWANIT OF THE . . .

(Continued from page 37)

Borneo are steadily increasing, and a total of five percent of all the Lawanit which Nasipit can produce is being exported.

Lawanit can be used not only for walls, eaves, ceiling, roofing, flooring and concrete forms but also for manufactured articles needed by Asia's developing industries. For example, Lawanit is used for making truck bodies and interior panels, radio cabinets, blackboards and other office needs.

Like its owners, Lawanit is a symbol of the growth of courage and faith of Philippine private capital to venture into new fields, encouraged by an economy where private ownership and a man's initiative are held in high regard. (*Reprinted from Free World, April, 1959*)

their ultimately fitting into a pattern of fully integrated use of the forest as markets and finances permit. The principles would seem valid, but they must be realized slowly.

Before anyone of us will be ready to embark on a program of forest improvement as suggested here, let us be sure that the climate is favorable by having a sound forest policy as a basic foundation. Corrective measures should be applied to bring about a more sensible land policy — land classification should be scientifically implemented rather than dictated by squatters; timber concessions where sizable investments are already made deserve adequate protection from the government as one would take in caring for the goose that lays the golden eggs; and above all, *permanent forest improvement* could only be made possible if there is an assurance to a concessionaire of his more or less permanent hold on his concession. This sense of permanency will serve as a great incentive in forest improvement.

Some Felling Techniques and Equipments That may be Useful in the Practice of Selective Logging

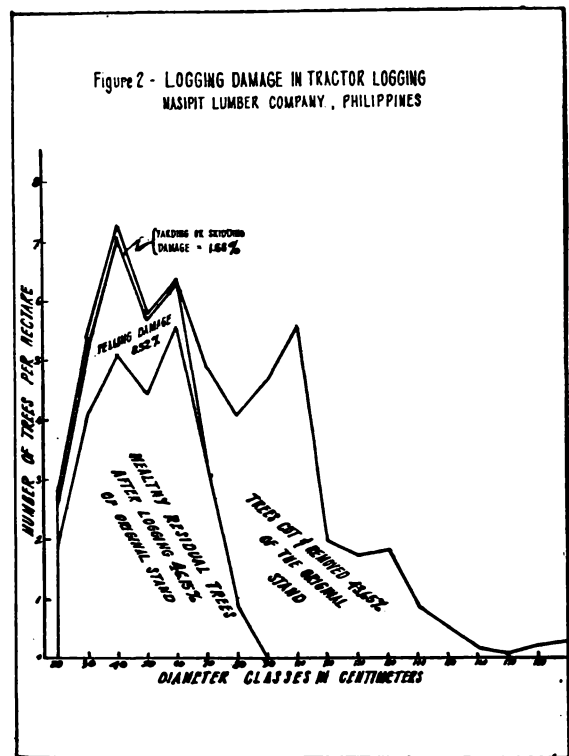
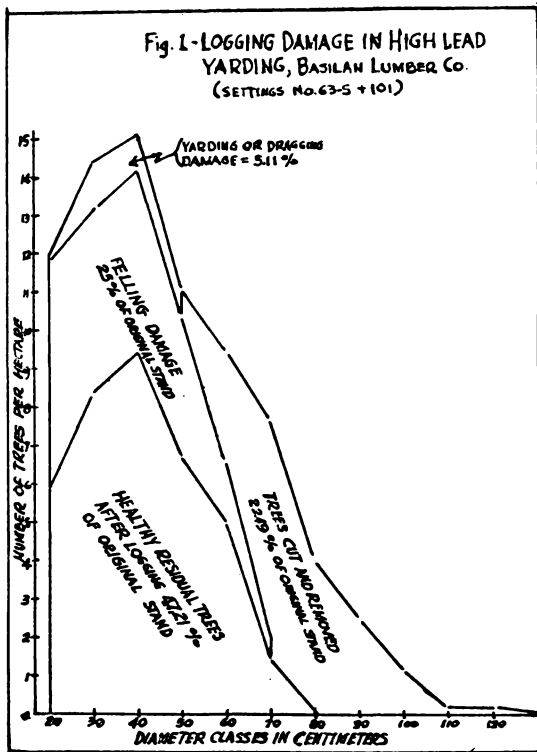
By EULOGIO T. TAGUDAR
Bureau of Forestry

In the First Philippine Conservation and Reforestation Conference held on October 1, 1954, a logging system under sustained yield through selective logging was one of the important points of the forestry program adopted and approved by the Government as a means of conserving the dwindling forest resources of the country. Serevo and Reyes (17) defined selective logging as the removal of mature, overmature and defective trees in such a manner as to leave an adequate number and volume of healthy residual trees of the commercial species and other tree species necessary to assure a future crop of timber and forest cover for the protection and conservation of soil and water. The adequate stand that these authors have in mind is a stand composed of uninjured young trees left as a result of exercising care by using suitable techniques and equipments. Leaving an adequate stand in the cutting areas is very hard to attain in the Philippines. This is due to the fact that the present system of extracting timber in the Philippines is not conducive to the saving of sufficient young trees from injury, and logging is presently conducted in rough areas. Powerful machinery has been employed for almost half century and is still carried on with little or no interest in the production of future timber crops (1).

Tremendous damage in logging has been caused either by not using suitable techniques and equipments necessary for saving residual trees or by the desire of many logging

companies in the Philippines to get back as much profit as they can at the earliest possible time with no thought of the future. The logging damage that the author wants to imply is the destruction or injury done during logging operation to the forest vegetation and to the ground cover, either above or below the ground. The residual stand, an integral part of the forest vegetation, is where damage or destruction is done.

Logging damage studies conducted recently in the Philippines revealed that a considerable portion of the stand was destroyed in the course of logging. This does not mean, however, that there shall be no destruction of the reserved stand. In fact, part of the residual stand has to be sacrificed. Marcelo and Tagudar (11) found that in high lead yarding, felling damage ranges from 23 per cent to 28 per cent and skidding (dragging) damage was from 4 per cent to 6 per cent or an average of 30 per cent of the entire stand. In tractor logging, Tagudar and Quintana (22) found that felling damage was 9 per cent and skidding damage was 2 per cent (Table 1 and Figures 1 and 2). These data were gathered from two settings, comprising about 17.85 hectares (44.09 acres) in high lead yarding, and three settings, comprising about 21.90 hectares (53.87 acres) in tractor yarding. Although these data are still inadequate to be used as a basis for a general conclusion about the extent of damage in felling and yarding, they, however, indicate that felling damage is



very much greater than skidding (dragging) damage both in the high lead and tractor yarding operations. Felling damage is about four to five times higher than skidding damage.

Others may believe that skidding damage is greater than felling damage, especially to those who had been accustomed to, or had their experience mostly in temperate (pine forest) logging. But those who had their experience mostly in logging tropical (dipterocarp) forest these data may be true.

Because of the bigger damage in felling than in yarding, the author took interest to search improved felling techniques practiced in other countries that can be applied in the Philippines. This paper attempts to discuss briefly some felling techniques and equipments used in the United States, Canada, Australia, Malaya and Tropical Africa with the end in view of finding which of these techniques may be applied or adapted on the selective logging program in the Philippines. Hence, the presentation of these techniques and tools in this paper.

LOGGING DAMAGES

The logging damages that are often encountered in the process of logging are in felling and skidding. Felling damages usually occur, when trees are felled towards clumps of saplings, poles, and standards or are lodged to other trees. They are oftentimes committed mostly by unskilled or inexperienced fallers. Skidding damage occurs when the log being yarded hits young trees, when the yarding cables rub the trunks of healthy immature trees and when it rolls on the side of hills, thereby sweeping all trees on its path. This kind of damage (skidding) and its remedy are not discussed in this paper.

PROBLEMS IN FELLING

Before discussing the possible applications of these improved felling techniques and tools in the Philippines, it would be worthwhile to discuss briefly the problems involved in felling and some characteristics of the dipterocarp trees so that a clearer and better understanding of the application of

Table I.—Computation for the percentage of the original stand, trees cut, healthy residual trees, and damage per hectare in felling and yarding. *

Items	Highlead logging				Tractor Logging	
	Setting No. 63-S		Setting No. 101		No. of Trees	Per cent
	No. of Trees	Per cent	No. of Trees	Per cent		
Original stand	70.	100	85.49	100	54.52	100
Trees cut	15.58	22.25	19.45	22.75	23.78	43.65
Healthy residual Trees . .	32.01	45.71	41.63	48.70	25.16	46.15
Damage in Felling	19.54	27.91	29.20	22.46	4.64	8.52
Damage in Yarding	2.89	4.13	5.21	6.09	.94	1.68

*These data were compiled from papers written by Marcelo and Tagudar (11) and Tagudar and Quintana (22).

the techniques and tools could be well appreciated.

Fallers, for years and years since mechanized logging was started in the Philippines, were accustomed to falling trees in any manner they desire as long as the bole does not break when felled. Many lumber companies are still paying their fallers by the contract or piece wage system. Under this system, fallers, in their desire to earn more, sometimes disregard care in undercutting and felling the trees and they are not directed into open spaces devoid of trees and young timber (23). This condition has also, in one way or another, led to the heavy destruction of the reserved stand during felling and it has become one of the biggest problems in the implementation of selective logging in the Philippines.

Another problem in felling is the characteristics of the trees that are felled. Most of the virgin commercial forest in the Philippines are composed of mature and overmature broad-leaved trees. These trees cut for commercial purposes have strong, sturdy and massive horizontal branches, large tops, and wide crowns, extending as far as 20 meters on both sides. They can reach a total height of about 65 meters. These large trees require considerable space, skill and care in felling even under the best condition (23). Some of the large dipterocarp trees have hollow or rotten butt. They give way sooner

than sound trees when being felled and frequently fall in directions contrary to the intention of the marker or the fallers (2). The wide area of the crowns of the trees felled has also resulted in a wide area of destruction. Smaller dipterocarp trees that are hit by the strong and massive branches usually result in bark injury, crown injury, broken top, or toppling of these smaller trees. Unlike the pine trees, as long as the trees cut do not directly hit smaller trees that is, bole to bole hitting, there is practically no injury at all to the trees to remain. The pine trees have small compact crowns and the branches are thin and brittle, hence, felling injury is not the main problem. Tree markers in the Philippines when marking trees to be cut had to be expert or proficient in estimating the heights, diameters of the crowns and the best direction where the tree should fall in order to lessen or minimize the destruction to the residual stand.

The presence of buttresses of the dipterocarp trees presents also another problem. Most of the species or trees cut for lumber have buttresses ranging from a few centimeters above the ground in some species to three meters or more in others (10). These large trees, such as those found in virgin stands, have generally high buttresses and spread outward for some distances. Felling these high-buttressed trees has been a big problem of the loggers. High stumps leave

a portion of the tree to waste, cause breakage of logs when felled over them and interfere in the yarding operation.

DISCUSSION AND APPLICATION OF FELLING TECHNIQUES & TOOLS

A. Felling Techniques

Uphill felling. — Uphill felling is a method of felling trees sometimes done against the lean and its aim is to reduce the actual "flight time" of the tree by forcing it to fall against the usual downhill lean by mechanical means (20). The equipments needed in this particular operation are one tractor, equipped with double-drum winch and bulldozer blade, climbing gear and cables for pulling the tree. Stenzel (20) described this method as follows:

As soon as a tree is selected for felling, a tractor is positioned on the slope above the tree and far enough away to be out of the path of the falling tree. A high climber, with a one-fourth-inch-Manila rope line, climbs the tree. A dog is driven into the tree at the desired height and a small block is secured through which a choker is attached to the tree and is shackled to the winch line. The undercut is made on the uphill side of the tree. The backcut is made and if the tree is pinching the saw, the winch line is reeled in just enough to allow the saw to cut freely. When the backcut has been put into the extent that the tree is nearing falling readiness, the winch line is again slowly and carefully reeled in. As the tree starts to fall slowly, the cable is kept taut. This helps the tree to fall uphill. As soon as the tree reaches its full flight of fall, the cable tension is released and the tree is allowed to fall. It has been found that this method of falling saves much valuable part of the tree from destruction and felling could be directed in places where destruction to the young trees retained as future growing stock could be avoided.

Felling trees uphill described by this author cannot be practiced in a large scale by lumber companies in the Philippines because of the big expenses for the operation.

It might pay big lumber companies to fall exceptionally high-quality trees of the first and second groups of the commercial trees that may otherwise be shattered to pieces when felled. Small lumber companies may not be able to afford to perform this operation. Besides, most Philippine dipterocarp trees cut for commercial and domestic purposes are not as big as the red-woods and Douglas-fir in the Pacific coast. Hence, the chances of practising this method of felling in the Philippines are remote, although possible.

FELLING DIFFERENT KINDS OF STANDING TREES

a. *Felling straight, even-crowned and sound trees.* — The method of falling this kind of tree (23) is as follows:

The undercut is chopped off or sawed horizontally for a distance of about one-fourth to one-third of the diameter of the tree. The depth of the undercut depends upon the diameter of the tree. The backcut or severing cut, which is about one to four inches above the bottom of the undercut, is sawed on the opposite side of the tree and it advances parallel to the undercut until a small uncut wood section for holding breaks off. As this section (uncut wood) breaks off, the tree settles. On a windless day, a straight and evenly crowned tree can be felled in any direction.

b. *Felling leaning trees against their leans.* — Felling these kinds of trees (12, 22) is as follows:

After deciding the direction of fall, taking into considerations some factors, such as, the ease of yarding, least damage to the residual stand, and minimum breakage to the tree when felled, the conventional method of making undercuts is made. The depth of the undercut again depends largely on the degree of the lean. Before finishing the undercut, a vertical face (B) about six inches is made in the low corner and a straight face (A) about 10 to 20 inches on the upper side or pulling side of the tree is chopped into the

wall of the undercut above the stump cut and also another straight face of six inches to a foot is chopped below the stump cut (Fig. 3).

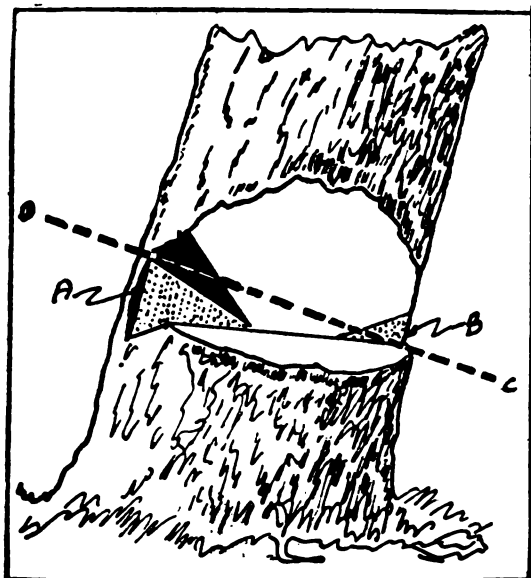


Fig. 3—Sketch showing how undercut is made and other details of the Ness method of felling leaners:

(A) Holding wood on the upper side. Leave one inch of straight face for each foot of lean.
 (B) "Dutchman" on the lower side. This straight face acts as a leg when tree starts to fall.

(C-D) Position of saw. The holding wood did not let go until the tree came to its position.

Traced for WEST COAST LUMBERMAN
 69(9):36

This piece of wood on the upper side of the undercut holds the tree when it starts to fall. In leaning trees, the upper side is much stronger and tougher than the lower side; hence, the added strength nature has provided on the upper side is taken advantage of. The felling cut is made by having the sawcut even at the top of the notch on the pulling side (A) and even with the bottom of the Dutchman (B). About 14 inches to 20 inches of uncut wood (C) is left on the upper side (Fig. 3). This side of uncut wood will allow the tree to bend on the pulling side and will hold the tree with the undercut in the desired direction. Wackerman (23) stated that it is frequently desirable to "pull" a tree felled to one side or the other from the

direction of the undercut by sawing the backcut at an angle to the undercut instead of parallel to it as in straight and balance-crowned trees (Fig. 4).

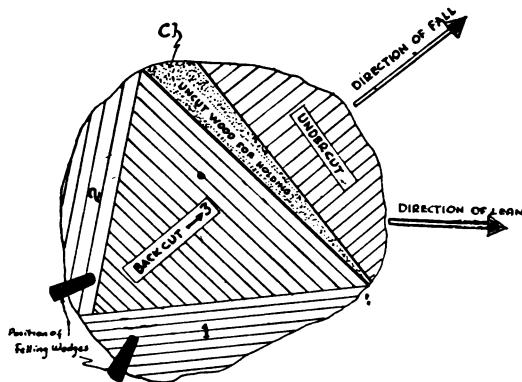


Fig. 4—Procedures in felling leaning trees against their lean.

c. *Felling a leaning tree in the direction of the lean.*—The undercut of this kind of tree is usually deep. This is necessary in order to prevent premature felling of the tree before the backcut has been severed off sufficiently and to prevent splitting of the butt log. The method of making the felling cut is the same as that of a straight and even-crowned tree (23).

d. *Felling heavily branched or forked trees on one side.*—These types of trees can be felled or dropped, like leaning trees, within a quarter-circle on either side of the place where it would naturally fall (4). Brown (4) stated further that trees must be felled so as not to interfere with log-transport traffic or hung up in adjacent trees or felled on rocks, windfalls, stumps, and the like, which cause shattering. If it is desired to fall the trees within the direction or against the lean, the method in making the undercut and backcut to be followed will be the same as that of felling a leaning tree against or within the direction of the lean previously described in this paper (Fig. 5).

The directional control of felling described by Ness (12), Wacherman (23), Brown (4), and Tagudar, et al (22) can be applied in the Philippines in a large scale. In fact, if the methods described by these authors

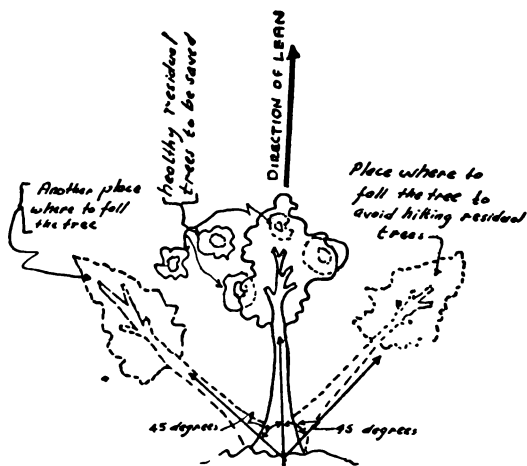


Fig. 5—Felling leaning trees and heavily branched or forked trees on one side within the quarter. Circle on either side of the place where it would naturally fall.

were practiced in the Philippines, the tremendous damage in felling could be sufficiently reduced. The wide-spreading and strong branches of these large trees will certainly smash all young trees desired to be left if they are just felled in any manner the loggers may like. The best idea would be to fall the tree within the quarter-circle on either side of the place where it would naturally fall for leaning and heavily branched or forked trees and where the least damage to the residual stand could be done. Hence, fallers would have to be proficient not only in determining the leans of the trees they cut but also the heights and diameters of the crowns (15). These will guide them in directing the fall of the tree in relation to the trees designated to be left as growing stock and trees that are to be cut for commercial purposes (15). The direction of fall is largely controlled by a careful making of an undercut, with the upper side (pulling side) higher than the lower side (12) and leaving a wider band of holding wood towards the direction of fall (23). This section (uncut wood) serves as a hinge that throws the tree to the desired direction to avoid hitting residual trees reserved for the future cut (17).

Felling erect and evenly-crowned trees can be placed in any direction on windless days and heavily branched or forked trees on

one side can be felled within a quarter circle on either side of the place where it will naturally fall. Such trees, therefore, can be felled in places where the damage to the residual trees will be the least.

Two-stage felling. — Sias (18) described this method of felling and its objective is to reduce logging damage to the residual stand and to lessen interference in tractor skidding and falling in the second stage. The stand where this operation was conducted was composed of overmature Jeffrey pine-white-fir type. The method of marking was to mark all the timber at one time. Two distinct marks were used for the first and second stages. The pine was more valuable than fir and contained a lesser percentage of cull trees than fir. Hence, pine was cut for the first stage and fir was for the second stage. Fewer cull trees would then interfere with the tractor skidding while the skidding pattern was being established in the first stage and also less interference to the fallers in the second stage. All logs were skidded to only one landing. This method causes less damage to the residual stand because the logs were skidded in accordance with the lay of the felled trees. The advantages of this method of felling (18) are the following:

- (a) Better marking results as the fallers can check the leave tree more efficiently after the stand is partially opened up.
- (b) The method appeals to the timber fallers as it is less difficult to avoid crossing and breakage of felled timber.
- (c) Bucking is also facilitated.
- (d) Less damage results from skidding due to the greater mobility on the part of the tractors, which enables the operators to work at a proper balance of laterals to main skid roads.

Regeneration fellings. — The State Government of Victoria, Australia (3) faced the problem of securing regeneration of mixed forests where only merchantable trees were cut, leaving the cull ones, and at the same

time utilizing trees left behind in previous cuttings. They solved the problem by sequence operations which are as follows (3):

First, the forest officers mark for regeneration purposes all those healthy young trees (referred as growing stock) which are considered capable of growing into good volume in the future. They mark as many young trees as they could. If there is an insufficient growing stock present to provide adequate seed supply, special seed trees are also marked to remain.

Second, the operator comes along and falls every tree, except the reserved trees, that he thinks might make a log. These trees are bucked and skidded by a tractor.

In the third and final step, the operator falls the cull trees on the same area from which he has just removed the mill logs. This sequence of operation is necessary for the very obvious reasons that if all trees to be cut are felled in one operation and are skidded at the same time, there will be a big trouble in getting out the logs out of the tangle of cull logs, branches and crowns of trees left in the felling areas.

Two-stage felling (18) and regeneration felling (3) which are about synonymous in their objectives and in the sequence of felling could be very well applied in the Philippines. Virgin dipterocarp forests in the Philippines are generally characterized by the presence of overmature, mature and immature trees distributed all over the stand. It would be better to cut first all smaller diameter trees that are not marked for the growing stock and followed by the falling of overmature trees later. This method will have a decided advantage to tree markers as the stand is partially opened up and the trees to be retained can easily be checked. The fallers can also easily judge where to direct the fall of the tree and what tree is likely to be damaged by the bigger tree. A further improvement on this method would be performing a sequence of felling in which a tree, likely to be hit by a bigger tree to be felled, should be felled first then followed by the felling of the bigger tree. This method has to be followed in

the Philippines because a lot of destructions both to the young trees and the trees to be removed are caused by haphazard felling.

Lopping some branches before felling. — Schafer (16) stated that branches and crowns of trees can be removed by lopping or by blasting the branches or crowns by explosives. He further described the method of drilling holes in the trunk of the tree near the branches by a 30-centimeter drill and followed by further boring it with a 50-centimeter drill. The explosives are placed in these holes and are set off by using a time fuse with a simple igniting device. Branches below the crown are efficiently removed by blasting with a detonator and fuse without preliminary boring.

Flemich (5) described the practical aspect of lopping in Malaya as follows:

Bamboo pegs are driven on the trunk of the tree at about three (3) feet interval on the opposite side of the trunk until the crown is reached. These pegs are used as ladder or stairs for climbing the tree. By means of a parang (a sharp one-edged knife), the branches of the tree are cut. Some of the advantages of lopping trees mentioned by Flemich (5) are the following:

(a) Avoidance of damage to the regeneration. If a mature tree is felled without lopping, young saplings or poles might be smashed up and it creates serious gaps in the canopy.

(b) Ease of felling. In lopped trees, there is no distribution of weight on one side of the tree, as in the case of unlopped tree having two or more branches on one side.

Lopping some branches before felling (5) and crown-blasting method (16) are operations necessary prior to felling to save a good number of residual trees. However, the crown-blasting can not be practiced in the Philippines. This is due to the scarcity and excessively high prices of explosives in the Philippines.

Lopping some branches before felling may have a better chance of it being practiced than crown-blasting by explosives. The

writer witnessed a work along this line (lopping) performed by the fallers of the Nasipit Lumber Company in the Philippines. A tall and wide-crowned dipterocarp tree, about 70 inches in diameter, 180 feet tall and having a crown width of about 30 feet to 40 feet on each side, was lopped before felling. Three big branches were concentrated on one side and the direction of fall, within the quarter-circle on either side of the concentrated branches, would destroy about 6 to 7 healthy residual trees. A high climber was sent to cut two of the big branches concentrated on one side. The removed branches tipped off the balance of the crown away from the residual trees and it was easily felled opposite these trees. The time required to lop and fell the tree was about three hours and it cost the company an additional expense of ₱2.50 for wages of the high climber. This method, although it helps much in the saving of residual trees from damages, is expensive and may not be practicable or economical to small timber licensees. But if the saved trees will be able to put more growth and can be cut in few years, such expenditures may be compensated by a fair and early profit in the form of added volume. Furthermore, the company that practices

this technique once in a while can also have the satisfaction of knowing that it is thereby putting something back into the forest and contributing to the stability of the industry (3).

Felling buttressed trees. — Noyon (14) described the method of felling buttressed trees in Gabon, French Equatorial Africa, as follows:

By the use of chain saw, the buttresses of the trees are cut horizontally one by one at convenient or accessible heights, preferably one meter above the ground, until the trunk of the tree is reached. These buttresses are cut wide enough to permit the passage of, or change the position of the saw when cutting down the tree. Usually the horizontal opening on the face of the direction of fall is about 65 centimeters wide and the horizontal opening opposite the direction of fall is 40 centimeters wide. The undercut, about 30 centimeters wide (BM) is cut below the cutting line (XY). The undercut is about one-third of the diameter of the tree. A stair-stepped undercut is best for large trees. The

Sketches showing how a buttressed tree is felled.
 Note: Numbers enclosed with circle denote buttresses of the tree. (Traced from: Noyon's *Abatage mecanique des arbres en forest tropicale*. Bois For. Trop. 3:36-37)

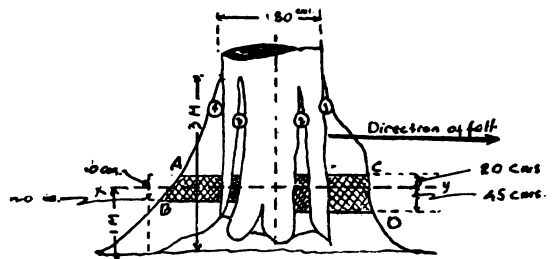


Fig. 6 shows the diagram of cutting buttresses.

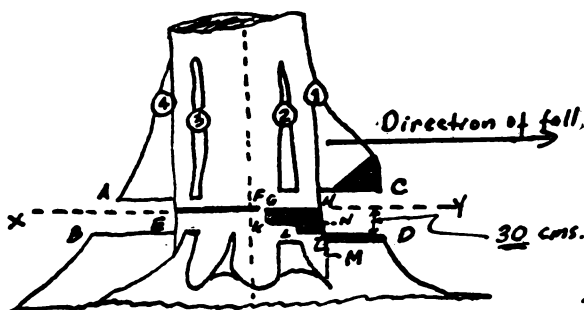


Fig. 7 shows when the buttress and the undercut were already cut.

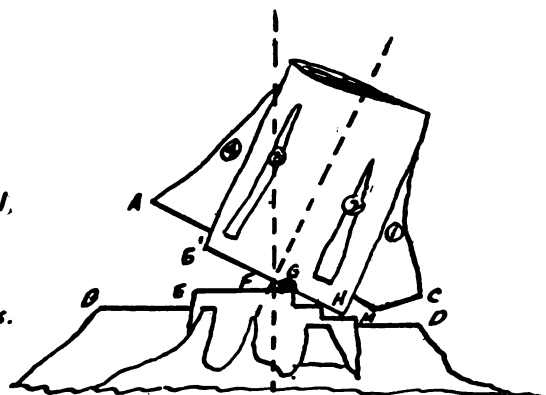


Fig. 8 shows when the tree begins to fall.

backcut, in line with the top of the undercut, is sawed parallel to the undercut (Figures 6, 7, and 8).

Felling buttressed trees as described by Noyon (14) could be well applied in the Philippines. Trees in the Philippines, like those in Gabon, Africa, are characterized by the presence of large buttresses. Three procedures in cutting buttressed trees for possible application in the Philippines are as follows:

(a) *Removing the buttresses when the tree is felled.* — The buttresses are cut horizontally one by one when the tree is still standing as described by Noyon (14). The buttresses may either be removed as soon as the tree is felled or when it reaches the landing.

(b) *Removing the buttresses while the tree is still standing.* — A strong platform is made first and then the buttresses are sawed vertically down to a point above the ground (10). The point above the ground is governed by the soundness or defectiveness of the bole of the tree near the ground. The sawing of the buttresses should be as close as possible to the outer diameter of the tree. After cutting vertically all the buttresses, they are cut again horizontally. The conventional method of felling the tree as previously described should be followed.

(c) *Organizing two sets of fallers.* — The first set of fallers would be merely cutting the buttresses vertically and horizontally using a lighter and shorter power saw. The second set of fallers will fall the trees, with removed buttresses, by a heavier and longer power saw.

Lansigan (10) stated that the lowering of stumps gives more freedom to the faller to fell the tree towards that side because as long as the stump is lower than the surface of the down logs, the breakage caused by low stumps is very much less than the breakage of the higher stumps.

A question that may arise is, how will this felling technique (cutting of buttresses) be of help to us in saving more residual trees from injuries? Felling would have to be di-

rected, whenever practicable, so that tops will lie close together or on top of one another and concentrated into the openings created by these low stumps, not towards residual trees.

For more efficient cutting of these buttresses, we need a one-man power saw light and powerful enough to be carried from tree to tree by the average Filipino logger, who is only about five feet and four inches tall. For this purpose, the Homelite or McCullock one-man chain saw, weighing from 19 pounds to 30 pounds and having a straight blade from 24 inches to 36 inches may be the most suitable.

B. FELLING TOOLS

Cross-cut saws. — Most Philippine logging operators today still use the dependable two-man cross cut saw. Fifty percent of the cross-cut saws used are of the six-foot length, weighing approximately five and a half pounds and the length of the handle varies to the convenience of the faller (8).

Power saws. — Power saws are now popularly used in many logging operations in the United States. A list of two different kinds of power saws that may be useful in the Philippines is shown below:

- (a) *Homelite* one-man chain saws (6):
 1. Homelite EZ-7-29, seven horse power, weighs 28 pounds and fells trees up to 10 feet in diameter.
 2. Homelite EZ-6, six horse power and weighs 19 pounds.
- (b) *McCullock* one-man chain saws (7):
 1. Model 3-25 straight blade, 3 horse power 4,500 r.p.m. and weighs 25 pounds.

Power saws are electric and gasoline operated. The gasoline type is used by all companies because the source of power can be transported with the saw and allows the saw to be used in places which would otherwise be inaccessible (8). Although power saws are becoming very popular for logging operations, the old reliable two-man cross-cut saw, used in conjunction with the power saws, still cannot be eliminated as a helpful

tool to loggers. Some advantages of the cross cut saw over the power saw are the following; (1) it allows all-time operation in case of breakdown of the power saw; (2) it is very light and easy to carry; (3) it is used where it is entirely difficult to get the power saw, especially in rough terrains; and (4) to many small time operators in the Philippines, it is still very expensive for them to buy power saws to be used for felling operations.

A power saw light and powerful enough for an average Filipino logger of five feet and four inches tall would be very suitable. Perhaps, the Homelite and McCulloch one-man chain saws, weighing from 19 pounds to 30 pounds, will be the most applicable in the Philippines.

Magna-Wedges. — A new and light-weight wedge manufactured by *Warren Tool Corporation*, Warren, Ohio, called magnesium chain-saw wedge or Magna-Wedge, was recently introduced in the United States (2). It weighs only one-fourth as much as the steel wedges of comparable sizes. It is soft and can cause no damage to the cutting teeth on the chain saw should it come in contact accidentally with it. Models M-9 and M-10 are recommended by this corporation to be used for felling medium to heavy timbers.

The Magna-Wedge may be the most useful and applicable felling tools cited in this paper in the selective logging work in the Philippines. In the advertisement of the *Warren Tool Corporation* of Warren, Ohio, it shows that this wedge is very light, easy to carry and easy to handle. In the implementation of selective logging in the Philippines, it was found that felling wedges are very useful in the directional control of felling trees in proper places so that trees marked to remain could be saved during the course of felling operation. However, fallers are reluctant to use steel wedges because they complained that when steel wedges were used, their daily production was drastically reduced. Reduced daily production means also reduction in their daily earnings. Aside from that, wedges, together with mauls, spring

pany in the Philippines. Complaints again have been received and aired by many fallers in a lumber company in the southern part of the Philippines that their health has been aboards and axes, are very cumbersome to carry from tree to tree, especially in rough areas. Hence, the introduction of the Magna-Wedges in the Philippines will be a relief to the fallers and a boost to the lumber companies. It will also solve some of the problems of the Bureau of Forestry in the implementation of selective logging.

Truck jack. — Devices for directional control of felling have not yet been perfected and it still remains an economical bottle-neck on many operations (24). Experiments conducted by Wyman (24) with the use of different kinds of jacks for directional felling revealed that the most efficient and economical unit tried was the "1-1/2 inches by 6 inches" screw jack with a 12-ton capacity. A slight change had to be made for the bell-shaped base of the simplex screw jack (1-1/2 inches by 6 inches) by sawing the bell-shaped base in the same vertical planes as the edge of the jack cap. An iron plate is welded to it.

In setting this jack in the tree to be felled, a step (a box cut at the felling cut) opposite the direction of fall is made for the jack by means of the end of the chain saw. The jack is set into the step made and when the felling cut is completed, the tree can be jacked over without shock or vibration is especially important in the case of snags or trees with "widow makers" and the tree is under "micrometer" control at all times. He recommended that for trees 24 inches to 30 inches in diameter felled against their leans, a screw jack (1-1/2 inches by 6 inches) with a 12-ton capacity should be used and trees 20 inches in diameter should be jacked over by a truck jack with 4.5 ton capacity. This jack costs only six dollars (\$6, U.S.) while the hydraulic wedge costs one-hundred sixty nine dollars (\$169, U.S.) It (truck jack) weighs only 16 pounds while a hydraulic wedge and sledge hammer, with three wedges, weigh 22 and 17 pounds, respectively, (Fig. 9 & 10).

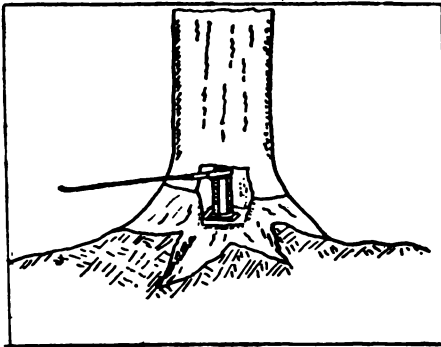


Fig. 9—Four and one half ton Automobile Jack with ratchet. Approximate price \$11.

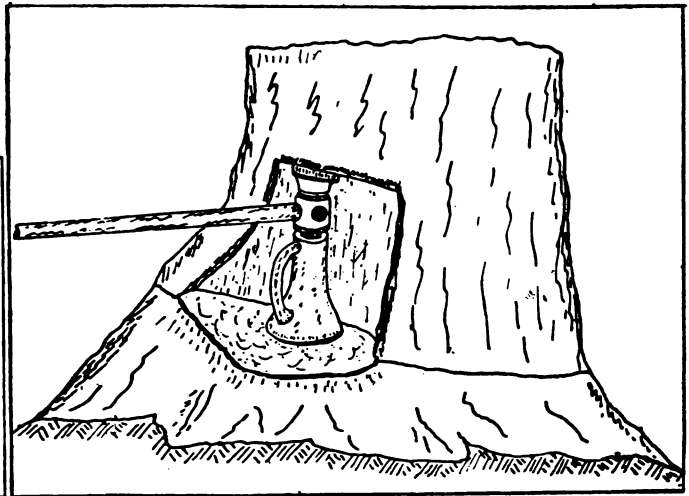


Fig. 10—Twelve ton 1-1/2 x 6 inch Simplex screw Jack. Cost \$6. (Traced from E. P. Wyman 1957. A safer Method of Directional Felling Control with the Cahin Saw. Jour. For. 55:84b).

The next tool that will be very useful in the Philippines is the truck jack. It is cheap and almost available in every logging company in the Philippines. Complaints again have been received and aired by many fallers in a lumber company in the southern part of the Philippines that their health has been affected by the constant use of heavy mauls and wedges every day. The introduction again of this cheap and simple felling tool will aid the Filipino loggers because with the truck jack, there will be no need to swing heavy mauls. The tree could be lifted or jacked over without exerting much effort on the part of the fallers. Another advantage of this tool is the lack of shock or vibration when the tree is jacked over. There would be no danger of broken or dead branches to be watched by the fallers when the tree falls.

Jacobs tree felling jack. — The Jacobs tree felling jack is scientifically designed to the right pressure against the different kinds of trees so that they are pushed to the correct amount while the tree is being sawed, just enough to prevent the saw from being pinched and then giving the tree a long “follow thru” shove just as the cut is finished (13). This tree felling jack has been recent-

ly placed on the market by the *Jacobs Wind Electric Co., Inc.*, of Minneapolis, Minnesota, U.S. It has two springs. The heavy spring starts the tree and then a lighter spring automatically kicks in to continue the “follow thru” action. Regardless of wind direction and direction of the lean, the tree can be felled exactly where the faller wishes. It is provided with special 4-pointed fork at the top of the steel tube for pushing the tree. It is 14 feet long, weighs 30 pounds and costs forty nine dollars (\$49, U.S.), f.o.b. Minneapolis.

The Jacobs tree felling jack may not find much use in the Philippines. It may only be used for directional control of felling small diameter trees. This is due to the following reasons:

- (a) It is heavy (about 30 pounds in weight). In rough areas, this tool would be very hard to carry.
- (b) It is long (14 feet long). In most logging areas in the Philippines, there are many miscellaneous small under story trees which block or hinder the carrying of this tool in the forests.
- (c) It is costly (about \$49.)

Hydraulic Wedges. — Simmons (19) stated that hydraulic wedges (Hydra-Wedge) should be used for directional felling in order to hold damage to the residual stand within reasonable limits. He stated further that this wedge has plenty of power and does not have the tendency to back out of the cut even in the severest service on frozen maple and birch.

The Hydra-Wedge may also not be used extensively in the Philippines. Simmons (19) enumerated several drawbacks of this tool. These drawbacks are also true in the Philippines. They are; (1) it is too heavy (weighs 22 pounds); (2) it is too slow (it goes only one thirty-second of an inch with each pump on the handle and backs out at the same speed); and (3) does not have enough lift (about one and one-half inches is the maximum lift) to topple many of the big-topped hardwoods against the direction of the lean. In the Philippines, the commercial trees presently cut are tall and big. This felling tool might not have enough lift to topple them at the right place and right time.

SUMMARY

Felling techniques that may be useful in the practice of selective logging in the Philippines in the approximate order of importance are the following: (1) Directional control of felling different kinds of standing trees; (2) regeneration fellings, (3) two stage felling, (4) uphill buttressed trees.

Felling tools that may be helpful in saving trees are : (1) Magna-Wedges, (2) truck jacks, (3) light power saws about 19 pounds to 25 pounds, (4) Jacobs tree felling jacks, and (5) Hydra-Wedges.

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2. Anonymous, 1954. New Magna-Wedge. *Northeastern Logger* 3 (4): 9.

3., 1955. Regeneration felling introduced in Victoria, *Aust. Tbr. Jour.* 21 (11): 1027-1028, 1098-1099, 1101-1102, 1105.

4. Brown, N.C. 1949. Logging. John Wi-

ley & Sons New York, xix —|— 48 pp. (Pp. 112-118).

5. Flemich, C.O. 1933. Notes on the practical aspect of lopping. *Malayan Forester* 2: 192-196.

6. Homelite, 1957. Homelite EZ-6 Port Chester, New York. (An advertisement, *North. Logger*, Nov. 1957, inside back cover).

7. Jefferson H.H. 1952. McCulloch chain saw one-man. *Amer. Pudpw. Assoc., Equipment Handbook Release No. 133.* Oct. 13, 1952).

8. Kelly, J.E. 1949. Felling and bucking tools used in the South. *Lumberman* 179 (2242): 38-39.

9. Landon, F.H. 1955. Malayan tropical rain forest. *Malayan Forester* 18: 30-38.

10. Lansigan, N.O. 1939. "Flanging" system increases timber utilization. *Philip. Jour. For.* 2:209-233 —|— 6 plates.

11. Marcelo, H.B. and E.T. Tagudar. 1956. Residual stand in selective high-lead logging, *Philip. Jour. For.* 12 (3-4): 101-116 —|— 2 plates and 6 figures

12. Ness, H. J. 1942. How to fall "leaners". *West Coast Lumberman* 69 (9): 36-38.

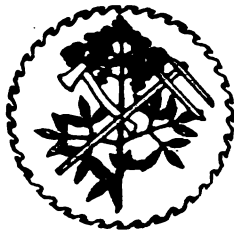
13. Northeast Pulpwood Research Center, 1950. The Jacobs 2 in 1 tree felling jack. Gorham, N.H. (Advertisement, Jacobs Wind Electric Co., Minneapolis, Minn.)

14. Noyon H. 1947. Abatage Mecanique des arbes en foret (tropical forest species). *Bois For. Trop.* 3:35-38 —|— plates. (Some procedures were taken from *For. Abstr.* 9: 2304 and brief translation of the procedures in the original copy by G. Weetman).

15. Reyes, M. R. 1957. Natural regeneration of the Philippine dipterocarp forest. Documents & Minutes of the Meetings of Forestry Division, Ninth Pacific Science Congress. Nov. 18-30, 1957, Bangkok, Thailand.

16. Schafer, G. 1951. Uber das Asten von Uberhalern und das Kronenabchussverfahren. (The preparation of standards for felling by branch lopping and by the crown-blasting method). *Forstarchiv* 26 (1): 11-12. (Original not seen; abstracted in *For. Abstr.*

(Continued on page 56)

**SFF CONFAB**

The Society of Filipino Foresters, last August 1, held its eleventh general meeting and conference at the UP Institute of Hygiene auditorium at Herran St., Manila.

This meeting was highlighted by a conference where several speakers, each an expert in his own line, were invited to speak on matters pertaining to forestry and the industries related to it.

Nicolas P. Lansigan, NEC expert on forest conservation and utilization, made an appraisal of forestry in the Philippines today. In his speech, he bared to the members of the society statistics on forestry which are not in the least very encouraging. According to the data he presented, the Philippines today has only about 9 million hectares of forest land, instead of the 14 million claimed previously and that this area contains only about 384 billion bd. ft. of commercial timber, instead of the 458 billion figure that we used to believe in before. Lansigan also pointed out that if our forests have an annual increment of 1.5 per cent then there would be an additional volume of 6 million bd. ft. every year, in which case, if we are cutting only about 2 million bd. ft. yearly, then we still have a safety margin of about 4 million. However, he continued, why is it that our forests are being depleted the way they are now, when in fact we are not cutting even one half of the yearly increment which our forests yield?

The other statistical data which the NEC forest conservation and utilization expert bared to those present during the conference pointed out to only one thing and that is: that our forest resources are being depleted at a rate faster than they are replenished so that unless something is done to remedy the situation now that it is not yet too late, the Philippines will one day find herself a victim of nation-wide timber famine.

Regent Florencio Tamesis, former Director of Forestry and present General Manager of the Philippine Wallboard Corporation, spoke on how forestry can meet the demands of industrialization. He emphasized in his speech the importance of sound forestry practices to the develop-

ment and maintenance of wood-using industries in the country.

Other speakers in the conference were Mr. Jose G. Sanvictores, President of the Aras-asan Timber Company, and Forester Tiburcio S. Se-revo, Assistant Director of Forestry. These two speakers discoursed on forest conservation, the former discussing it from the point of view of a lumberman while the latter from the view point of a forester.

Dr. Amando M. Dalisay, Under-Secretary for Natural Resources, delivered the closing remarks. An open forum followed after this.

Among those who attended the conference aside from the regular members of the SFF were students of the College of Forestry, particularly those of the Lumbering, Forest Management and Forest Administration classes.

Sr. forester Carlos Sulit was appointed recently as Forestry Project Coordinator of the bureau of forestry.

Forester Sulit started his public career as ranger in 1915. He subsequently held various positions as forest supervisor, forester, chief, division of forest investigation, collecting & disbursing officer, assistant, instructor, asst. professor and associate professor of forest management, U. P. College of Forestry, chief, division of forest management, forester-at-large, chief, division of forest and range management, actg. chief, administrative division, chief, division of forest management, chief, division of forest concession and chief, administrative division.

After liberation, he reorganized and ran the forestry bureau when he was designated its officer-in-charge on April 26, 1945 until a permanent director was appointed on August 28, 1946.

A native of Sta. Cruz, Laguna, he obtained his ranger certificate (medalist) in 1915 from the U.P. School of Forestry and Master of Forestry degree (cum laude) from Yale University (USA) in 1925. He passed the junior forester examination in the United States in 1925 which is equivalent to forester in the Philippine civil service. He was also a government pensionado (university fellow) to the U.S.A. in 1923, returning to the Philippines in 1925 via Europe, India and Malay States. — fbc.

Sr. forester Carlos Sulit of the bureau of forestry was resource speaker of the 1959 national science institute symposium held recently at the Philippine Normal College.

Sulit, who is the forestry project coordinator of his bureau, said that our forests play an important role in our national economy. He pointed out that aside from the control of floods and soil erosions, providing employment and income to millions, helping conserve dollar reserves, forest also furnish man with food, clothing, shelter and fuel from the cradle to the grave.

Sulit appealed to the teachers and the youth of the land to be forest conscious and help fight the enemies of our forests like illegal kaingin and destructive fires. He warned that unless our people do their part in the gigantic task of protecting and conserving our forest resources, we may yet find our future generations deprived of the bare necessities of life.

The science institute, sponsored by the National Science Development Board of the Bureau of Public Schools, was attended by teachers, principals and supervisors coming from different parts of the country. — fbc.

Two ranking officials of the bureau of forestry were designated recently chiefs of division.

Senior foresters Jose Viado and Juan Utlek were designated by agriculture secretary Juan de G. Rodriguez acting chiefs of Reforestation and Reclamation and Domain Use Division respectively, to take the places of two division chiefs who retired recently.

Viado started in the bureau as ranger and, through sheer merit, was promoted to forest supervisor, junior forester, assistant forester, forester, senior forester and general inspector of reforestation projects and assistant division chief. A former officer in charge of reforestation projects in Ilocos, Cebu and Visayas provinces and district supervisor of reforestation projects, he finished ranger and forester courses at UP College of Forestry, Los Baños, Laguna as government pensionado; bachelor of laws degree from UST and master of forestry from Yale University (USA) under the fellowship of Food and Agricultural Organization (FAO) of the United Nations Organization. Author of the "Narra as a National Tree", a winning essay in UP college campus journalism contest published in the Philippines prose and poetry, Viado observed reforestation work in several forestry research centers in the United States.

Utlek started as ranger, senior ranger, senior forester, assistant forest coordinator and assistant division chief. A former USAFFE captain, he holds ranger certificate and bachelor of science

in forestry degree from the UP-college of forestry, Los Baños, Laguna as government pensionado. — aeg.

A high ranking official of the bureau of forestry was appointed recently as chief of its administrative services division.

Atty. Juan Acogido started in public service as clerk and computer in 1919. He obtained his Bachelor of Laws degree from the Philippine Law School in 1930, becoming member of the Philippine Bar that same year. He, also, passed civil service examinations for second grade, junior stenographer and senior stenographer.

Through sheer merit and hardwork, he rose to the positions of clerk and junior stenographer, clerk stenographer, stenographer for the director and asst. director, acting chief clerk, asst. chief of division and chief clerk, asst. chief, administrative division, administrative officer II, acting chief and chief of administrative services division.

A native of Pañgil, Laguna, he is a member of a screening committee for applicants to clerical positions in the forestry bureau. He is also the adviser of the forestry circle, inc.-fbc.

Sr. Forester Porfirio San Buenaventura, chief of the division of reforestation and reclamation of the Bureau of Forestry retired March 30 after completing 48 years of continuous work in the conservation and protection of the country's forest wealth.

Forester San Buenaventura started his public career in 1911 as a forest pensionado of the forestry bureau to the school of forestry. He subsequently held various supervisory positions from ranger officer-in-charge to district foresters, forester-at-large, division chief and officer-in-charge of the bureau.

A native of Naga City, he obtained his ranger certificate in 1913 and his bachelor of science in forestry degree in 1932, both from the U.P. College of Forestry. During the enemy regime, he was appointed by the governor of unoccupied Bukidnon as superintendent of the cinchona plantation at Malaybalay which supplied the guerrilla forces and the AFWESPAC in Australia precious barks for processing into anti-malaria drugs. He represented the Philippines thrice in FAO conferences abroad, the last two as technical adviser by presidential designation. — aje

Sr. Forester Braulio Cristobal, chief of domain use division and member of a planning committee to work out a five-year development program of the Bureau of Forestry, was retired from
(Continued on page 70)

Society of Filipino Foresters Conference on Forest Conservation



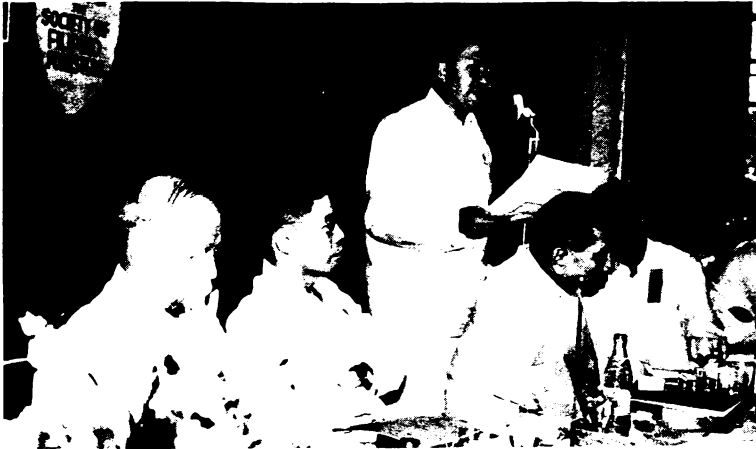
FPRI Director Eugenio de la Cruz emceeing the symposium.



Assistant Director of Forestry Tiburcio S. Serevo explaining "Forest Conservation" from the point of view of a forester.



Mr. Jose G. Sanvictores, President of the Aras-asan Timber Co. speaking on "Forest Conservation" from the point of view of a lumberman.



Senator Pelaex advocating support for his over-all forest policy legislative proposal.



Under-Secretary Amando Dalisay exhorting the foresters to join hands in the orderly and sound utilization of the forest resources.



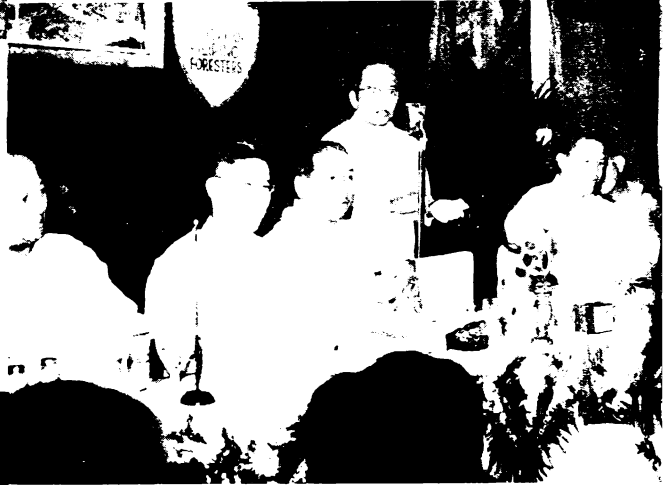
Panel of interrogators. In the picture may be seen from left to right: Dean Zamuco, ICA Adviser Paul Zengraff, Mr. Nicanor Hidalgo, Dr. Canuto Manuel. Not in the picture: Mr. Carlos Fernandez, Mr. Ricardo Marfori.



Regent Florencio Tamesis expounding on the "Challenge of Industrialization".



Dr. Paulino Garcia, Chairman of the Science Development Board, administering the oath of office to SFF officers and council members.



Atty. Leon O. Ty, newspaperman and radio commentator, delivering his scathing tirade against politicians interfering in forestry work.



Dr. Paulino Garcia delivering his talk at the luncheon meeting. Seated at the head table are: Hon. Antonio de las Alas, Under-Secretary Dalisay, President Nazario Peñas, Senator Emmanuel Peleez, Dr. Salvador Araneta.



Part of the SFF group at deliberations during the afternoon business meeting at the Philippine Columbian Club.

College Scenes



Dean Gregorio Zamuco welcoming the Taiwanese Forestry officials during the special convocation.



Part of the audience during the special convocation while singing the Forestry School Song. Standing from left to right: Mr. Paul Zengraff; Mr. Lin Kun-Mao; Mr. Kan Han and Dean Zamuco.



The UPSCAns performing the bakia dance at the convocation.



Mr. Lin Kun-Mao, Vice Director of the Taiwan Forest Administration.

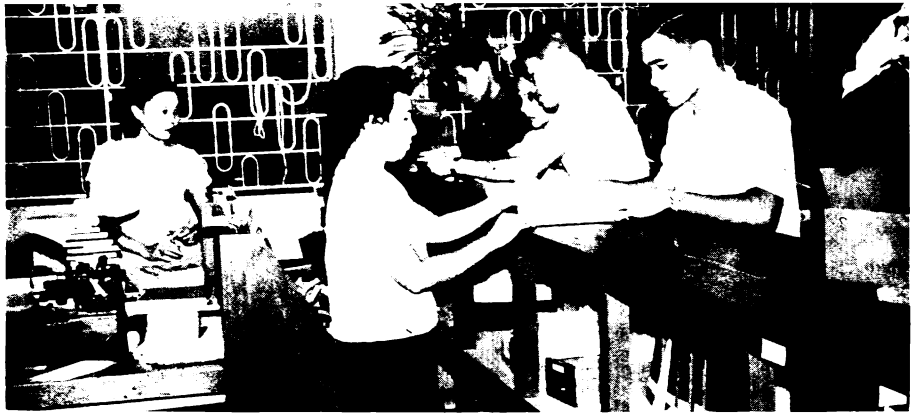


Mr. Paul Zengraff, ICA Forestry Adviser to the Philippines delivering his speech during the convocation.



Merienda given by the Dean in honor of the visiting Taiwanese Forestry Officials.

Always a busy day for Mrs. Ranit and her assistant in the College library.



Dr. Elequin and the Freshman Counseling Staff listen to a tape recording interview. (L. to r.): clockwise, L. Angeles, A. Mordeno, E. Guzman, A. Villafior, J. B. Blando, A. Bacdayan, F. Pollisco, Z. Portacio, Dr. Elequin, R. Castillo, & Prof. C. Recto.

Forestry in the News Bulletin Board prepared and arranged by Dr. Earl Stone.



A Class in "P.I." clearing the stage for the traditional Smokers' Rally.

Here and There



U.P. President Vicente G. Sinco asking questions on the technical aspects of charcoal briquetting near the briquetting machine in operation. From left: Manuel R. Monsalud, Chief of the FPRI Chemical Investigations Division who supervises the operation of the machine, Administrative Officer Eloy V. Velasco, Director de la Cruz, Andy Sinco, President Sinco, Adviser George M. Hunt, and Assistant Director Luis Aguilar.

1. For. Verendia; 2. For. Jacalno; 3. For. Navalasca; 4. For. Cunanan; 6. Dean Zamuco; 7. For. P. dela Serna; 8. Kim, Chul Yong, Chief, Planning Sub-Section, Office of Economic Coordination, Seoul, Korea; 9. Lee, Chang Woo — Interpreter; 10. Sanguine You, Director, Bureau of Statistics, Ministry of Home Affairs, Seoul, Korea; 11. Arthur Mitchell, Technical Consultant, OEC Seoul, Korea; 12. Lee, Yoon Gu, Agri. Asst., OEC.

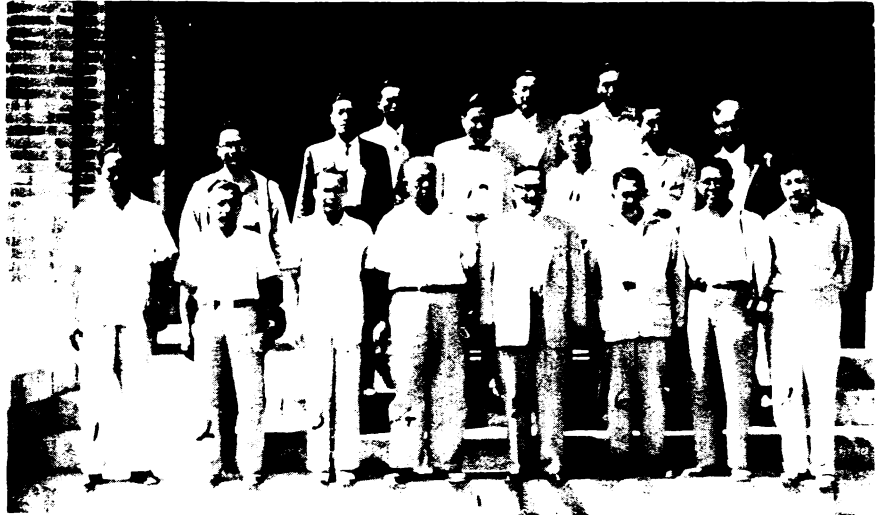
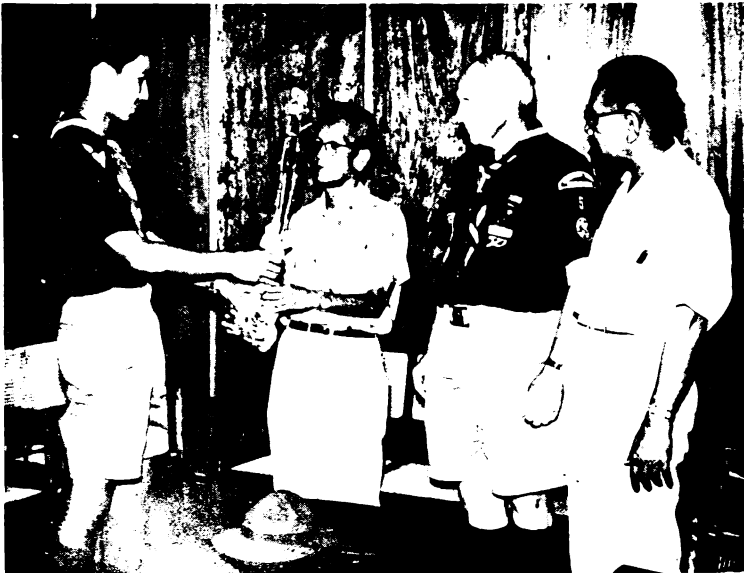
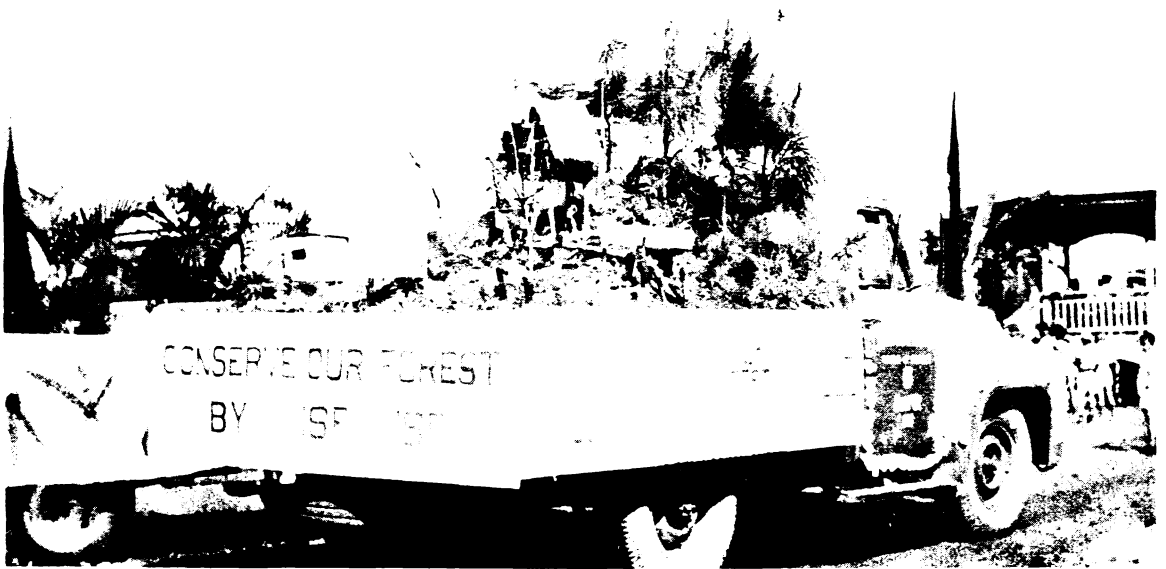


Photo taken on May 28, 1959 at the entrance of the Capitol of Chung-chong Pukto when the Filipino Participants in the Third Country Training Program called on the Governor (No. 5).



Forestry Coordinator Carlos Sulit accepting from Ronald Nakasone of Ewa, Oahu, Hawaii, seedlings of Hawaiian timber species on July 24, 1959. Looking on are: John F. Crosby, B.S.A. of Auburn Dale 66 Mass., U.S.A., and Director Eugenio de la Cruz of the Forest Products Research Institute.



Prize Winning Float of the Malaybalay Reforestation Project Office on July 4, 1959.



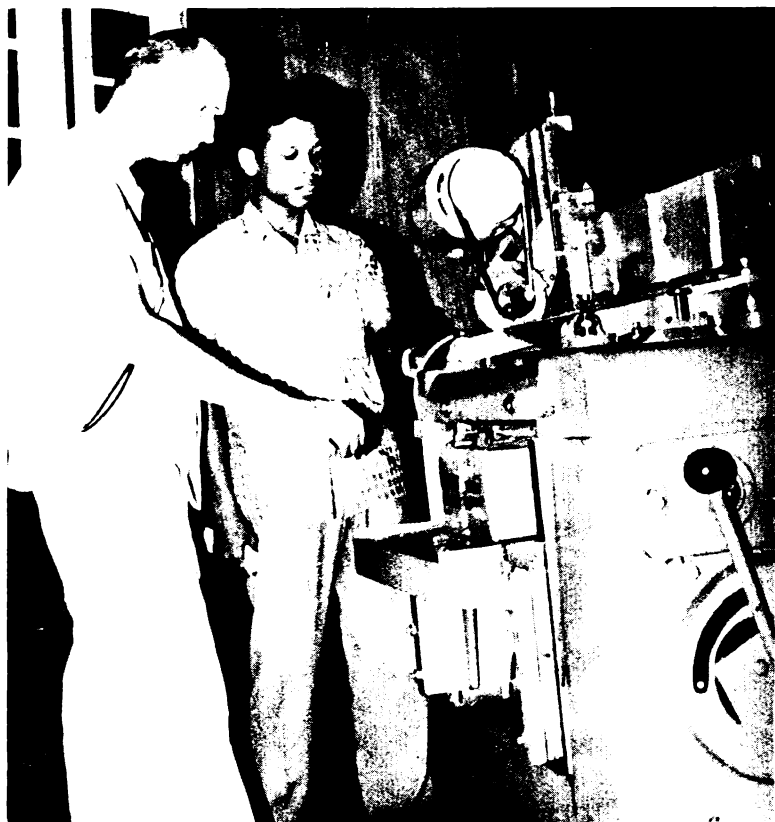
Another Forestry Winning Float in Oroquieta, Misamis Occidental.



B. F. Personnel and friends during Arbor Week at Plaza Lixaso, Virac, Catanduanes.



Vital College Problems Are Presented by the Dean to ICA group. L. to r. Dr. H. B. Knapp, Dean Zamuco, Dr. Fred Sommers, Dr. C. Larson, Dr. S. Garrison, Prof. F. Rosqueta and Dr. E. L. Stone.



Dr. De Zeew examines a 14 Planer, one of the Forest Products Laboratory machines recently received through ICA.



Dr. Kang Han, Senior Specialist, For. Div. C-AJCR, Taipei, Taiwan, addresses the FSBO.

"Let Us Conserve Our Forests by Wise Use"



FORESTRY LEAVES STAFF AT WORK:

L. to r. (clockwise), G. Francia, Esteban, Estrada, A. Rimbon, E. Dixon, I. Barongan, F. Arcangel, E. Cajucom, J. Rola, E. Fabian, A. Revilla, C. Glori.



ARBOR WEEK PLANTING IN ZAMBALES. Governor Barretto assisted by Dist. For. Primo Andres, planting a seedling at Panauig, Zambales.



Stairway to the College of Forestry Building

COUNSELLING AND GUIDANCE PROGRAM

A counselling and guidance program was recently started in the college to help the students especially the freshmen. It is a process of helping the individual meet and adjust himself to a new situation and plan his future along the line of his interest, abilities and habits. The guidance program aims to help the individual meet and solve his problems and be capable of planning and deciding things successfully for himself and by himself.

To effect this program, the new freshmen were divided into nine groups, each under one counselor. Each group meets once a month with their respective counselor and discuss their problems. Aside from the monthly group meetings, each counselee consults a counselor at least once a month. In cases where the counselor could not solve the problem of the counselee, the counselee can go directly to the Professor Incharge or to the Senior Staff Counselors who in turn could put together their ideas to help the student.

An in-service training is given by Dra. Elequin twice a month to these counselors: R. Castillo, A. Mordeno, E. de Guzman, L. Angeles, J. Lamanilao, A. Bacdayan, I. Domingo, A. Villaflor.

THE COLLEGE LIBRARY

Do you want to read? Then come to the library and take advantage of the many new and wonderful books. These newly arrived books, part of the \$10,000.00 Rockefeller grant to the college library, have already been catalogued last summer are now available.

The librarian, Mrs. Juanita C. Ranit, has always been encouraging the faculty members, employees and students of this college, and even the staff and employees of the Forest Products Research Institute and the Forest Experiment Station as well, to read in the library. Also she and her staff are doing their best to improve the

Campus Notes

library and its facilities, not to mention the courteous and efficient service they are giving to everybody.

To achieve these ends, Mrs. Ranit devised means of attracting everybody's attention by putting up a beautiful display of the new book jackets and lists of the newly arrived books and materials available for reading. She also prepared copies of pamphlets for distribution containing information regarding the proper use of the library. Time and again, she is being invited by faculty members to speak before their class about the library. The regular library hours of from 7:30 a.m. to 12:00 a.m. and then from 1:00 p.m. to 4:00 p.m. have been extended up to 9:00 in the evening to afford everybody, most especially the students, a chance to make full use of the library and its facilities.



For more comfort the tables and chairs were rearranged so that it can now easily accommodate 100 persons without seeming to be overcrowded. Plants from Dr. Manza were placed along the windows and corners within the library. A globe map was donated by Dr. Stone. To keep off the afternoon sun, a venetian blind was installed in one of the windows. The pictures and pennants that used to clutter the walls of the library were transferred to another room. More improvements are being planned such as: having a reading corner in the stockroom for research students and faculty members; acquisition of a pencil sharpener for the students' use; a bell for the librarian to call the attention of students who are violating certain library regulations, and the acquisition of electric fans so that students who are reading will feel more comfortable and be able to have a better concentration.

A. A. Rimbon

SENIORS ELECT OFFICERS

The Senior Class Organization elected its class officers for the school year 1959-1960 last July 7, 1959 at the College of Forestry Auditorium.

The elected officers are:—President, Edilberto Cajucom; Vice Pres., Wilfrido Pollisco; Secretary, Isidro D. Esteban; Treasurer, Adela Rimbon; Auditor, Romeo Salvador; Bus. Manager, Jose Acain; Reps to SBO, Lorenzo Estrada and Justo Rojo; Pro, Romulo Valerio; Sgts-at-Arms, Alfredo Cañete and Constante Serna. Adviser: Prof. Domingo Lantican.

I. D. Esteban

NEW VISITING PROFESSOR ARRIVES

Dr. Charles C. Larson, Visiting Professor of Forest Economics, under the University of the Philippines—Cornell University contract sponsored by the ICA, who has recently arrived is a well-known author in the field of forest Economics.

He is also a Research Associate in Forest Economics. He received his A.S. from the North Dakota State School of Forestry in 1938; his B. S. from the University of Minnesota in 1940; his M.S. from the University of Vermont in 1943; and his Ph.D. from the State University of New York, College of Forestry in 1952.

Dr. Larson will handle all classes in Forest Economics in the College of Forestry.

I. V. Barongan

1959 SUMMER GRADUATES

The Secretary's office of the College of Forestry released the names of the following students with their corresponding degree or certificate as of the end of summer, 1959 after the recommendation of the Faculty of the College for their graduation!

B.S.F.

Simplicio Castillo, Teofilo Lindayen, and Nguyen Hoang Dam.

RANGER'S CERTIFICATE

Ernesto Asuncion, Domingo Bonnit, Dominador Faustino Jr., Pantaleon Fortunado, Carlos Glori, Juanito Jumong, Tranquilino Lauricio, Casiano Loyola, Esmeraldo Luna, Benjamin Macabata, Natividad de Ocampo, Lucrecio Rebugio, Prospero Repollo, Ermelo de los Santos, Amador Siapno, Celestino Tolentino, Celedonio Vibar, and Apeles Villaluna.

I. V. Barongan

JUNIORS, SOPHOMORES AND FRESHMEN ELECT OFFICERS

Not to be outdone, the Junior Class Organization elected its officers for the school year 1959-

1960. There was close fight between the two parties. Maximo Tandoc from Dagupan City had a convincing victory over his strongest opponent Adolfo Revilla Jr. to capture the Presidency.

The Junior representative to the Central Council in Diliman was not included pending further order from the UCCSOA. Election for this position will be held later.

Besides Mr. Tandoc the following officers were elected to office.

Vice President, Dominador Faustino Jr.; Secretary, Melchor Magsanoc; Treasurer, Moises Estrella; Auditor, Ricardo Clemente; P.R.O. Felizardo Virtucio; Bus. Manager, Caesar Arroyo; Rep. to S.B.O., Edilberto Unite Jr; Sgt-At-Arms, Geronimo Turgo and Fernando Obrero; Adviser, Miss Zenaida Portacio.

Meanwhile, the Sophomore Class Organization elected its officers for the school year 1959—1960 last July 8, 1959. Augusto Blando overwhelmingly won over his closest rival. Blando is a member of the UPSILON SIGMA PHI LOS BANOS CHAPTER, ZETA BETA RHO, an honor fraternity of the College of Forestry, and member of the U.P. Los Baños Basketball varsity team.

Besides Blando the following were elected:

Vice President, Dominador Alonzo; Secretary, Samuel Reyes; Treasurer, Guillermo Cabanero; Auditor, Francisco Lozano; Bus. Manager, Jorge Segueria; P.R.O., Cesar Galvez; Rep. to SBO, Dominador del Rosario; Sgt.-at-Arms; Benjamin Cariño and Petronilo Muñoz; Adviser, Dr. Artemio Manza.

At the same time the Freshmen Class Organization also elected its officers. The position was closely contested by the different aspirants. After a brief campaign, the following were elected; President, Marquez Ynalvez; Vice Pres. Conrado Guerrero; Sec., A. Tahl; Treas., Honorio Cariño; Auditor, G. Lardizabal; PRO, M. Semana; Bus. Manager, Victor Serrano; Rep. To SBO, B.Dacumos; Sgt. at Arms, F, Tumaneng and C. Dagui; Adviser Dr. Manza.

GOLDIES SUFFER FIRST SETBACK

The Forestry team's long string of victories in Los Baños Basketball competitions was ended by the up-and-coming Senior team to a 78-70 tune, as the 1959 intramurals cagefest reeled-off amidst cheers and yells last July 2, 1959.

Jumping to an early 8 points lead the goldies went on a scoring spree led by Blando, Clemente and Faustino. A senior rally spirited up by Panganiban, Tan and Lopez, pricked the goldies' 8-point lead bubble. Lemon time found the home

team behind by 10 points. In the third *canto* Clemente, Blando and Tandoc fanned up a rally converting on consecutive fastbreaks and incursions inside the Senior zone, cutting the lead to a close two shots. It was, however, immediately snuffed out by the Seniors' deadly shooting power and mastery of the rebounds. All the goldies could do was trade shot for shot in the closing minutes to prevent the Seniors from getting too far ahead.

Senior—87		Forestry—70	
Panganiban	15	Clemente	16
Bernardo	14	Blando	13
Lopez	12	Tandoc	9
Tan	10	Arroyo	7
Eseo	10	Faustino	6
Perez	6	Seguerra	6
Felipe	5	San Pedro	5
Mauricio	2	Hilario	4
Gonzales	2	Muñez	2
Belen	2	Cadelina	2

DESPEDIDA PARTY FOR TALEON

The Forestry UPSCAs honored Miss Jesusa Taleon with a despedida party last June 5 at the Forestry Mess Hall.

Father Hurley, Spiritual Adviser and the UPSCA President, Robert Choy and Miss Taleon spoke during the occasion. Prof Blando made the closing remarks.

A corsage given to the honoree was pinned by Prof. D. Lantican followed by the signing of the Forestry UPSCA Logbook.

Miss Taleon will enplane to the United States in August to take up advance studies in Mathematics for about two years. She will enroll in the University of Missouri. The honoree was formerly teaching mathematics subjects in the College of Forestry and an adviser of the UPSCA.

I. V. Barongan

ROLA, UNITE RECEIVE "LETTERS"

Jess Rola and Eddie Unite became the first Forestry student basketeers to be awarded a letter by the UP Department of Physical Education for their remarkable playing with the Varsity Team in the U.P. Diliman — Silliman Meet and in the National Open. They will still play with the Varsity Team this UAAP season which will reel-off on July 19, 1959.

Rola, a senior student, plays guard-forward for Agustin Cailao's maroons. Unite, a junior student is the standout center of the maroon line-up.

Ironically this honor they received prevented them from qualifying in the Los Baños intramurals. Varsity Lettermen are not qualified to play

in intramural games. This year's Forestry line-up will miss both of them in crucial games in the intrams, especially Unite who is a reliable rebounder and a consistent scorer.

SAN PEDRO TO SKIPPER DEFENDING CHAMPS

Veteran Pete San Pedro, playing his last season for Forestry in this year's basketball intrams is the ball captain of the defending champions. He succeeded former goldie Sid Zamuco who is now acting as assistant coach to Prof. Recto.

A standout ever since he joined the Forestry line-up, this goldie, standing only 5'6" recovers his height disadvantage through his speed, deadly shooting accuracy and guts. He will be playing his second year for the U.P. Los Baños Varsity Basketball Team. Also a football enthusiast, he gets his stamina from playing with the Forestry eleven. The goldies' fighting spirit will revolve around this "scooter" of a man from the initial toss-up to the final-gun-bark.

Assisting him in this year's pennant drive will be Co-Captain Max Tandoc and old reliables Toti Blando, June Faustino, Jorge Seguerra, Sar Arroyo, Pepe Muñez, Larry Cayayan and Oca Cadelina. They will be backed up by rookies Ding Clemente, Justo Hilario, Reboton, Dometila and Cruz.

Jessie

FSBO SMOKERS' RALLY

The Student Body Organization held its traditional annual Smokers' Rally last July 31 at the College of Forestry auditorium.

As usual the batch of incoming freshmen were inducted by their adviser, Dr. Manza, followed by the different contests in singing and combo presentations. The Juniors romped away with the first prize in the vocal solo tilt with the Freshies coming in second. The UPSCANS, not to be outdone, walked off with the first prizes in the group singing and combo numbers. Skits too were presented during the program and this helped in making the affair a howling success. The "Haunted House" of the Seniors was adjudged the best skit presentation of the night, followed by the Sophomores', "The Moth and the Flame" and the Makiling Literary Club's, "The Sputnik."

Dr. Earl Stone gave a very short but mirth-provoking talk and Dean Gregorio Zamuco, the closing remarks.

Smokes and refreshments were distributed at the end of the program.

MORE FRATERNITY NEWS

After undergoing a probationary period of three weeks and a final initiation on July 15, 1959 six new members were added to the ranks

of the Zeta Beta Rho, honor fraternity of the College of Forestry. The six successful members were: Augusto Blando, Francisco Lozano, Segundo Burgos, Dominador del Rosario, Jorge Seguer- ra and Ricardo Clemente. A simple dinner at the Forestry Coop Mess Hall was tendered in their honor by the frat adviser, Dr. Artemio V. Manza, and their Rhoan brods. The new mem- bers will be formally inducted at a pinning cere- mony and ball to be held some time in August.

In the meantime, two Forestry boys were able to qualify for membership in the Upsilon Sigma Phi after surviving through the usual hectic pro- bation period and final initiations with their Ag- gie counterparts. The new "upland" Upsilonians this year are Augusto Blando and Cesar Galvez. A hobo dance held last July 18 at the Forestry Swimming Pool, which was well attended by their sisters in the Sigma Delta Phi sorority, was ten- dered in honor of these new members.

MAKILING LITERARY CLUB ELECTS OFFICERS

The Makiling Literary Club of the College of Forestry, established with the aims of encourag- ing forestry students on the fields of dramatics and literary writings elected its officers for the year 1959-1960.

The officers, elected are: Carlos Glori, Pres- ident; Lorenzo Estrada, Vice-President; Adela Rimbon, Sec.; Romulo Valerio, Treasurer; Au- gusto Blando, Auditor; Bienvenido Rola, PRO; Rogelio Cosico, Business Manager, Professor Jose B. Blando was elected club adviser.

Meanwhile the club disclosed its plans for the year. The club intends to sponsor benefit shows, stage short plays, and publish at the end of the school year, a folio which will contain the win- ning essays, short stories and poems. The club annually sponsors the Annual Oratorical and De- clamation contest on the eve of Moving-Up day.

FORESTRY STUDENT BODY OFFICERS

The forestry students elected the officers of the Student Body Organization recently. Although there was not enough time for the candidates to campaign, the college campus bustled with house- to-house, rallies campaigns and posters.

Fortunato S. Arcangel, a senior and Bureau of Forestry scholar came out overwhelmingly over his closest rivals to cop the presidency. Arcangel is the vice illustrious fellow of the UPSILON SIGMA PHI, Los Baños Chapter; member of the Honor fraternity of the College — Zeta Beta RHO, and the Editor-in-Chief of the "Forestry Leaves."

Besides Arcangel the following were elect- ed: Mariano Valera, Vice-President; Adolfo Re-

villa, Secretary; Moises Estrella, Treasurer; Maximo Tandoc, Athletic Manager; Bernardo Si- nues, Auditor; Edilberto Unite Jr. and Geronimo Turgo, Sergeant-at-Arms, Professor B. Blando was elected adviser of the student Body.

COLLEGE ENROLMENT

The office of the Secretary of the College released the list of students enrolled during the first semester. Of the 355 students enrolled 31 were granted scholarship by the DANR Forestry Scholarship, 10 of whom are from the Bureau of Forestry and the rest belong to the different classes in the College from Sophomore up.

The decrease in enrollment may be due to the abolition of the 2-year Ranger course in the college curriculum and the present precarious financial situation.

The total enrolment is as follows: New fresh- men — 113; Old freshmen, 56; Sophomores, 93; Juniors 42; Seniors, 44; and Graduate stud- ents, 7.

SOME FELLING . . .

(Continued from page 50)

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• Forestry in the News •

Compiled by: ADOLFO V. REVILLA, JR.

For the first time since the occupation, Manila, the suburbs and neighboring towns will have a series of staggered "brownout." The shortage of water in Ambuklao has been pointed out as the villain of the piece. Lack of water means failure to deliver power, and supply cutdowns in vital areas where there is a heavy concentration of industries. In spite of the forewarning, hundreds of industries will sustain heavy losses that foresight could easily have avoided.

In a manner of speaking, the Nawasa probably finds confirmation of its worst fears in the report that even Ambuklao is not holding sufficient water. The drought and light intermittent rains are being blamed—but not the almost complete and costly failure of the so-called conservation program of the government.

That Ambuklao will eventually find itself semi-paralyzed was predicted by engineers as far back as 10 months ago. Continuous erosion of the mountainsides has meant a lot of water for Ambuklao and a lot of silt. Kaingineros have so burned up the forest cover that the water simply slides down, carrying soil with it to silt up the dam. It is incredible that engineers failed to anticipate the problem of maintaining a good forest cover to protect the huge water course that drives Ambuklao's turbines.

The situation in Botocan, Laguna, is no different. Here the public domain, which is an ideal watershed for the hydro-electric system's water power, has been raided by *kaingineros*. These pyromaniacs burn down trees, haul out the mature trees, destroy every living thing, and then move on. There is plenty of water during seasons of constant rain, but in summer, the absence of forest cover becomes synonymous with lack of water.

Nothing less than a congressional investigation will reveal to what extent the so-called

conservation program has been sabotaged by *kaingineros*, thoughtless officials, concessionaires who don't even follow the rules of selective logging, and the government itself. What will happen to the industrialization program if we can't even protect our hydro-electric systems?

Editorial—*Manila Times*
July 28, 1959

DALISAY TAKES ACTION AGAINST FOREST CUTTERS

Acting Secretary of Agriculture Amando M. Dalisav yesterday poised drastic action against illegal forest cutting in the province of Bataan as he activated a five-member investigating group headed by Forestry Director Felipe Amos to probe infractions of forest regulations in the province.

The team was directed to determine the desirability of discontinuing certain ordinary timber licenses into line reported rampant infractions of forestry regulations within the national park and reservation areas.

Dalisav's activation of the forestry team was made following the receipt of a communication from Agriculture Secretary Juan de G. Rodriguez now with the Lapu-Lapu exposition as President Garcia's ambassador extraordinary advising the need for such a move.

The committee is also expected to recommend appropriate measures for proper protection and development of the Bataan national park and prevention of wasteful and illegal logging.

Named to the forestry investigating group aside from Amos were Director Vicente de la Cruz of parks and wildlife, Atty. Juan N. Samson, chief technical plans and schedules division DANR; Atty. Alejandro Recto, DANR chief legal counsel, and Atty. Cesar Pangalangan, DANR technical assistant.—*Manila Times*, May 25, 1959

THE REALLY BIG-TIME SQUATTERS

Worse in the long run than those who squat on private property are those who preempt areas that have been reserved by the government for experiment stations, seed farms, forest stations and even communal forest. Of the two kinds of

squatters, harder to eject are those that take over valuable, first class public domain being developed or conserved for the special purposes mentioned above.

In the case of squatters on private property, owners may secure a court judgment as fast as their lawyers could establish a case for action. But in the case of the squatters on public domain, under existing laws, unauthorized occupation of vacant alienable lands does not constitute squatting. And when they are abetted or protected by powerful politicians, ejecting them is almost an impossibility.

As long as squatters occupy lands reserved for special purposes, valuable trees will be cut down, stock animals will be decimated, and research stations can never be developed to yield valuable data for the improvement of Philippine agriculture.

In considering Senate Bill 365 which would make a criminal offense squatting on private and public properties, our legislators should take into serious consideration the far-reaching ill effects caused to our natural resources by the rural squatters. —*Editorial—Manila Times, May 17, 1959*

GOV'T LOSS IN LOGS BARED

The government losses millions of pesos in "run-away" taxes in the south annually from the practice of underclassifying quality Philippine logs shipped abroad for conversion into lumber, Lt. Gen. Manuel Cabal, AFP chief of staff, revealed yesterday.

In a report to President Garcia, Cabal outlined the "modus operandi" of certain log and lumber exporters, including alien merchants, who he said cheat the government out of legitimate revenues.

He said that exporters sell first-class lumber to Japan at the real market value after declaring it as third or fourth class and paying the corresponding negligible levy to the government.

Cabal did not however reveal whether certain government agents were involved in the racket.

The AFP chief was briefed on the log-underclassification racket and other forms of economic sabotage by Navy Capt. Pastor Viado, chairman of the presidential law enforcement unit for southern Philippines during his trip in Mindanao. —*Manila Times, May 25, 1959*

2 VISITING PROFESSORS SUBMIT TERMINAL REPORT

Two visiting professors under the UP College of Forestry-Cornell University assistance contract presented recently their terminal report

entitled "Resources for Tomorrow" to strengthen and expand the College of Forestry to enable it to play its role in the development of the forest resources of the country.

Dr. Richard E. Pentoney, visiting professor of wood technology and forest products, and Dr. C. Eugene Farnsworth, visiting professor of silviculture, said that Philippine forests are not receiving the protection essential to insure their existence despite their importance in the national economy, provide watershed protection, recreation and other values.

The report mentioned that Philippine forests are among the finest hardwood forests in the world with timber exports valued at approximately \$50 million a year.

Other principal points brought out in the Pentoney-Farnsworth report were:

Effective forest management is hampered by inadequate data on forest areas and volumes, and neither techniques nor funds are available for making accurate estimates;

Effective enforcement of selective logging is hampered by lack of technically trained men;

There is lack of understanding or appreciation of the importance of forests by the general public.

Drs. Pentoney and Farnsworth were assigned in the Philippines for 18 months. —*Manila Times, June 8, 1959*

FOREST GOODS

Little known to most Filipinos is the fact that the Forest Products Research Institute in Los Baños has been undertaking extensive research for the purpose of utilizing a vast number of Philippine forest products, usually thrown away as waste.

Recently, as a result of the institute's recommendation, a Philippine manufacturer is now producing textile picker sticks made out of a local species of wood, replacing the imported hickory sticks. Seed-boxes were given longer life by treating the wood with preservative chemicals.

The institute reported too a charcoal briquetting plant was recently completed which produced good briquettes by using 10 per cent cassava as a binder. It is also conducting extensive investigation on soda pulping and bleaching, using coconut husks and cogon grass as raw materials.

Thus the Forest Products Research Institute is amply repaying a million-fold the money spent by the government in its establishment. Moreover, it is fast gaining a reputation almost equal to the forest research laboratory of America located at Madison, Wisconsin. Here's wishing that it continues its splendid work. — *Manila Times, May 3, 1959*

FOREST GOODS RECEIVE BOOST

Establishment and expansion of forest-using industries through more liberal credit facilities and foreign exchange allocations has been recommended by the National Economic Council to President Garcia.

The recommendations, embodied in a resolution adopted by the council at its meeting last Thursday, are expected to pave the way for exploiting more thoroughly the export potentialities of lumber and other allied industries.

While the proposal provides for the entry of new operators in the industry, emphasis is being placed in maintaining and expanding the facilities of existing operators.

Top priority will be given in the allocation of dollars to existing plants who may need replacement for spare parts and other components of their machineries.

In considering new applications for entry into the industry, the NEC would require a survey of the existing plants to ensure that additional plants would not saturate the domestic market.

Should the domestic market prove to be saturated, applications may be considered favorably on the production of exportable grades of products for which allocations for machineries will be provided. — *Manila Times*, May 2, 1959

TO STUDY PAPER PULP PROCESSING

Manuel R. Monsalud, chief research chemist and concurrently chief, Chemical Investigations Division, Forest Products Research Institute at College, Laguna, recently enplaned via the Northwest Airlines for Japan and Hongkong to undertake studies on the pulp and paper processing as practiced in several commercial mills over there. He will also make observations on the manufacture of pulp and paper on a cottage-industry scale and see the possibility of its being introduced in this country. Usually, the pulp and paper manufacture is a big industry in the United States, Australia, and Europe. It is reported, however, that in Japan and Hongkong there are very numerous pulp and paper factories conducted on a household-scale.

Mr. Monsalud will also visit scientific research institutions in Japan and Hongkong. — *Manila Times*, May 27, 1959

10TH WORLD JAMBOREE AT MAKILING

The Tenth World Boy Scout Jamboree opened last week at the Makiling National Park at Los Baños, Laguna with some 2,000 Boy Scouts from 52 free world countries participating in the 10-day encampment.

At the jamboree city complete with a grand arena and indoor theater, electricity, telephone networks, swimming pools, first aid stations and exhibit halls, Boy Scouts of various colors, different beliefs and diverse backgrounds will stage their pageants, shows and tableaux, sing their songs around the campfire, and swap jokes and stories.

General Dan C. Spry, director of the international Boy Scouts Bureau, said that the 1959 jamboree could be called a "bamboo jamboree" because of the significant role bamboo is playing in the world gathering. He added that the "greatest benefit which will come out of the youth gathering will be the knowledge gained in the many uses of bamboo for scouting activities."

Some 200 American Boy Scouts, headed by Dr. Arthur A. Schuck, Chief Scout Executive of the Boy Scouts of America, are attending the gathering. Commenting on the choice of the Philippines as the site for the jamboree, he said:

"The growth of scouting in the Far East during recent years attests the excellence of its leadership. The international committee, in accepting the invitation to hold the 10th World Jamboree in the Philippines, paid tribute to these leaders. We, representing the Boy Scouts of America, show our respect and appreciation by full-scale participation in this event. The jamboree will make possible the extension of world brotherhood in a very significant way."

President Eisenhower in a message to the jamboree said:

"It is a real personal pleasure to have this opportunity to extend my warmest greetings and best wishes to the thousands of Boy Scouts representing 52 countries gathered for your 10th World Jamboree in the beautiful Makiling National Park in the Philippines. This is the first jamboree to be held outside of Europe and North America. You have chosen to assemble in the homeland of a courageous and self-reliant people. I know that you will draw inspiration as well as enjoyment from your surroundings.

"Today, we feel that the world is confronted with problems of unprecedented magnitude and complexity. Those of the coming years will be no less difficult. You will soon be the ones to face these problems and will determine the course that events will take. Preparation for your role as leaders is a matter of utmost importance. Therein lies the value of scouting. Scouting is one of the greatest single training activities available to the youth of the world. Through its programs and rich experiences, you will grow to manhood, learning to live productively and in harmony with

your fellowmen. Moreover, the World Jamboree offers a unique opportunity to form lasting friendship with scouts of other countries." —*News Digest, July 25, 1959*

FORESTERS CONFAB SLATED AUG. 1

Senator Emmanuel Pelaez, Dr. Paulino Garcia, Agriculture Undersecretary Amando Dalisay and Atty. Leon O. Ty will be among the speakers at the annual conference of the Society of Filipino Foresters Aug 1.

The morning session at the Institute of Hygiene will be a technical conference where important forestry papers will be presented. This will be followed at the Philippine Columbian Association building and with a luncheon oath-taking and business meeting in the afternoon.

— *Manila Times, July 11, 1959*

BUILDERS NOTE DECLINE IN PLYWOOD OUTPUT

Eduardo R. Escobar, president of the Philippine Contractors Association, Thursday urged the Industrial Development Center and the National Economic Council to encourage the establishment of more plywood companies in the Philippines to meet both export and local requirements.

In a statement he issued yesterday, Escobar said that there is a critical shortage of plywood for local consumption at present. The price of plywood for domestic needs has gone up by more than 20 per cent.

The PCA President said that while in 1958 the production of plywood was 242,455,600 sq. ft. compared to 177,473,000 sq. ft. in 1957, there was a decrease in the local consumption of plywood in 1958 — 122,651,000 sq. ft. compared to 145,241,500 sq. — *Manila Times, May 20, 1959*

THOMPSON WILL REPRESENT PI IN LUMBER MEET

The Philippine Lumber Producers' Association will be represented at the annual convention of the Philippine Mahogany Association of Los Angeles, California to be held on July 13 to 16, 1959 at Ojai Valley Inn, Ojai, California, by Henry S. Thompson, president of Insular Lumber Company, as announced yesterday by Don Antonio de las Alas, president of the Philippine Lumber Producers' Association.

Thompson will take up problems affecting the Philippine lumber industries in the United States. He will especially endeavor to effect closer relationship between the Philippine producers

and the American buyers and consumers. The representation of Mr. Thompson is expected to focus more attention to Philippine mahogany and to boost Philippine trade with the United States and Canada in so far as lumber products are concerned. — *Manila Times, July 11, 1959*

ALICANTE HITS ABUSE OF SOILS

Director of Soils Marcos M. Alicante deplored this week the abuse by farmers of soils in their desire to utilize critical areas.

He spoke as guest speaker before a group of public school officials, superintendents, principals, supervisors and science teachers at the science institute, department of education.

The soil head observed that unwise utilization of soils and forests has brought about two major destructive effects — acceleration of soil erosion and limitation of water supply. He urged the group of educators, especially the science teachers who can pass the gospel of soil conservation system to school children, to cooperate create soil consciousness and have our farming be in a lasting basis.

While he admitted that a tremendous amount of rich surface soil has already been lost, he saw the bright hope that the tragic process may be partly minimized through reforms in the educational system, say by introducing some incentives for the young generation to appreciate the value of soils.

Director Alicante also explained the significance of considering the value of researches in our national economic planning. The government set up, he said, is also wanting of legislation registering, inspecting and analyzing fertilizers being sold to farmers designed to protect our fertilizer consumers.

"I have no doubt that fertilizers coming from commercial plants carry the nutrients indicated in the bags or containers, but the problem of adulteration may creep in when these fertilizers are rebagged, or the weight of fertilizer per bag may not be correct. No agency will ever do the checking... there must be a law to handle this," he said. — *Manila Times, May 17, 1959*

EUROPE'S FORESTS YIELD 25 PERCENT MORE WOOD THAN A DECADE AGO

Production of industrial wood in Europe has increased by more than 25 per cent in the past decade, the European Forestry Commission was told yesterday at the opening of its 10th session.

Mr. Egon Glesinger, Director of the Forestry and Forest Products Division of the Food and Agriculture Organization, said that production

had risen to about 200 million cubic meters from the level of 160 million cubic meters a decade ago. The increase represented a value equivalent to about \$800 million, and had outstripped in pace the growth rate of European population. Consumption of wood per person had gone up by 14 per cent.

Mr. Glesinger said that forestry has thus become one of the sectors of the European economy which has repaid governmental investment.

The meeting, which will last until 13 July, is attended by 17 directors-general of national forest services. It was officially opened by Mr. B.R. Sen, Director-General of FAO, and is under the chairmanship of Prof. Alberto M. Camaiti, Director-General of Forestry in the Italian Ministry of Agriculture. Both Mr. Sen and Prof. Camaiti, in their addresses, stressed the fact that the level of the representation will provide opportunity for a policy-level discussion of the impact of the European Economic Community upon national forest policies. —*Release—FAO of the UN July 8, 1959*

EUROPEAN FORESTRY COMMISSION TO MEET AT ROME AND FLORENCE

Twenty-four countries* have been invited by the Food and Agriculture Organization to the 10th session of the European Forestry Commission, to be held at Rome Florence within the period 7-13 July.

FAO officials said that a great part of the session will be devoted to a review of forest policies of the member countries. Each delegation would be called upon to report on the development of its own forestry. The consequences of projects of economic integration upon European forestry would be the object of a particularly thorough examination. The Commission would also consider the production potential of the European forests and make short- and medium-term forecasts of fellings.

Also on the agenda is the customary examination of the activities of the bodies dependent upon the Commission, those of its working groups dealing with afforestation and reforestation and with torrent and avalanche control, and the work of a committee on forest working techniques.

Delegates would be brought up to date on the forestry work of FAO, particularly that carried out under the Expanded Program of Technical Assistance, and would consider a progress report on the state of the FAO survey of developmental prospects for the Mediterranean area.

A study tour has been organized for the delegates in the region of Florence, and the session will come to an end at the Academy of Forest Science at Florence.—*Release—FAO of the UN July 6, 1959*

LUMBERMEN REQUEST FOR EXEMPTION

Antonio de las Alas, president of the Philippine Lumber Producers Association, recently wrote a memorandum to Senator Gil J. Puyat with the request that exemption from the payment of special import tax should likewise be extended to the machinery equipment and spare parts imported by the lumber industry.

He stressed that utilization of forest products has great possibilities and should be exploited very thoroughly as these products can be readily sold for dollars abroad.

Alas believed that the industrialization of forest products can contribute greatly, if not decisively, in the solution of the economic problems which beset the Philippines. And this industrialization, according to him, could not be achieved if the burden of the lumber industry will continue to be heavy.—*Manila Time, April 25, 1959*

INSULAR NAMES NEW MANAGER

Harvey C. Pope, veteran general manager for Insular Lumber Company and for 38 years a leader in Philippine business community, will become on Sept. 1 special consultant for Insular, based in San Francisco, it was announced recently.

R.S. Kearns of Portland, Ore., will succeed Pope as Philippine manager for Insular, leading local manufacturer of export lumber and mill-work.

Pope arrived in Manila in 1921. As a certified public accountant, he audited the Insular Lumber account from 1921 to 1926. From 1927 to 1932 he was chief accountant for the Insular plant at Fabrica, Occ. Negros. He became general manager in 1932.

Pope's successor, R. S. Kearns, from 1950 to 1958 was general manager and later vice president in charge of operations for the Winton Lumber Company, of Martell, Calif. In December, 1958, he became general manager of the Dwyer Lumber Company of Portland, Ore.

Kearns brings to his new post a lifetime of experience in the lumber industry. From Oregon State College he received a degree in forestry in 1930 and an M.S. degree in lumber manufacturing in 1931. A few years later he was Professor of Forestry at Oregon State College, a post he held from 1935 to 1940. He has had intensive experience in the fields of timber management, timber acquisition and taxation for timber industry clients. — *Manila Times, July 11, 1959*

PULP COMPANY LOAN ON AGENDA

The five-million loan which the Development Loan Fund in Washington, D.C. approved recent-

ly in favor of the Bataan Pulp and Paper Mills, Inc. will be the main item on the agenda of the stockholders' meeting of the paper corporation this afternoon, Friday, July 10, at the Manila Hotel oak room, starting at 3:30 o'clock, it was learned yesterday from Alexander A. Adamson, vice-president and general manager of the firm.

Bataan Pulp and Paper Mills, Inc. is the first private company to be granted a loan by the DLF. The loan papers will be signed in Washington, D.C. this month, it was learned further.

The corporation is capitalized at fifteen million pesos, an overwhelming majority of the stocks having been subscribed by Filipinos.

On the board of Bataan Pulp and Paper Mills, Inc. are the following: Vicente A. Rufino, chairman; Carlos Palanca, Jr., president; Alexander A. Adamson, vice-president and general manager; Manuel de Leon, treasurer; George Athos Adamson, technical management director; Romeo Villonco, assistant treasurer; Francisco Delgado, Eugenio J. Puyat, Ernesto Rufino, Alexander Sycip, and Gaudencio Antonino. —*Manila Times*, July 10, 1959

PI PULP MILL GETS US LOAN

The United States development loan fund announced today basic approval of a loan of \$5.3 million to the "Bataan Pulp and Papers News Incorporated," a private-owned firm in Manila.

Details of the loan agreements are to be negotiated.

The Bataan firm will establish a new plant to make paper pulp and writing, printing and wrapping papers from bamboo by well-tested and established processes.

The new plant is expected to employ 600 people and save the Philippines \$5 million to \$6 million in foreign exchange. —*Manila Times*, July 20, 1959

PULP, PAPER MILL READIES OPERATIONS

Officials of the Bataan Pulp and Paper Mills, Inc., have disclosed that operation of the firm will start with the acquisition of machinery and other necessary equipment through a \$5-million from the U.S. Development Loan Fund.

Three top executives of the firm—Vicente Rufino, chairman of the board; Carlos Palanca, Jr., president, and Alexander Adamson, vice-president and general manager — conferred recently with Gov. Emilio Ma. Naval on the operation of the BPP which would be established in this town. *Manila Times*

PAPER MILL EXPERT OFF TO KUALA LUMPUR

Robert Dan, paper mill consultant left June 1 by plane for Singapore and Kuala Lumpur to make studies on the possibilities of developing paper industries in the Federated Malayan States, and specially to determine the kind of raw materials that is available for paper pulping.

His extensive studies of tropical hardwoods and the grass families, including bamboo, have helped a great deal in the successful establishments of modern pulp and paper industries in the Philippines. *Manila Times*, June 4, 1959

TIMBER

*Specially prepared for the Manila Times by
"The Economist" Intelligence Unit of London*

In the United Kingdom market there has been a falling off in activity for the timber trade. This is probably due principally to a generally lower level of demand from the furniture industry. The rather remarkable boom which the furniture trade enjoyed with the first easing of hire-purchase restrictions, and the general tendency towards cheaper credit, has now disappeared. This was not unexpected: many or most of the purchase made were simply transferred to an earlier point in time. Now the backlog has been made up.

It is also thought that the proximity of the Budget, which certainly holds out prospects of some, perhaps large, concessions in purchase tax may have some responsibility for the present easing off. However, the tax on furniture is now only 5 per cent, which is a relatively small part of the final price. Nonetheless, psychological reasons would lead buyers to delay their purchases and it is widely hoped that after the Easter holiday and the Budget there will be an improvement in the demand for hardwoods from all consumers.

Another factor which cannot be ignored is the fact that this is the season for stocktaking, at least for most timber dealers. While pre-occupied with this side of their business they are less concerned with their other activities. Equally they are not engaging in very much buying and most markets have shown very little change over the last few weeks. Some indeed may feel themselves to be rather over-stocked for the time of year.

In this atmosphere most members of the trade are tending to minimize the difficulties which confront the hardwood shippers in West Africa. The recent drought in Ghana, however, does

(Continued on page 66)



FPRI Building

CHEMIST UNDERGOES TRAINING IN AUSTRALIA

Lauro A. Ynalvez, a senior forestry research scientist of the Forest Products Research Institute, is scheduled to fly to Australia via Qantas Airways at 9:00 p.m. on June 10.

A beneficiary of a Colombo Plan training grant, he will undergo specialized training for one year in the production of waterproof adhesives from tannins at the CSIRO, Melbourne in that country.

Ynalvez is a B.S.A. graduate of the University of the Philippines. He is also a licensed chemist. He joined the government service as a student laborer at the U.P. College of Agriculture during his college days. For his proficiency in any work assigned to him he was promoted from one position to another until he was appointed senior analyst of the U.P. College of Agriculture and Central Experiment Station.

In that capacity in December 1954 he was sent to Japan on an FAO-PHILCUSA training grant to study scientific glass blowing and instrumental chemical analyses there. He joined the research staff of the Forest Products Research Institute over a year ago. —*Philippine Free Press, Philippine Herald*

PAPER MAKING STUDY OUT

Director Eugenio de la Cruz of the Forest Products Research Institute revealed this morning that bond and wrapping papers with good strength and other physical properties can be made from Philippine fibrous materials.

He said that another phase of a continuing study on the production of pulp and paper was completed recently in that Institute.

The results of the study, the Director pointed out, show that, by using the sulfate pulping process, almost all the wood species, bamboos,

FPRI Highlights

—by Ulpiano de Leon—

and agricultural fibrous materials pulped and made into bond and wrapping paper in the Fourdrinier paper machine possess very good strength and other physical properties.

Elucidating on this point, the Director said that all experimental bond papers produced in the study exhibited higher bursting strength, folding endurance, and tensile strength than commercial bond paper tested in that Institute.

De la Cruz further stated that majority of the materials used yielded bond paper higher in tearing strength, opacity, and brightness than commercial grades although a few are slightly lower.

An interesting feature of this study, the Director also pointed out, is that most experimental wrapping papers exhibited bursting strength higher than the U.S. Federal Specifications require and are considered excellent in tensile strength compared with wrapping paper made from commercial pulp, although some are lower in tearing resistance.

He stated that these experimental papers were all fabricated by using standardized pulping conditions and processing details. It is expected, he added, that with modifications of the processes the strength and other characteristics of the papers can still be improved.

De la Cruz mentioned that materials used in this study included some 32 species of woods, bamboos, and agricultural fibrous wastes. He said that numerous paper machine runs were made to produce these experimental papers from 100 per cent sulfate pulps of certain species as well as from mixtures of two or more species — *Sunday Times*

HUNTS RETURN AFTER 2-MONTH HOME VACATION

Dr. & Mrs. George M. Hunt, of the Forest Products Research Institute returned after a two-month vacation leave in the States.

A world-renowned authority on wood preservation, Prof. Hunt, was until his retirement in 1951, director of the U.S. Forest Products laboratory in Madison, Wisconsin. He has written a book of two editions on wood utilization.

The Forest Products Research Institute, a young research institution devoted to develop scientific methods and techniques for the most

advantageous utilization of wood and other forest products, and which has been acclaimed from many quarters as an ideal pattern for all research centers in the entire Archipelago, got its stature, to a great deal, upon the combined executive ability of Director Eugenio de la Cruz and the technical advice of Prof. Hunt.

Prof. Hunt is a forestry officer of the Food and Agriculture Organization of the United Nations. He has been assigned here since 1954 to render his technical advice in developing the plans to put up the FPRI, in selecting research equipment, and in developing the Institute's research program.

Hunt is a chemist. After his graduation from the University of California in 1911, he joined the U.S. Forest Service in San Francisco. Out of his 40 years with the U.S. Forest Service, for 38 years he was with the U.S. Forest Products Laboratory. For five years, until his retirement in 1951, he was the Director of that Laboratory after which the FPRI was patterned.

In 1953, he was forest products adviser in Austria as a forestry officer of the FAO. Upon the request of the Philippine Government, in 1954 he was assigned to the Forest Products Laboratory under the forestry bureau from which the FPRI emerged.

Asked of his personal opinion about the progress of the Institute, Hunt readily remarked that the FPRI has made excellent progress, pointing out that its competence and accomplishments are increasing every year.

He said that the Institute is now moderately well equipped but more equipment will be needed as its research activities expand.

PRES. SINCO VISITS FPRI

U.P. President Vicente G. Sinco expressed amazement at the Forest Products Research Institute yesterday afternoon when he could not crush a charcoal briquet by stepping on it with his whole weight.

President Sinco made a two-hour visit at the Forest Products Research Institute yesterday afternoon to see research equipment in operation, particularly the newly installed Yeadon briquetting machine and the two cord charcoal kiln of that Institute.

Shown a sample of a charcoal briquet made by the briquetting machine, the U.P. executive tossed the black diamond in the air and was surprised when he saw it still intact when it fell on the cement floor. He then stepped on it and applied his whole weight but the briquet remained the same.

Headed by Director Eugenio de la Cruz and Adviser George M. Hunt, FPRI ranking officials

demonstrated to the President the different steps of charcoal briquet production on the charcoal briquetting machine.

Director de la Cruz pointed out to the visiting official that practically all species of solid wood waste not over six inches in diameter can be charred and then converted into briquets.

Earlier, the President was taken to the two-cord charcoal kiln and shown how wood slabs, edgings, large branches, and other forms of waste which do not find high grade uses, are charred.

Director de la Cruz explained that the charcoal produced by this kiln is powdered and made into briquets by the briquetting machine using starch as the binder.

Other activities that specially attracted the attention of the visiting official were the manufacture of paper from hardwood waste on the Fourdrinier paper machine and the production of artificial limb blanks using the copying lathe.

FPRI KEY OFFICIAL OBSERVES PAPERMAKING METHODS IN JAPAN, HONGKONG

Manuel R. Monsalud, chief of the chemical investigations division, Forest Products Research Institute flew recently via Air France on a four week observation tour of commercial pulp and paper mills in Japan and Hongkong.

He will study pulp and paper processing methods used in those countries, particularly the methods and techniques used by small factories that turn out pulp and paper products on cottage industry scale.

Monsalud is a U.P. graduate in sugar technology. In 1955-1956 he underwent specialized training in pulp and paper technology at the U. S. Forest Products Laboratory, Madison, Wisconsin, U.S.A., under the ICA-NEC technical assistance program. Since his return from the U.S. in 1956, he has been supervising the studies on pulp and paper making at the Forest Products Research Institute in College, Laguna.

During his present trip, Monsalud will also visit important scientific research institutions in Japan and Hongkong. —*Manila Times*

CORRECTION DATA AVAILABLE

Director Eugenio de la Cruz announced this morning that correction figures which are needed for determining the moisture content of a number of native woods using the resistance type of electrical moisture meters are now available at the Forest Products Research Institute.

Explaining the importance of these figures, the Director mentioned that the fastest and most convenient way of determining the moisture content of wood is by the use of electrical moisture meters.

He said that moisture meters made in the United States are usually calibrated either for Douglas fir or beech although correction factors are usually supplied by the manufacturers of these meters so that they can be used for determining the moisture content of other species.

However, de la Cruz pointed out, species correction tables supplied by the manufacturers do not give figures for any definite Philippine wood species except those that fall under the Philippine mahogany group which include bagtikan, red lauan, tangle, white lauan, mayapis, and almon. Only one correction factor is provided for all of these, which is not sufficient, he added.

To extend the use of these meters to Philippine woods of various commercial species, the Forest Products Research Institute has conducted an initial study towards determining the correction factors for all commercial Philippine species, the Director stated.

He announced that correction factors covering 45 species have already been determined in a preliminary way. He remarked that these data are substantially accurate and are usable now but they may have to be revised somewhat for greater accuracy if and when more comprehensive data become available.

Director de la Cruz, however, assured that these figures can be useful to lumbermen and the wood-using industries, in their present form.

**FPRI CELEBRATES 2ND YEAR TODAY;
ACCOMPLISHMENTS IN RESEARCH
PROGRAM TO AID WOOD PRODUCTS
INDUSTRIES CITED**

Some 70 kilometers southeast of Manila, on the slope of Mt. Makiling near Los Baños in Laguna, a small group of scientists will take time out today, get their eyes off the eye pieces of their microscopes, put aside their slide rules, and shave for once the proverbial scientist beard, to observe the second anniversary of their Institute, the Forest Products Research Institute.

The simple celebration will be highlighted by the offering of the Holy Mass (misa de gracia) to be said at nine o'clock in the morning at the FPRI inner court with Rev. Father John Hurley officiating.

In a short program to be held following the mass, FPRI Director Eugenio de la Cruz will present the main features of the Institute's FY 1959-1960 research program and give his subordinates some guide lines on how to approach the great task that lies ahead so that the Institute's activities will become even more responsive to the wood using industries and the over all program on economic development by the administration.

Director de la Cruz will also give a capsule resume of the Institute's accomplishments during the FY 1958-1959.

To provide an occasion for the scientists to blow their lungs off in a real hubbub, parlor games to be participated in by all personnel, from the Director to the daily wage laborer, will be held in the afternoon.

The affair will be concluded by the distribution of prizes to winners of different events in the parlor games. —*Philippine Herald*

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Forestry In . . .

(Continued from page 62)

seem to have been serious and the timber operations in the Takoradi-Sekoradi region are badly disrupted. Many of the large coastal mills are steam-operated and they have been forced to curtail, and even to suspend operations. It also appears that the up-country suppliers are now being affected, due to curtailment of railway services in some cases to only 50 or 60 percent of services regarded as normal for the time of year. Hence, although logging is still continuing at usual rates there will be no immediate increase in the supply of timber available for shipment.

Another problem which has recently arisen again is the difficulty involved over cutting iroko. This is regarded as a sacred wood in some areas and the local Chiefs have again been exerting pressure on timber interests to end the felling of this tree. Moreover, domestic users resent the price pressure caused by the increasing interest in this wood on the part of European buyers. Ghana has now re-imposed the ban on iroko exports and is unlikely to lift it quickly.

Meanwhile in Nigeria volcanic activity threatens the principal road serving the forests of the Cameroons, and could lead to an interruption of supplies. All these factors could mean firmer prices for the West African timbers.

West African Conference Lines freight rates have once again been in the news. It now appears that they are to remain unchanged until the end of May. This has brought a new tone of stability and confidence to the market. A minor flurry of interest in West African timber has coincided, unfortunately, with the latest rash of problems in Ghana.

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It seems that the timber trade between West Africa and Europe remains an attraction for tram vessels in the present depressed state of the shipping industry. This explains the Conference Line's continuation of the rebate system, since although shippers prefer the regular services, they are not averse to using tram vessels when the prices of the latter are well below the comparable rates of the Conference.

Recent weeks have again shown no improvement in the supply position of Japanese oak, and UK importers' interest remains strong. Restricted quantities of the more popular sizes have led the shippers to press once again for the acceptance of reduced averages on both f.a.s. and common grade. The tightness of the market has affected that for American oak floorings, which are in short supply and while U.S. oak has not yet been generally accepted as a substitute for the Japanese wood, interest in the American product is strengthening.

Equally, importers are interested in the French market, where the effects of devaluation continue to make for competitive prices. Both there and in Denmark the mills are said to have been receiving a heavy volume of orders.

At this season in previous years, ramin prices have shown signs of weakening. This is certainly not the case this year and falling prices seem extremely unlikely. Shippers have been able to conclude several long-term contracts at good prices, which should carry them into the second half of the year. The Sarawak ramin industry is apparently reasonably satisfied with the results of the quota system in stabilizing the market, and it seems very likely that it will be retained at the current level.

Keruing continues to be in popular demand, and meranti is running it a close second. In all, the demand for Malayan timbers is fairly good, although shippers continue to complain that current prices barely cover their costs. — *Manila Times*, April 7, 1959

FAO FELLOWSHIPS TO TWO FILIPINOS

The Food and Agriculture Organization has recently awarded separate fellowships in forestry and agriculture to two Filipinos. They are Ricardo F. Casin and Cleofas Contreras Rodriguez. Both are scheduled to leave for the United States to start their fellowships sometime in September.

While in the U.S. Mr. Casin will take up a twelve-month study and training in mechanical engineering and kiln drying.

Mr. Rodriguez' fellowship in plant breeding includes study of all stages in the technique of breeding hybrid maize and the production of seed. At the same time he will take a course leading to a Master's degree in agronomy. — *FAO Press Release*

• Students' Section* •

Atop the Pedestal

by the woodpecker

Hello folks! Welcome to this corner. First time for it to come out and I hope you will enjoy reading it.

For one thing, I like this column because it is mine and mine alone and nobody else's. Furthermore, it's so cozy and the sensation so very exhilarating to be way up on top of the pedestal where the vista of the surrounding landscape is so broad that almost nothing escapes the eyes. And this makes it a very nice observation post, don't you think so? In addition, the place is "away from the maddening crowd" thereby making its location the more ideal because it is too far up to be reached by outside distractions. And so a wide vista of observation plus an environment conducive to serious and concentrated thinking, together with a large elbow room for the expression of one's ideas without being intimidated and influenced by "outside elements", make my corner, "*Atop the Pedestal*," an ideal retreat.

Looking down from this vantage point the College of Forestry can be seen directly below. Here, we find its halls and corridors a bee-hive of activity because classes are once more on the go. A closer look shows us that the Freshies are huddled in Room 111 in wide-eyed concentration as their professor in Introduction to Forestry is discoursing on the various aspects of the subject that is Forestry. In another section of the school the Sophomores are busy with their knives and lenses in their efforts to learn more of the microscopic anatomy of the wood of trees. This, by the way, is that one subject of the course which can make a cross-eyed specimen out of you — Wood Tech. 1 — that is, if you are not careful. Meanwhile the Juniors are sweating it out with their Analytic

Geometry, trying to figure out why "X" is equal to "Y" and not to "Z" and at the same time secretly wishing that Pythagoras *et al* had never been born so that they would not be having these mental indigestions which they are experiencing at the moment.

Oh yes, I almost forgot! Of course, we also have the Seniors. And what a query-some lot they are. Maybe because of their three or more years of stay in college, they think they have absorbed enough knowledge in matters concerning forestry so that they already consider themselves their professors' peers. This, they make as an excuse to question their mentor in most nearly every statement that he makes which these noble Seniors think is contradictory to some principles they had studied. Or, is this merely one of the many filibustering tricks they have up their sleeves in order that their professor will not be able to go too far with the lecture thereby reducing the amount of subject matter which they will have to study for their next exam? Well, we just don't know. Let's just leave them there for the present. It seems as if there is some question in Forest Finance which they want to have threshed out before. . . R-i-n-g-g-g-g!!! Oh well, there goes the bell.

My, what noise! Just like the hubbub one hears in the market on a Sunday. This is always the case when the bell rings, announcing the end of the period. And a babel of voices always shatters the stillness of the corridors as the students start shuffling to their respective rooms for their next class. Maybe I ought not to say this but the way I observe things from "*Atop the Pedestal*", the upperclassmen are the ones causing the most uproar. Tsk. . . tsk. . . what a shame! A very nice example for the Freshies to imitate. And from their bigger, older and more responsible brothers at that. No wonder the Forestry students always stand out above any other groups whenever they go out.

* *Suggestions observations, comments and literary contributions of students.—Ed*

Say, a lot of new faces around here. It's very surprising though that unlike in previous years, not one among this bunch of new ones belongs to a descendant of Eve. Why, are they scared to follow the footsteps of their sisters who had gone ahead of them? Or, have the college authorities adopted a new policy of letting no more dames infiltrate into the portals of the College of Forestry?

For a change, let us focus our sights to the four dormitories we have on the campus. Notice anything new? Uh-huh. The lights seem to be functioning all right now. New ones taking over from the old. The beds too are no longer the big wooden frames with their large, big holes in their middles so that if ever you tried lying down on one of them, you would land on the floor instead — bottoms first. These too had all been replaced with brand new units. When it comes to the water facilities, no complaints on that point although there are still some of those leaky faucets and sinks and the flush toilets that get out of order more days of the year than not. As for those tables and lockers for the individual occupants, we are still "optimistic" that these items will still get installed although I can not tell exactly when. But we'll just keep crossing out fingers for the best. Okay? And, do you notice how those floors shine? Well, we can thank the cooperative spirit of the residents who were willing enough to scrape off from their meager allowances the sum necessary to raise the amount with which to buy such materials as are needed for this janitorial work.

This takes care of Dormitory Nos. 1 to 4. But what about "Dormitory No. 5" — the Barracks? Aha! There we have a nice big problem in our hands. Were it not for all things not being all right, then everything would be all right. Details? Hm... m... m... things are a bit hazy from my observation post just now because of some cloud obstructing my view. However, here are a few I had jotted down when the visibility was high: when it rains outside, ditto, in the inside; the faucets are as dry as the Sahara

when water is needed most badly and only seem to drip some when everybody is starting to go to bed; the toilet facilities are the best junks for miles around Makiling which can serve the purpose they had been intended for. Oh well, I can not enumerate them all for the present because as I have already stated visibility is very low now and as much as possible, I don't want to play a guessing game. But if you are that curious the best thing is for you to go there and see for yourselves what other things I could not jot down.

And this too is where I say — CURTAINS! I hope to see you again next issue.

What the Freshmen Think of Forestry

By CARLOS VILLA. GLORI

The following are first impressions and ideas of this year's incoming freshmen about the College of Forestry and the forestry profession. After having gone over more than a hundred themes written by the above mentioned freshmen care has been exerted in the selection of nine excerpts which represent their general notions and conceptions of forestry career.

"I came to know that only the University of the Philippines' College of Forestry is at present offering a course leading to the degree of Bachelor of Science in Forestry. I came to know that the profession is in demand nowadays. I learned that most of the graduates from the College of Forestry are having good positions with substantial salaries. I wish to be one of those successful persons in the future." — Honorio F. Cariño.

"One simple reason why I chose this course is the facility of landing a job after graduation. Furthermore, our government is in need of technically trained men to guard and perpetuate the forests which pay an important role in our economic progress." — Beato B. Bautista

"People in my community only know how to cut down trees and make kaingin. If I should learn something from this College and be able to show my folks and friends the proper forest utilization, then my education would be of positive value to me and my fellowmen." — A. Lucop

"My father convinced me to study in the College of Forestry for the reason that for-

estry graduates have big opportunities of being sent to the United States as government pensionados." — Pacifico Evaristo

"I came to the College of Forestry because nowadays, our natural resources are not being exploited in the proper way. Many people make kaingins even in forest reserves." — Eduardo P. Gacula.

"I am taking Forestry, not because it is my parents' choice but because it is my own choice. I prefer to stay and study here because of the quiet and wholesome environment." — Rodolfo Visperas

"News here and there state that the cause of the students' staying long in the College of Forestry is their unsatisfactory scholastic showings. The rigid training in the course is not to blame but should be the other way round, the students themselves who do not exert enough efforts. I came here to study with determination and willingness to shoulder any task given to me. Forestry subjects are not easy. One may even go to the extent of risking his own life in the woods." — Conrado C. Salvador

"I don't know any reason why I came to the College of Forestry. Maybe because it is the only course I had in mind during my high school days. I think it is the challenge of a wholesome outdoor life full of adventures that made me come." — Jose G. Gumnad

"Since a B.S.F. has more chances of being employed than the graduate of other colleges, I decided to take up forestry. Foresters are very scarce in the country. Seldom can one hear of unemployed graduates of this college. Because of the ideal climate here I became interested in Forestry." — Francisco A. Clemente

Many of the freshmen sing the same song, that is, the desire to be employed immediately after graduation. This is but the natural tendency of most young men, considering the fact that the great bulk of unemployed people in this country today belong to the other professions. It is disheartening, however, to come across a still greater number of students who came and took up forestry totally unaware of what they are here for. I came across one student who had the notion that a ranger is a pistol-packing horseman similar to the cowboys of the old west.

This revelation gives the clue to the high scholastic mortality in the College. It is not because the course is tough, but rather the kind of materials, who come to the College inadequately trained and mentally low.

We hope that the authorities concerned will double their efforts to attract the better type of students who would be the future hopes of forestry.

Now that You are Gone

*How was I to know
that the bright, glorious flame
was to smoulder into dying embers,
that smiles are followed by tears,
that after joy comes the pain,
that there is no cure, no anodyne
for loneliness;
And so I want you to know
that I find emptiness in everything,
that when night comes
darkness enwraps my soul,
and all night long I can count
the rain drip from the eaves,
into the puddle of water below,
and in my mind's eye
see the ripples caused by every
drip,
like the thought of you
causing ripples in my memory
of our happy hours together,
of our dreams and our hopes,
but like the ripples
that have ceased to dimple
the water's surface,
these, too, have ceased
to stir me to depths—
now that you are gone.*

TOTI BLANDO

WHAT IS A FRIEND?

A friend is a person who is for you always, under all circumstances.

He never investigates you.

He likes you just as you are. He does not want to alter you.

He likes your success, and your failure endears you more.

He is better than a lover because he is never jealous.

He wants nothing from you except that you be yourself.

He is one being with whom you can feel safe and at ease.

With him you can utter your heart, its badness and goodness.

A friend is an impregnable citadel of refuge in the strife of existence.

It is he who keeps alive your faith in human nature, who makes you believe this is a good universe.

You give him without reluctance and borrow from him without embarrassment.

When you are vigorous and spirited, you like to take your pleasure with him; when you are sick you want him near you.

—AUTHOR UNKNOWN

B.F. Notes . . .

Continued on page 52)

government service March 24, after 42 years of continuous and faithful service dedicated to Philippine forestry.

A native of Victoria, Tarlac, he started in public service as a school teacher in 1909. He served as 2nd Lieutenant of the Philippine National Guard Federal Service during the 1st World War. In 1917, he joined the Bureau of Forestry as ranger after receiving his ranger certificate from the U.P. College of Forestry, where he, also, obtained his Bachelor of Science in Forestry degree in 1935.

Through sheer merit and hard work, he rose to the positions of officer-in-charge of a forest station, administrative officer, assistant forester, assistant forest coordinator, forest coordinator, acting chief of division of land classification and chief of domain use division.

His services in connection with classification and delimitation of public lands are valuable forest lands and releases of agricultural lands. contributions to the establishment of permanent — f.c., jr.

Tomas N. Roque, retired official of the bureau of forestry, succumbed to heart attack-Sunday at 3 p.m. He was 69.

Roque started his public career as ranger. He subsequently held various positions as sr. ranger, asst. forester, forester, silviculturist, sr. forester, asst. division chief and chief of forest lands and maps division. He retired on December 29, 1954.

Surviving him are his children, Placida, Emerita, Macaria, Lourdes, Inocencia, Alicia, Edmundo, Ruben and Rodolfo, — fbc.

As a means of boosting the government's efforts in its drive for enhancing forestry-consciousness on the part of the people, personnel of the various B.F. district offices throughout the Islands take every opportunity in participating in all civic parades and activities of their respective localities, thereby keeping forestry in the limelights.

An example of such an activity is the participation of the personnel of the District Office of Oroquieta, Misamis Occidental, during the recent July Fourth celebrations, its float having been awarded the fourth prize. The Malaybalay Reforestation Project personnel, too, contributed their part and their float during the Fourth of July parade in that district also won a prize.

Asst. Dist. Forester Regino Doroin of Camarines Norte District Office at Daet reports that his office's participation in the town fiesta celebration was a success. According to him, his

From the Mail . . .

(Continued from page 78)

to learn a great deal about the forestry and coconut industries and the knowledge we have gained will be useful indeed in helping to improve the work here in Taiwan.

Since the Philippines and Taiwan are neighboring countries and the climatic and geologic conditions similar to each other, it is my hope that we may enjoy closer cooperation in the promotion of the forestry movement and especially coconut cultivation. I sincerely wish that the experts of your country could come to Taiwan and I look forward to a visit from you. It will not only leave me an opportunity to reciprocate and repay a part of the courtesies extended to us, but would provide an excellent opportunity for an exchange of information and ideas which will be extremely beneficial to both countries.

With best wishes to you and your colleagues,

Yours sincerely,

KANG HAN

Sr. Specialist

Forestry Division

Office put up exhibits representing the different phases and work in forestry.

The District Forester of Tarlac reported that his Office during that one-week arbor celebration distributed 2,464 seedlings and other planting materials to public schools, public officials and private individuals as well, for planting in public and private school premises, public plazas and private yards. As a guest speaker on various programs during the Arbor Week, he stressed the importance of trees and forests, to instill tree-consciousness into the people's minds.

Other forests districts reported similar participation during the Arbor Week, all of which contributed immensely to the mass forestry-education drive of the government.

AN APPEAL

With the arrival of additional volumes through the benevolence of the Rockefeller Foundation, our library has kept expanding to meet the needs of the Faculty and the students of the College.

Alumni, if you happen to have in your possession copies of pre-war forestry publications such as "The Makiling Echo," "Narra Chips", etc. which you can very well afford to donate to the library, please do so. Any publication will be appreciated.

Address all communications to the:

Librarian

College of Forestry, U.P.

College, Laguna

• Abstracts & Excerpts •

SILVICULTURAL PRACTICES IN SOME TROPICAL COUNTRIES AND THEIR POSSIBLE APPLICATIONS IN THE PHILIPPINES

By
EULOGIO T. TAGUDAR
and
MARTIN R. REYES

ABSTRACT

Various problems are encountered in the practice of silviculture in tropical countries. Some of the most serious problems are the following:

1. The astonishing diversity of species in which only a few are at present of commercial value;
2. The rapid growth of vines, weeds other herbaceous species after the opening of the forest canopy;
3. The exploitations of the forest by the "high grading" system in which only the best and valuable trees are cut, leaving spaces for non-commercial species and causing the gradual deterioration of the forest type; and
4. The practice of shifting cultivation practiced in many tropical countries, including the Philippines.

Lately, many of these countries have been giving a great deal of attention to the development of silvicultural techniques suitable for their own forests through natural methods. These techniques had been the results of years of research, observation and experience. They are as follows:

1. *Tropical Shelterwood System.* — Natural regeneration is induced through the gradual opening of the stand or through partial shade. This is used successfully in logged-over areas where overmature and seed trees of the original commercial trees were left during logging and there is dense reproduction under these trees just waiting for some kind of liberation.

2. *Clearfelling over natural regeneration.* — Complete removal of the original forest canopy is conducted after harvest cutting, except immature trees and advance growth of timber trees which are of good form and useful to retain. It is conducted where labor is expensive and logging is done by powerful machineries. It is successful where sufficient seedlings of timber species

are present during the operation. It is conducted in forests where the intermediate class groups are scarce and not well distributed.

3. *Selection System.* — This system involves the removal of mature, overmature and defective trees by periods (cutting cycles) in such a manner as to leave uninjured an adequate number and volume of healthy residual trees of the commercial species and other useful species necessary to assure a future crop of trees, and forest cover for the conservation of soil and water.

4. *Conversion of degraded forests into productive forests by artificial regeneration.* — Two methods are used in this technique. They are (1) opening the forests in wide blocks and (2) in narrow parallel strips, or by small gaps on openings made at random or otherwise. Desirable species are sown, underplanted, or interplanted into these openings or blocks in regular or irregular spacing. The first one is successful where there are abundant local labor supply and enough public forest lands available for such purpose. The latter is used successfully only when government funds are available.

A very detailed method of managing different conditions of logged-over areas in the Philippines is also discussed in these paper. They are recommended by the authors to be used as "guide" in the managing these kinds of cut-over areas.

In the tropical zone, the forests show many important similarities, in spite of their geographical distances. The climatic conditions are also more or less relatively similar. Under such conditions, it appears that it is advisable and logical for Filipino foresters to make use of the findings of their colleagues in the tropics. Those findings (silvicultural techniques) which are closely related or suited to our species should be adapted.

The above silvicultural techniques and their possible application in the Philippines are presented and discussed at length and in detail in this paper. The climate, the present forest composition and reasons for the changes of the techniques in the tropical countries of Africa, America and Southeast Asia are also discussed herein with the hope that these practices may guide Filipino foresters in selecting or developing the silvicultural techniques suitable for the Philippine dipterocarp forests.

• Sunshine Corner •

Compiled by: EDDIE Z. CAJUCOM

AS USUAL FOLKS!

Absent-minded Professor (leaving church) —
“Who’s the absent-minded one now? You left
your umbrella back there and I not only remem-
bered mine but I brought yours, too.”

Wife (gazing blankly at him) — “But neither
of us brought one to church.”

* * * *

SO NEAR AND YET SO FAR

“Mr. Jones”, asked the instructor, “how far
were you from the correct answer?”

“Only three seats, sir.”

* * * *

MA’S CURE

“Son, after four years of college, you’re noth-
ing but a drunk, a loafer and a damn nuisance.
I can’t think of one good thing it’s done.”

“Well—didn’t it cure Ma of bragging about
me.”

* * * *

S O S

Night Watchman— “Young man, are you going
to kiss that girl?”

Student— “No, sir”

Night Watchman— “Well, then, hold my lan-
tern.”

* * * *

STRANGER THAN FICTION

“It’s true,” said the husband, pensively. “My
wife ran away with my best friend.”

“Too bad. Was he a handsome devil?”

“Can’t say. I never met the man.”

* * * *

HIGHER MATH.

Archie— “Jess, would you lend me ten pesos
if I asked you?”

Jess— “Why, yes, I suppose so.”

Archie— “All right, then, lend me ten, but
just give me five of it.”

Jess— “O.K. But why?”

Archie— “Then you’ll owe me five, and I’ll
owe you five, and we’ll be all square.”

* * * *

ARE YOU SURE?

“Who was that pretty little thing I saw you
with last night?”

“Will you promise not to tell my wife?”

“Surely, I promise.”

“Well, it was my wife.”

HER RESERVED SEAT

Mely (after a quarrel) — “Leave this house.
I never want to see you again. Go this instant.

Eddy— “I have one last request to make be-
fore I go.”

Mely (sweetly, oh very lovingly) — “Well,
what is it, dear?”

Eddy— “Before I leave forever, would you
mind getting off my lap?”

* * * *

TIT FOR TAT

Boarder— “Ah, your steak is like the weath-
er this evening, madam, rather raw.”

Landlady— “Indeed? By the way, your ac-
count is like the weather, too, unsettled.”

* * * *

TUNNEL OF LOVE?

“Sweetheart, if I’d known that the tunnel was
so long, I’d have given you a kiss.”

“Gracious! Wasn’t that you?”

* * * *

TAKING NO CHANCES

A boxer was to fight a heavyweight cham-
pion. When he reached the ring it was noticed
that he hung back.

“It’s all right, Jim,” said his trainer. “Just
say to your self, ‘I’m going to beat him’, and
you’ll win.”

“That’s no good, boss,” replied Jim. “I know
what a liar I am.”

* * * *

PREFERS CASH

“I shall have to give you ten days or \$20,”
said the judge.

“I’ll take the \$20, judge,” said the prisoner.

* * * *

SLIP OF THE TONGUE

“Fine advice you gave me! You said if I was
pally with the Judge he’d let me off easy.”

“Well, didn’t he?”

“No I walked and said, ‘Good morning, your
honor— how’s the old kid today?’ and he said
‘Fine—twenty dollars.’”

* * * *

ANATOMICALLY SPEAKING

Tailor— How would you like a belt in the
back and a cuff in the pants?

Customer— How would you like a sock in the
nose?



SOCIETY OF FILIPINO FORESTERS, INC.
P. O. Box 2445
Manila

June 25, 1959

The Editor, *Forestry Leaves*
College of Forestry
College, Laguna

Sir:

Enclosed is an article for possible publication in the *Forestry Leaves*. As could be seen in the footnote (page 1), a resume of this was published in the *Manila Times Magazine*. The full-length article may prove useful to the student body of the College and to the other readers of the *Leaves*.

Very respectfully,
(Sgd.) NICOLAS P. LANSIGAN

* * * *

Republic of the Philippines
Department of Agriculture & Natural Resources
BUREAU OF FORESTRY
Office of the District Forester
Tarlac, Tarlac

D-10, Forest
Planting (Labney Ref. Project)

June 22, 1959

The Director of Forestry
Manila
Sir:

I have the honor to inform you that the inauguration of Labney Reforestation Project, Mayantoc, Tarlac was celebrated quite successfully on June 20, 1959, according to plans and the program previously prepared therefore with some additional activities.

The Project is approximately 23 kilometers from the Poblacion of Mayantoc via the Mag-saysay Dam. The dam is 13 kilometers by third class road from the Poblacion of Mayantoc and from this dam to the Project is 10 kilometers by logging road passable only by 6 x 6 logging trucks along the Mayantoc River during the dry season. Important personages, visitors as well as local residents were ferried to the Project by three (3) logging trucks. Those who were not able to get accommodation in the trucks proceeded to the Project by hiking.

Activities during the celebration in their order of occurrence consisted of:

(1) Visitation of the newly constructed Office—officers' quarters building, laborers' quarters, nursery and water reservoir of the Project;

(2) Literary-musical program;

(3) Planting of memorial trees by the following officials: Provincial Governor Arsenio Lugay—Narra, Municipal Mavor Rosendo Tomas of Mavantoc—Mahogany, Municipal Mavor Florencio Molina of Sta. Ignacia—Narra, Municipal Mayor Amado Roldan of San Clemente—Narra, Asst. Provincial Fiscal Fernando Bartolome of Tarlac—Narra and Tarlac SWA Administrator Leonila Valbuena—Mahogany; and

(4) Distribution by SWA Administrator Valbuena of school supplies such as pencils, papers, rulers, crayons and others to indigent pupils of barrio Labney most of whom are non-Christians.

The guest speaker, Provincial Governor Arsenio Lugay of Tarlac, and other speakers in the program had for a theme in their speeches the importance of reforestation and forest conservation for watershed protection, soil erosion prevention, tempering of climatic condition and prevention of floods. About 400 persons from all walks of life but mostly farmers attended the affair.

Representatives of the local DANR offices in Tarlac like the Bureaus of Agricultural Extension, Plant Industry, Lands, and Division of Agricultural Economics were present and helped in making the celebration a success.

Hereto attached are pictures taken during the affair for information and record purposes.

Very truly yours,
(Sgd.) TORIBIO V. MANZANO
District Forester

Encls:

COPIES FURNISHED:

Chief, Recl. & Ref. Div., BF., Manila
Chief, Forestry Information Section, BF.,
Manila

O.C., Labney Ref. Project, Mayantoc, Tarlac
Editor, "FORESTRY LEAVES," College of
Forestry, Laguna with pictures

Republic of the Philippines
NATIONAL ECONOMIC COUNCIL
Manila

Office of Statistical Coordination and Standards
July 2, 1959

Mr. Gregorio Zamuco
Dean, U.P. College of Forestry
College, Laguna
Dear Dean Zamuco:

I wish to thank you for the kind cooperation which you extended us during our trip to the College of Forestry on June 22, 1959. I assure you that the trip was most informative and useful at this stage of operations of the Raw Material Resources Survey Project.

Please extend also our deep appreciation to the members of your staff and also to your wife for their kind hospitality.

For your information, I am attaching a copy of the report which I sent to the Chairman of the National Economic Council upon arrival in Manila.

Sincerely yours,
(Sgd.) BERNARDINO G. BANTEGUI
Director

Encl: a/s
A TRUE COPY

Republic of the Philippines
NATIONAL ECONOMIC COUNCIL
Manila

Office of Statistical Coordination and Standards
June 23, 1959

MEMORANDUM

F O R : The Chairman
National Economic Council
F R O M : Bernardino G. Bantegui
Director, Office of Statistical Coordination and Standards
SUBJECT: Report of the Management Committee of the Raw Material Resources Survey on the Trip Made to the College of Forestry, Los Baños, Laguna on June 22, 1959.

1. *Objective of the Trip*

To determine the latest developments in the research on the utilization of forest products and the potentialities for expansion of production of specific products, both for imports and exports.

2. *Composition and Activities of the Party*

1. The party was headed by Mr. Bernardino G. Bantegui, Director, OSCAS and Project Director, Raw Material Resources Survey. The members consisted of Mr. Pedro Florentino, Assistant Project Director, Mr. Ruben F. Trinidad, OSCAS; Mr. Nicolas P. Lansigan and Dr. Ignacio Austria, ONAP; Mr. Virgilio Bustos, IDC;

Mr. Jose Castillo, AED; Mr. Anselmo Garcia, Bureau of Forestry; and Mr. Alberto Garde, Raw Material Resources Survey.

2. The party left Manila at 8:25 a.m. and returned at 4:30 p.m. The activities of the party at the College of Forestry were as follows:

10:00-10:30 a.m.—Courtesy call on the Dean of the College of Forestry. The party was shown around the College of Forestry Building.

10:30-12:00 a.m.—Conference with Mr. Eugenio de la Cruz, Director of the Forest Products Research Institute, and members of his staff.

12:00 - 1:00 p.m.—Lunch time: Lunch was graciously offered by Mr. Gregorio Zamuco, Dean of the College of Forestry at residence.

1:00 - 3:00 p.m.—Conference with Dean Zamuco and a few of the faculty of the College of Forestry.

3. *Observations*

1. Forest Products Research Institute—The Institute is a semi-government institution attached for policy purposes to the University of the Philippines to conduct research and development in wood utilization.

1. The general objectives of the Institute are as follows:

a. To study the properties of the 3,000 different species of Philippine woods to determine the uses for which they are suited.

b. To study and improve the chemical processing, seasoning, preservative treatment and other manufacturing or improving processes for the efficient and profitable conversion of wood into final products in order to serve the user better.

c. To develop new industries based on wood residues not now put to profitable use, and thus provide additional employment opportunities and economic advantages.

d. To find profitable uses for species not now being used and for species found to have special properties of value.

f. To undertake any other kind of research that will enable a more efficient utilization of the products of the forest.

2. A number of activities are being undertaken to aid manufacturers, wood users, and the public in the most profitable and maximum utilization of wood by disseminating information on: eliminating waste, reducing costs of manufacture, increasing serviceability of wood

to users, and new and profitable products from wood. The waste in forest products are in the form of sawdust, slabs, edgings, shavings, trimmings, bark, and defective or broken pieces. The waste from the time the timber is felled until it reaches the final consumer is about one-half to two-thirds of the timber volume. This enormous amount of unused wood has great potential value as a source of raw materials for new wood products and industries. A number of researches along this line are:

a. *Paper Production.* A research on the production of paper from Philippine woods and bamboos, especially waste wood and species of little use for other purposes is in progress. The institute has a variety of equipment for making, processing and bleaching pulp and a paper machine that can produce a continuous sheet of paper 8½ inches wide. Excellent paper-testing equipment are housed in a humidity and temperature-controlled room for testing the properties of paper made from the pulp in conformity with international standards.

b. *Veneer and Plywood Manufacture.* The Philippine plywood industry is facing many difficult problems in producing plywood of export quality at costs that can compete in the world markets. The Institute is cooperating with plywood manufacturers in solving these problems. It might appear profitable to continue the export of high-quality logs and let other countries manufacture the plywood but exporting plywood and other finished products instead of logs would mean more jobs and more income for the Philippines.

c. *Wood Classification as to their Properties.* In deciding the suitability of a species for certain uses, it is necessary to know the relations of several factors to the strength of the wood. Studies are being conducted on how the strength of wood is affected by its specific gravity and moisture content. The duration and direction of load with respect to the grain of the various types of wood are also being tested. Finally, studies are being undertaken also on the identification of woods and their relation to structure, properties and uses.

d. *Chemical Investigations.* The Chemical Investigation Division of the Institute also studies the chemical properties of different wood species to determine their suitability for the production of tannins and other extracts. For instance, it was found out that 15 percent of the gross weight of coconut husk may be recovered as tannins and the residue may be used in the making of pulp.

e. *Charcoal Briquetting.* Forestry wastes such as slabs, edgings, defective or broken pieces of timber are converted to charcoal in charcoal kilns. Charcoal is pulverized, mixed with cassava flour to serve as binder, and coursed through the briquetting machine. Under extreme pressure, the pulverized charcoal is transformed into "coal briquette."

The briquetting machine in the Institute has a capacity of 4 tons daily working eight hours a day.

Locally produced coal briquette compared favorably with imported coke in usability and cost.

f. A study was made to determine wood waste in sawmills in the Manila area. This was undertaken in response to queries about available wood waste for possible processing to useful products. The results of the survey showed the amount of recovery and waste per one cubic meter log scale and per one thousand board feet of lumber sawn from white lauan, tangile, malugai and nato timber. Wood waste are slabs, edgings, trimmings, bark and defective portions of timber. This study was made on sawmills with 10,000 board feet daily capacity. The table below shows the distribution (percentagewise) of a cubic meter of timber into lumber recovered and waste products:

Species	Solid				Defects
	Lumber	Residue	Sawdust	Bark	
Tangile	63.58	10.72	13.44	2.77	9.49
White lauan	53.67	11.99	17.51	7.46	9.37
Malugai	65.34	9.29	17.11	—	8.26
Nato	63.68	10.95	17.44	—	7.75

g. A survey of secondary wood-using industries in the Manila area is currently being undertaken to acquire basic information on these industries, their processing methods, and their problems in order to formulate a rational program of practical and applied research in the field of wood-use, the selection of suitable woods for different purposes, and wood-waste utilization. The findings of the survey so far reveal the following:

1. There are some 600 wood-using establishments in Manila and suburbs.

2. About 8,000 people are employed by secondary wood-using industries in the Manila area with approximately 32,000 dependents.

3. The Chinese seem to dominate the furniture industry in the area.

4. One hundred thirteen establishments out of 600 reported a total average annual wood consumption of approximately 8.8 million board

feet with gubas the leading kind of wood consumed.

5. The important problems in the industry are:

- a. Improper drying of wood prior to manufacture.
- b. Search for local species of wood suitable for: tool handles, baseball bats, venetian blind slats, pencil slats, piano parts, liquid tanks, bobbins, battery separators, steam pressbending for curved and rounded parts of cabinets and furniture, shoe heels and lasts, and fan ribs.
- c. Adequate supply of wood suitable for some specific uses, such as kalantas and maringo for piano parts; gubas for matches, pencils and toothpicks; binggas for tool handles; Vidal's lanutan bagyo for blind slats; and lanete for fan ribs.

d. Standardization of sizes for sash, doors, and windows. The Institute plans to put up a brochure based on the results of the survey to guide general buyers of wood products, and manufacturers and suppliers of wood.

II. *College of Forestry.* The college was established for the training of men in the "proper administration and wise utilization of the vast forest resources, the reclamation and reforestation of grass and barren non-agricultural lands and to carry on such scientific studies and research work as are needed for the better management, protection, and use of forests."

1. It was pointed out by the Dean and his staff that the present curriculum is geared towards training persons in increasing the production and profitable utilization of forest products.

2. There are about 400 students at present compared to about 100 students before the war. The average postwar turn-over of graduates is estimated at 25. The number of graduates lags significantly behind the growing needs for trained personnel to undertake the forestry development program for the Philippines.

3. The college is not physically and financially able to accommodate more students due to lack of professors and facilities for students. It was pointed out that before the war, laboratory space provided was 80 square feet per student as compared to only 7 square feet at the present. On the whole, it was claimed that school facilities before the war were better than those obtaining at present.

A TRUE COPY.

Republic of the Philippines
Department of Agriculture and Natural
Resources

BUREAU OF FORESTRY
Office of the District Forester
Oroquieta, Misamis Occ.

D-36, Z-Protection

March 23, 1959

The Director of Forestry
Manila

Sir:

In compliance with your letter dated January 14, 1959, designated similarly as above, in connection with the intensification of forest protection specially during this dry season:

I have the honor to inform you that this Office has acted upon your suggestion and has followed-up the project and as a result, six (6) billboard signs have been made as follows:

Two (2) by the Misamis Lumber Co., Inc., two (2) by the Senote Sawmill Company, and the other two by this district, and they are all placed on strategic places.

For your information and record, enclosed are three (3) pictures of the billboard signs made by this Office and taken in three different positions, with the request that one of them be given to the Publishing Editor of the Lumberman for publication.

Very truly yours,
SANTIAGO MORAO
Acting District Forester

* * *

Republic of the Philippines
Department of Agriculture and
Natural Resources
Forest Station
Bangui, Ilocos Norte

D-I, Public Relations

March 11, 1959

The Director of Forestry
Manila

I have the honor to inform you that on February 20, 1959, the forest Station, Bangui, Ilocos Norte, participated in the Purok Festival, in connection with your public relation program, by representing the Bureau of Forestry, with a float significant to the program and function of the Bureau of Forestry. Copies of the picture of our float is herewith attached for your information with the request that same be published in our Forestry Circle or in the Forestry Leaves.

After the parade there was a brief talk of each participant to explain the significance of their float. The undersigned with an audience of 700 more or less has delivered a brief talk regarding the importance of forestry, forest protection against unwise use of our public forest,

land uses and discussed particularly the meaning of the placards placed on the float.

Thereafter several people who were tact with interest asked questions two or three times. It was apparent that their interest was aroused.

Very truly yours,
LEON I. AGLUGUB
Officer in Charge

Republic of the Philippines
Department of Agriculture and
Natural Resources
Office of the District Forester
Tarlac, Tarlac

D-10, Personnel
Ferrer, C.A.

April 10, 1959

Director of Forestry
Manila
Sir:

Supplementing our telegram to that Office yesterday:

I have the honor to submit the following facts and circumstances surrounding the sudden death of Forest Station Warden Cornelio A. Ferrer who, at the time of his death, was acting Officer in Charge of Maamot Reforestation Project.

Forest Station Warden Ferrer was in the District Office from April 6 to 8, 1959 working on his monthly service reports, traveling expense and general vouchers and other monthly reports for March, 1959. On the night of April 8, 1959, he left Tarlac, Tarlac at about 7:30 p.m. together with his only son of about 8 years old on logging truck arriving at Maamot Reforestation Project at about 11:00 p.m. He proceeded to his quarters—the temporary office-headquarters of the Project—where he allegedly fed his son preparatory to retiring in his room to sleep. At about 2:00 a.m. on April 9, 1959, the laborers—all trusted men of his—who slept in the sala of the same building heard a groan whereupon the laborers opened his room and shook him, bit his toes, pinched him and did almost everything to awaken or revive him but to no avail. He expired finally at about 3:00 a.m. April 9, 1959. According to information gathered from the laborers who used to sleep with him, Warden Ferrer very often suffered from the same stroke only they were not so serious, and said laborers have awakened him on time.

Upon learning of the incident, which was relayed to the undersigned by some of the laborers of the Project, the undersigned, together with local health and police officials including the wife and oldest daughter of the deceased forest officer rushed to the Project. An autopsy was conducted on the body and the facts and circumstances surrounding the cause of death investigat-

ed. The autopsy and investigation conducted yielded neither signs nor mark of violence or foul play as the cause of death. According to the investigating physician—Dr. Juan C. Ebetuer of the local Municipal Health Office in Tarlac, Tarlac—the cause of death was “cardiac failure” known vernacularly as “Bañguñgot”.

The remains of Warden Ferrer was brought to his home in Tarlac, Tarlac where it now lies in state pending arrival of his relatives who live in Paniqui, Tarlac and Sto. Domingo, Nueva Ecija. Internment will take place tomorrow, April 11, 1959, at 3:00 p.m. in the local Roman Catholic Cemetery.

With the death of Warden Ferrer, this District is one man less in personnel. In order that the work in the Maamot Reforestation Project may not be interrupted and paralyzed, it is recommended that Nursery Farm Foreman Restituto V. Acosta be designated acting Officer in Charge thereof. He is a Ranger Graduate and provided he is given good and efficient assistants—Plant Propagator, Nursery Farm Aides—he may be able to handle and push through the work in the Project successfully. All equipment, tools and other government properties in the Project will be turned over to Nursery Farm Foreman Acosta immediately pending assignment of whoever will be the successor of the late Warden Ferrer.

Very truly yours,
TORIBIO V. MANZANO
District Forester

—o0o—

Dean Gregorio Zamuco
College of Forestry
College, Laguna
Dear Dean Zamuco:

I am inclosing copies for two short papers on Scolytidae by Prof. Dr. Jojo Murayama, of Yamaguchi University, who, as you will recall, was a recent visitor in this country. This are: (1) An inquiry into the scolytid problems from Philippine lumber exports to Japan and (2) An introduction to the studies of Japanese Scolytidae. The first paper originally had no title and the present one was supplied by me, but it can be changed if a better one is deemed desirable.

Can you use these papers in Forestry Leaves? That seems to be the Philippine publication where they will fit. They are too general for the Philippine Journal of Science. I will appreciate being informed of your decision. In case Forestry Leaves has no place for this material, can you suggest another publication? Doctor Murayama left them in my care, with the request that I help him publish the articles here.

They appear to have some valuable information particularly for Local workers.

In the event that these will be published in Forestry Leaves, Doctor Murayama requested that at least the galley proof be referred to him at Yamaguchi for rechecking.

Very sincerely yours,
L. B. UICHANCO
Dean

Republic of the Philippines
City of Lipa
OFFICE OF THE MAYOR

August 5, 1959

Mr. Carlos Cunanan
Forester-in-Charge
Makiling Reforestation Project
College, Laguna

Sir:

This is to acknowledge receipt of your letter dated July 28, last, and of the ornamental tree seedlings taken by our agronomist Mr. Timoteo Comia last July 23. I hereby take the opportunity of extending to you my profound gratitude for the seedlings and for the kind consideration you extended in granting my request.

The seedlings we received will be used for planting in our hospital grounds alone which is estimated to be still lacking. Our Agronomist is also planning to plant both sides of the street leading to the city proper from the hospital to provide aside from beauty, shade to pedestrians going to and from the hospital. I hope therefore that we will be again granted planting materials upon further requests.

Reiterating my thanks for the seedlings, I am

Very truly yours,
(SGD.) BALDOMERO B. REYES
City Mayor
July 14, 1959

The Director
Bureau of Forestry
Department of Agriculture and Natural
Resources
Manila

Sir:

The Committee in charge of the construction of the Yukio Ozaki Memorial Hall in Tokyo has solicited the various diplomatic missions in Japan for contributions of their national trees to be planted in the lawn of the said Memorial.

The late Yukio Ozaki, who donated the cherry trees to Washington, D.C., is considered by the Japanese as one of their leaders in international affairs, who contributed a great deal to the promotion of better understanding between Japan and other countries. The committee has conceived

the idea therefore of having trees from other countries in the memorial grounds. To date, more than forty countries have already sent saplings of their national trees to the Committee.

The Chairman of the Committee has reminded us again about the possibility of our contributing saplings from the Philippines. I am, therefore, constrained to write to you directly hoping that you will find it possible to help us in this matter. It will be deeply appreciated if you can arrange for someone connected with your office to send us, through the Department of Foreign Affairs, 12 saplings each of narra, Benguet pine and Mindoro pine. If the saplings of these trees are not all available, you may send us saplings of anyone of them that can be sent here before the end of September. The Memorial Hall is expected to be finished sometime in October.

Thanking you for assistance in this matter,

Very truly yours,
(SGD.) MANUEL A. ADEVA
Ambassador

Republic of the Philippines
Subprovince of Aurora
B A L E R

Office of the Lieutenant Governor

August 7, 1959

Mr. Carlos Cunanan
Forester-in-Charge
Makiling Reforestation Project
L a g u n a

My dear Mr. Cunanan,

I am very grateful for your offer of several seedlings to be planted in the Quezon Memorial Park at Baler which was abandoned for several years. I regret, however, that due to so many unforeseen circumstances, in spite of my desire to see you personally to renew our old acquaintances and get the seedlings myself (although I was already in Mount Makiling during the last Jamboree) I was not able to see you. I am, however, sending to you our common friend, (whom I hope you will readily recognize) the bearer, Mr. Jesus Mejico, Agricultural Extension Worker for the Municipalities of Maria Aurora and Dipaculao, this Subprovince, to represent me and confer with you.

Mr. Mejico has my instructions to get from you the seedlings that you promised to give us. He has also been authorized by me to see if he can bargain for more seedlings appropriate for planting in our hallowed park. He is carrying with him a copy of the plan of the park to show and convince you to give us enough seedlings to plant where they are indicated in the plan. I hope as a friend and a former fellow student in Muñoz and now as a responsible public official,

you will not deny us the much-needed plants if only to compensate for the big expense Mr. Mejico is incurring for this special trip.

You were very kind to insert a small note in your official letter inquiring about a former classmate of yours bearing my own family name. I remember he must be Mr. Silverio Guerrero, a relative of mine in Casiguran, who is now a public school teacher about to retire. As per latest information he is also entering politics as Mayor of his town. As regards myself, if you remember one of the smallest students in Muñoz known as one of the two Edrings (one is your own Edring) that is me.

Again allow me to thank you for this great favor. I hope I will some day be able to repay your kindness in one way or another.

Cordially yours,

(SGD.) PEDRO V. GUERRERO
Lieutenant Governor

BUREAU OF STATISTICS
Ministry of Home Affairs
Republic of Korea
SEOUL, Korea

July 27, 1959

Mr. Carlos Cunanan
Republic of the Philippines
Department of Agriculture and
Natural Resources
Bureau of Forestry
Manila

Dear Mr. Cunanan:

I am happy to acknowledge the receipt of your letter of July 9, 1959. It is my regret that the pictures you mentioned in the letter have not been sent to you. I have just written a letter to Mr. Won Han Lee, Chief of the Forestry Section in Chungchong Pukto asking that those pictures he sent to you via air mail.

As a matter of fact, I have been with my new assignment in the Central Government in Seoul, since my unexpected transfer to the present position in the Home Affairs Ministry on June 10.

I am delighted to recall the time I spent with you and those forestry experts of your country. I am convinced that our association with you will contribute to the good-will of the two nations.

May God Almighty be with you, your family and your country,

Sincerely yours,
SANGUINE YOU
Director

No. 15 Kami-ushirogawara
Yamaguchi City, Japan
Aug. 5, 1959

Mr. Lorenzo Estrada,
Managing Editor, Forestry Leaves
College of Forestry
University of the Philippines
College, Laguna, Philippines

Dear Mr. Estrada:

Yesterday, I received with many thanks your kind letter of July 31, 1959. It is very kind of you to publish these articles on Forestry Leaves and I also received two proofs for them.

Today I corrected the errors and sent it back to you with the manuscript for it, under the separate cover. I hope these materials arrive in time for your issue.

Among two articles the shorter one is the salutation only for the entomologists and foresters in the Philippines and accordingly, I would like to cancel it in this occasion.

Reading the proof for the longer article, entitled "An Introduction to the studies of Japanese Scolytidae", I found that five footnotes and two tables (Table III & IV) were omitted. As they are the necessary parts for the construction of article I would like to add them in the publication according to my manuscript sent back with the proof this time.

Please, send me, if possible, by return of post, the proofs of these parts added.

Thank you again for your kind treatment.

Very truly yours

Dr. Jozo J. Murayama,
Entomologist

JOINT COMMISSION ON RURAL
RECONSTRUCTION
25 Nan Hai Road, Taipei, Taiwan

Aug. 7, 1959

59-FD-6694

Dean Gregorio Zamuco,
College of Forestry
University of the Philippines
Makiling National Park
Los Baños, Laguna

Dear Dean Zamuco:

May I take this opportunity to express my appreciation for the kindness and warm hospitality extended to us during our recent trip to the Philippines. The visit has a most delightful one and the pleasant memories of our visit will remain with me for a long time to come. Through the courtesy of your countrymen we were able

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Forestry Leaves

Organ of the Student Body and Alumni of the College of Forestry, College, Laguna

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Editorials

ARBOR WEEK — A MERE SHOW?

Once again Arbor Week is here with us. And as it had always been since the institution of this annual celebration, people throughout the country will come to remember our mute and uncomplaining friends — the trees. Once more, our leafy crowned benefactors will come into the limelight. Once more, programs will be held in their honor. There will be speeches wherein litanies of the innumerable and invaluable services we derive from the trees are recited and at the end of it all will be the tree-planting activities to complete our salute to them. For one whole week — starting from July 27 and extending up to July 31 of this year — such activities will continue, all of which when summed up will be tantamount to the same oft-repeated message: LOVE, PROTECT AND PLANT TREES.

But all these are mere theatricals! True, the purpose of Arbor Week is noble. There is no denying that. However, there is a very big difference between just doing a thing because it is so ordered and doing it in order to attain the ends for which it was established. For with our present practice of celebrating Arbor Week by holding programs and mass tree-planting, after which those trees planted are merely left there on the ground to try their luck in their hard fight for survival without our giving them a helping hand in their struggle. Do you think that this is in consonance with the purpose for which this annual arbor celebration has been instituted? If the trees planted during Arbor Week are planted, not because we want these to grow

up so that we may benefit from them when they reach maturity, but because it has been so written and ordered for us to do so, then there is no use of having Arbor Week. It will be just a waste of time, effort and planting materials.

So, if Arbor Week is celebrated just for compliance, instead of serving as a reminder for each and every one of us every single day of the year that we should plant trees, protect and care for them so that they would grow up to full maturity so as to derive from them all the benefits they can give us, then it is just as good as not having any celebration at all because the things we do during this one week celebration would only defeat the purpose of Arbor Week. — fsa

HANDWRITINGS ON THE WALL

Years ago whenever someone spoke of the necessity of conserving our forests by wise use, no one paid attention to him, for at that time the Philippines was enjoying one of the world's best forest resources. Now things have changed. It is now the general belief that unless a sound conservation program is launched effectively and immediately, there will be no forested area to exploit twenty years from now.

The Society of Filipino Foresters at their recent conference brought the subject of conservation to the fore. It had been pointed out that our forest resources have tremendously dwindled and the effects of forest destruction are such that the problem of protecting them cannot just be merely laid aside.

The old argument of "No Funds" can no longer hold water. The Reforestation Funds from fees paid by concessionaires was presumably spent to reforest areas which have been denuded, or to check the destructive work of kaingineros on public domain, as well as protect watersheds and promote sound forest management. But it has been alleged that the money has been used to finance dubious projects.

Dr. Tom Gill's talk to the Philippine Lumber Producers' Association pointed to the handwritings on the wall. The grim warnings were repeated by the speakers at the Conference of the Society of Filipino Foresters. We cannot now be blind to the fact that our forests are fast dwindling and, unless we take immediate steps, we shall experience the sad tragedy that struck other countries who had the same way of thinking as ours at present. — LME

THE FRESHMAN COUNSELLING STAFF

The Freshman Counselling Staff, Dr. Stone's brainchild, is an answer to a long felt need of the College for the effective solution of its scholastic delinquency problem. Since 1945, according to the annual report of the Registrar of the University of the Philippines, the College leads the other units in the number of delinquent students. The delinquency rate would have been greater, had it not been for the fact that every year the entering freshman students are screened by entrance tests and personal interviews.

A recent study revealed that the greatest number of delinquent students belonging to the Freshman Class were inadequately prepared for college work, and quite a number came to the College because of parental decision. Among the brighter ones, the failures were due to faulty study habits and too many extra-curricular activities.

(Continued on page 82)

INCIDENTALLY

"Absence makes the heart grow fonder," so goes the familiar saying. That's why, after missing them for one solid year, the whole Forestry campus particularly their loved ones whom they had left behind, are more than eager to welcome Nap Vergara and Lucio Quimbo back upon their return from the States come September 16.

Nap and Quim, both instructors of this college, left for abroad last year to take up their master's degrees at the Syracuse University N. Y. The former specialized in Forest Economics while the latter in Forest Products. And now that their one year of studies and observations abroad are over they are coming back to impart to the Forestry students the knowledge they have gained from that higher institution of learning in the field of studies they have specialized in. "Professors" Vergara and Quimbo, welcome back home!

Ironically, however, the coming back of these two means the going of the next batch of their colleagues for their post-graduate studies too. Juanito Lamanilao, instructor in Forest Engineering, left September 13 to specialize in aerial photogrammetry at the Syracuse University. Flor Mauricio, together with Bert Pollisco, are scheduled to leave for the same University on or about September 16. The first, who is handling subjects in Silviculture and Forest Management in this institution, will major in these lines of studies while the latter will specialize in the course he is at present teaching — Forest Products. *A bon voyage* to you all and here is keeping our fingers crossed so that at the end, you will "bring home the bacon."

Somewhere in this issue is an article about the College of Forestry library. From this item, we gather that a great bulk of the volumes it now has come from donations from various sources. Barrington Moore, the Rockefeller Foundation, alumni of the college, and the Visiting professors are to mention, only a few of these benevolent donors.

However, its present collection of old books and pamphlets relative to forestry is far from complete. That is why an appeal is being made to the alumni so that in case they have old issues of the "Makiling Echo" and similar other materials, they can donate them to the College of Forestry library where they will be of immense help to the students, particularly those making researches.

For the UPSCAns who attended the UPSCA Field Day at Diliman, August 23 is one day for them to remember. Accordingly, this was the first time in the history of this organization that the different student catholic units of the University grouped together to do some celebrating. The day's activities started with a solemn high mass officiated by the Papal Nuncio to the Philippines, Msgr. Salvatore Siino, followed by the general meeting and program. Senator Francisco "Soc" Rodrigo was the guest speaker. During the Barrio Fiesta which was held in the afternoon at the Delaney Hall, parlor games and contests of various sorts were held, and our representatives ran away with some of the prizes. The "Simplest Booth" award was given to the Forestry booth. The day terminated with a benediction officiated by Fr. Ortiz.

EDITORIALS . . . (Continued from page 81)

While there had been an attempt in the past to assign students to faculty counsellors, a check showed that the counselees were either reluctant or indifferent to seeing their advisers. This was perhaps due to the practice of assigning students indiscriminately to faculty counsellors who either had no time for counselling on account of overload teaching or had no love for counselling work.

Dr. Stone realized this situation. He felt the need for an efficient and effective counselling and guidance program for the Freshman class. The Counselling Staff, composed of young instructors, trained by Dr. Eleanor T. Elequin, of the Office of the Dean of Student Affairs, of the State University will undertake the task of solving the delinquency problem.

Our congratulations and best wishes to Dr. Stone and the Staff.

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(Sgd.) EDILBERTO Z. CAJUCOM
Business Manager

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Mayor, Las Baños, Laguna

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