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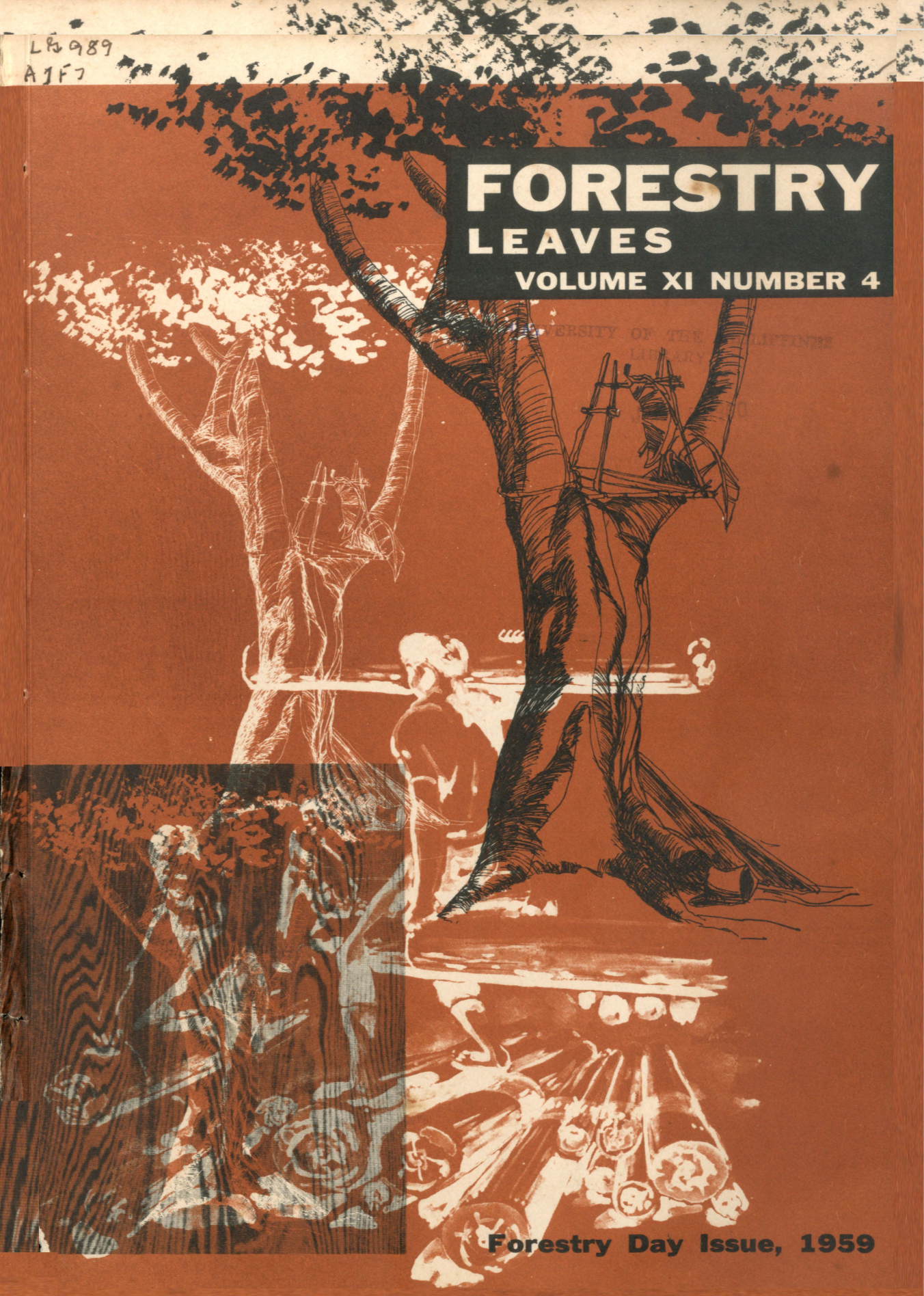
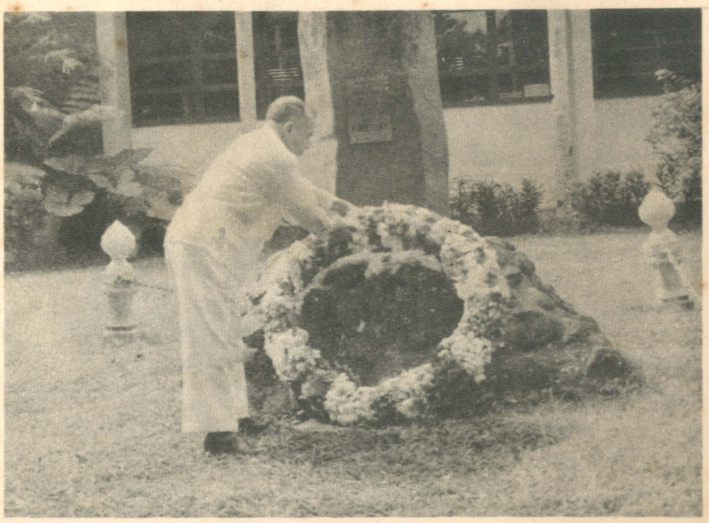


Forestry Day Issue, 1959



U. P. President V. Sinco laying a wreath in front of the College Cenotaph on the Twentieth Forestry Day, November 30, 1959, in memory of those who died for the cause of Forestry.

In this issue:

Forestry Proposals for the Philippines

By TOM GILL

General Situation

The forest problem of the Philippines centers about the rapid rate of forest destruction. Each year the pace of devastation mounts. Each year the forests decline. Already over wide areas they have been wholly annihilated. The great bulk of this denudation is not primarily the result of logging, for logging, when properly conducted, is simply the harvesting of mature timber. The destruction that threatens the future of the Philippine forests today results in great part from the widespread system of shifting agriculture known as "Kaingin."

Under the practice of Kaingin, the farmer fells and burns the trees on a few hectares, then selects the most promising patches thus liberated to the sunlight and temporarily enriched by wood ash to plant his seed. For two years, or three, the land may bear crops, but by that time soil exhaustion so depletes the harvests that the farmer abandons his area and burns another part of the forests. Every few years, then, this process is repeated, and when pursued by thousands, as in the Philippines, it can wreck whole provinces. The process represents an enormous loss to the community and the nation, while the benefit to the kainginero is scant, for his harvest is pitifully small.

This age-old practice of carving small farms out of the forest is common to the tropics of both hemispheres. Actually, it is not a system in the sense of any definitely worked-out procedure, but has become a forlorn makeshift in which the farmer fights a futile rearguard action against time, and leaves behind him a trail of ruin. In the Philippines, literally thousands of small clearings are hacked out annually and burned to create temporary farms which pockmark both virgin forests and logged-over areas. On some islands, forest denudation has progressed to the point where nothing remains but snags and abandoned land that is being taken over by cogon grass or, even worse, is being eaten away by erosion, The great area of abandoned land is proof in itself that these soils were never suitable for permanent agriculture. For kaingin is in effect an attempt to do the impossible — to force forest soils, often steep and infertile, to permanently produce food crops.

In the Philippines, the practice is made even more wasteful by the custom of burning and clearing all of the ten or twelve hectares usually allocated for each farm, but planting only the one or two hectares that seem most promising. The rest is invaded by grass or destroyed by fire or erosion.

Archeologists claim that this practice of shifting agriculture was responsible for the disappearance of the Maya civilization in the highlands of Guatemala; it has ruined or degraded fifty percent of the cultivable land of Mexico.

In most countries, the harmful effect of shifting cultivation is a direct result of heavy population pressures on the land; but in the Philippines, though population pressure is heavy, there is less clearing of land by bona-fide farmers today than by professional squatters who make a business of burning and clearing in order to establish title and then sell the land, move on, and clear again.

Kaingin has spread rapidly since the Second World War, and received impetus from the "Land for the Landless" movement of the late President Magsaysay. Originally, this movement had as its humane objective an orderly opening of true agricultural land for permanent settlement. Today, it has largely been perverted to speculative and land-grab ends, until "Land for the Landless" has become in actual fact "Land for the Lawless".

Most of the clearing is now being done by squatters on government-owned forests, who destroy the timber and occupy the land without the least vestige of legal right. These professional squatters seem to be well organized, often under the direction of land speculators and private surveyors living in nearby towns. Meanwhile, the belief is being fostered that under the "Land for the Landless" policy all forested areas in the Philippines are to be released for homesteading.

Thus encouraged, the squatter crowds in and occupies land originally dedicated by the government to permanent forest purposes, either for soil protection or for the perpetual production of forest products. Yet in spite of the fact that these areas are federal property, reserved for forest growth, the squatters by weight of numbers and through political influence create pressures to release the land from forest administration and open it to agriculture. The presure, carefully manipulated, is usually successful. Many squatters seem to be skillfully directed toward selecting strategic sites best calculated to render areas unfit for forest management, and so force their release. Most often at this point the organizing parties step in and take over the land, and a valuable forest potential has been destroyed under the pretext of increasing food population.

This ever-widening expanse of destruction left by the kainginero, then, constitutes 90 percent of the forest problem of the Philippines, and unless the problem is promptly and courageously dealt with, all other attempts at forest management and forest protection will be nullified. For as a result of successful pressure to release forest land, great areas have already been alienated and turned over to private ownership regardless of their suitability for agriculture. Indeed, the question of agricultural suitability or nonsuitability simply does not enter: the deciding factor seems to be the political strength of the demand.

The impermanence of the government forests under these conditions makes management next to impossible, creates serious obstacles for the logging and lumbering operators, and endangers the entire future economy of the Filipino people. If this loss of timber and soil resulted in any tangible addition to the food supply, there might be some possible justification; but the fact that the land is not suitable for agriculture is borne out by the negligible amount that remains in cultivation. The overwhelming remainder has been abandoned.

Progressive forest devastation is now so common that in virtually all of the tree-covered areas of the Philippines fires of new clearings dot the hills throughout the dry season, and smoke covers the blackened countryside for miles.

In the Philippines, as in most of Asia, the need for increased food production cannot be denied, but this need could be far better met by more complete and intensive use of agricultural land already cleared, as well as by the introduction of high-yielding food crop varieties, than by clearing forests from slopes that may be sterile, all for the sake of two or three problematical harvests before abandonment. The sole reason why these forest soils produce even one harvest lies not in the fertility of the soil itself: it lies in the nutrients — rapidly exhausted after forest removal — laid down by decades of forest litter.

No one can even guess the loss entailed in soil and forest values by years of unrestricted kaingin. Already forest des-

truction is jeopardizing the future of the lumber industry, the third major export industry of the nation, and through erosion and water shortages is menacing many a hectare of true agricultural land in the valleys below. Over large areas the forests have been as utterly destroyed as in Korea or North China. For miles the land has been degraded from a permanent national asset into a permanent liability, for it is unlikely that within the foreseeable future much of this land can be economically reforested.

Today, with the present attitude of government and the apathy of the public, no part of the "permanent" forest is safe from alienation and clearing. Even areas under forest management are doomed if pressure is strong enough. The Bureau of Forestry, in accordance with its policy of perpetuating the forest after lumbering, requires the operator to refrain from cutting certain trees, which are to form the nucleus for a future crop. These trees are marked by forest officers, and the timber cutters are forbidden to fell them, even though they may be merchantable. As a result, a thrifty young stand of trees is left that, with reasonable protection, would provide future forest products, future employment, and future revenue to the nation.

But this hope is short-lived. For almost invariably, no sooner is the last log removed from the cutover area than squatters swarm in, burn the trees that are left, and begin again a cycle of plant and abandon. So the work and expenditures of the Bureau, the financial sacrifice of the logger, and the source of tomorrow's revenue and employment are alike blotted out for a handful of corn and the possession of a few hectares of rapidly deteriorating soil.

Even experimental areas established for purposes of forestry research are not exempt. Foresters of the Bureau and of the College of Forestry have become reluctant to undertake studies, however, sorely needed, since there is no assurance that their work will not be wiped out before results can be obtained.

At this juncture one may ask, "But what about the laws? Are there no penalties for this illegal destruction of government property? Laws do exist. They are wholly inadequate from the standpoint of penalties invoked, but the chief difficulty lies in securing convictions. Local law officers openly sympathize with and encourage the kainginero, and on the least pretext dismiss the case against him. Lawyers and local politicians vie with each other for the privilege of defending him, in order to gain his favor or his vote. Under these circumstances, the case against the squatter usually drags along for years. Meanwhile, he returns to his clearing and burning. But if, by some exceptional circumstance, a conviction is finally secured, the penalty is so light that it lacks all force as an example to deter others.

In all cases of forest violation, forest officers have the responsibility of acting as prosecutors — a system that most countries have discarded as unsatisfactory. In the Philippines, nothing has so completely served to discredit the Bureau in the eyes of the public as has the impunity with which legal and political authorities, high and low, thwart its every attempt to protect the nation's property.

Here then, in this failure to deal with the rising tide of destructioon, lies the greatest danger to the Philippine forests and industries. It is not a question of what *may* happen if forest lands are denuded — it already *has* happened over large areas. It has happened on Cebu, on Bohol, most of Negros, and in many other once-forested regions. Under the impact of similar abuse, it can denude any island of the Republic and render the environment unfit for human life. All too commonly one sees large areas that only a few years ago supported one of the finest timber types the world knows, valuable species that foreign markets are eager to buy, now snag-dot-

ted and useless — not only useless but an ever-present menace to the agricultural lands below, to irrigation and to hydro-electric power installations, whever erosion has begun to claw away the soil of the steep, naked slopes. Yet not a single effective step has been taken to cure or curtail this national malady.

Before one can consider recommendations to curb the damage wrought by the kainginero, or to plan for the forestry future of the Philippines, it may be useful to describe briefly three major factors involved in the forestry situation: the forests, the forest industries, and the Forestry Bureau.

Three major factors

1. *The forests.* Present forest areas have been greatly reduced by human occupancy, and today the most important commercial areas lie on Mindanao, eastern and north central Luzon, and the islands of Samar and Palawan. Recent figures indicate that the commercial forest areas have shrunk by more than 2 million hectares during the last 25 years, and that today they cover about 9.3 million hectares, or 31 percent of the total area of the Philippines. Of these, only about 7 million hectares are accessible. Ninety-nine percent of the forest land is publicly owned. The forests for the most part are mature or overmature, and, as in all virgin forests, growth is balanced by death and decay. It follows, then, that until the mature and over-mature trees are harvested, and the forests placed under management, the growth potential is not adding one centavo to the national wealth.

The forest cover includes large areas of tropical hardwoods and fairly extensive areas of pure pine. The dipterocarp forests — chiefly various species of lauan or so-called Philippine mahogany — constitute about 75 percent of the commercial forests and are by far the most important forest type from the standpoints of area, volume, and value. Dipterocarps occur throughout the Philippines at nearly all elevation except the high altitudes of the Mountain Provinces. Natural reproduction offers no serious problem under proper cutting systems, and provided the area is protected from fire.

The pine forests of the Mountain Provinces occur as secondary forests in almost pure stands. Here too natural regeneration is satisfactory where seed trees persist, but fire destroys much of the new crop. Commercially unimportant today, these pine forests, under protection and management, may become a possible source of paper and pulp. Such use, if planned on a permanent basis, would add materially to the industrial strength of the Philippines, which now imports 80 percent of its newsprint.

The total estimated forest volume is about 900 million cubic meters, of which 720 million cubic meters is accessible. The volume represented by trees of merchantable size is about 600 million cubic meters.

Total annual forest drain from all sources is a matter of conjecture. The actual annual recorded cut is about 6 million cubic meters, but there are no records of illegally cut timber nor of the vast quantities destroyed through kaingin. Regardless of the exact amount, the important fact is that under the present rate of removal disastrous inroads are being made on the forest capital. It is by no means impossible that the point may already have been reached where the forests cannot permanently provide for the demands of the expanding economy of tommorow's population.[1]

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[1] In 1956 H. G. Keith wrote, "On the basis of area alone, it is estimated that the Philippines has a scant margin of about 4,000 hectares a year between the area of forest annually exploited at present (42,000 ha.) to maintain actual production on a sustained yield basis, and the theoretical annual cut (46,000 ha.) based on the total area of permanent forest. The estimate does not take into consideration the number of adverse factors which reduce or cancel this scant margin."

It certainly does not take into consideration the ravages made by the squatter, since this report was written in 1956. For according to recent sta-

There can be no least doubt that requirements for forest products are bound to grow. The population is increasing at the rate of more than 3 percent annually, and industrialization and technical advances will call for ever higher per capita wood use.

So it will require careful forest management, as well as less wasteful logging and better manufacturing techniques, to provide an adequate permanent source of the raw materials the future is certain to demand.

One thing is certain: this demand cannot possibly be met unless the depredations of the squatter are stopped, and stopped soon.

2. *The forest industry.* One of the major bulwarks of the Philippine economy is the forest industry. Ranking third in export value, the lumber industry annually contributes 100 million pesos to the national wealth in foreign exchange through exports, and 130 million pesos more from the sale of domestic timber. The industry is a source of direct livelihood to about half a million people, and gives indirect or part-time or livelihood to several times that number.

Logs and lumber are exported to world-wide markets, Japan being the major importer of logs, and the USA of sawn timber.

Logging on the public forests is performed wholly by private enterprise under timber-extraction permits or concessions issued by the Bureau of Forestry. Concessions vary in size from about 1,000 to 250,000 hectares, and are limited in duration to periods of one to two years, after which they may be renewed, "if performance is satisfactory." The government imposes a fixed charge on all timber, regardless of its accessibility, a method which seems neither equitable for the operator nor good practice for the government.

All accessible forest areas are said to be under concessions, although on many of them no logging has been begun. This holding of idle concessions for speculations or reasons represents a loss of revenue to the government, a loss of growth potential in the forest, and an obstacle to operators who are willing and able to begin logging and manufacture.

Timber operators in the public forests suffer two uncertainties: First, they cannot be sure of the amount of timber they may count on throughout the investment period. Estimates of timber available, made at the beginning of the operation, soon become worthless when squatters riddle the concession, as they do practically at will, drastically reducing the supply, making it necessary to revise cutting plans, rendering efficient management impossible, and frequently jeopardizing the entire economic outcome of the venture. Since the land under concession is government-owned, the operator is practically powerless to deal directly with the squatter, but must depend on the Bureau for protection. This responsibility the Bureau, because of lack of personnel and transportation facilities, is unable to redeem, leaving the operator without recourse.

The operator can then only watch hectare after hectare of valuable timber burn to ashes without returning a single centavo to the government or to the investment made for its harvesting.

A second uncertainty results from the fact that the operators have no initial guarantee of the duration of their concessions, and find it difficult to obtain the long-term leases necessary to justify their investments. This places an added and seemingly unnecessary hazard upon a business that is often hazardous enough. Leases limited

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tistics, the average annual reduction of commercial forest during the past 25 years is about 85,000 ha.

There is undoubted need for more thorough and dependable statistics than now exist. These could best be obtained by aerial surveys, but until greater stability and protection can be afforded to permanent forest areas, the results of such a survey would be of doubtful permanent value, and the expense hard to justify.

to one, five, or even ten years make plans for permanent production almost impossible. They offer little incentive for investments in industrialization which would help allay the serious unemployment situation of the Philippines.

In the past there has been and to a large extent still is enormous waste both in logging and manufacturing. Probably three-fourths of the wood standing on the average hectare of forest land is unutilized in the process of conversion into lumber, plywood, and other products. Part of this loss is unavoidable under present market conditions; part of it — chiefly the result of carelessness in felling and yarding — could be sharply reduced by proper supervision and planning.

Gradually, through efforts of the Forestry Bureau and studies of the Forest Products Research Institute, as well as through the initiative of the lumbermen themselves, improved practices are becoming apparent, and there is good reason to expect less and less waste in the woods and closer utilization in the mills. In the various processes of manufacturing especially, impressive strides are being made, such as in the establishment of plywood plants and hardboard plants.

All this would seem to forecast a promising future for the lumber industry, and ever-increasing values for the resource itself, were it not that illegal forest destruction by squatters is undermining the basis of the entire industrial enterprise.

3. *Forestry Bureau.* Administration of the public forests — a resource valued at over 25 billion pesos — is the responsibility of the Bureau of Forestry, operating within the Department of Agriculture and Natural Resources. Created in 1900, the Bureau was reorganized in 1945 after the Japanese occupation, and again in 1957, on a line and staff basis, much like the Forest Service of the United States of America. It is headed by a Director of Forestry, under whom is a Deputy Director, seven Division Chiefs, all in the Manila office, and 45 District Foresters, who have territorial responsibility for all Bureau activities within their Districts, except for certain phases of land classification and for the regional experiment stations.

In administering the public forests, the Bureau suffers a number of heavy handicaps. It is held responsible for the enforcement of many of the regulatory provisions of the forestry laws, a responsibility it has neither the facilities nor manpower to redeem. It is understaffed, underpaid, unsupported at top levels, opposed at local levels, and continually frustrated in its attempts to carry out its allotted tasks. In transportation facilities particularly the Bureau is ill-equipped, and is forced to depend on the generosity of concessionaires. Because of the generally unsympathetic attitude of provincial governments and local courts, it is grossly obstructed in its attempts to enforce the forest laws, and even more in its efforts to apply a consistent policy directed toward the long-range development of the forest resources.

Further, the Bureau of Forestry is in the anomalous position of bearing full responsibility for securing management while at the same time facing conditions which make forest management impossible. The invasion of squatters on an ever-ascending scale and the constant removal of "permanent" forest land for agricultural purposes precludes any possibility of the Bureau's redeeming its responsibility toward rational forest management. Forest management is a very long-time affair, and must have continuity of policy and administration. At present there is no least assurance that the forest under management today may not be released for agriculture tomorrow. Here, in the instability of the public forest and in the impossibility of any rational management, is the very essence of the Philippines' forest problem.

In view of these handicaps, it is easy to understand why trained men are not en-

tering the Bureau at a rate to compensate for the numbers that are leaving. This lack of incentive to embrace forestry as a career is having its inevitable effect on the College of Forestry, whose faculty meets with increasing difficulties in obtaining qualified students interested in receiving technical forestry training. Yet without men of technical training, it is difficult to see how the forest resources can be properly managed, for here, if anywhere, is an urgent need for competent men, adequately grounded in the fundamentals of the science of forestry.

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 law, all these will avail very little unless administered by a body of foresters well trained technically and imbued with a sense of professional integrity.

Through its Division of Reclamation and Reforestation, the Bureau has embarked on a program to reclaim by reforestation overexploited areas and deteriorating watersheds. Reforestation for the most part is confined to denuded areas of important watersheds where there is little probability of natural regeneration. The Bureau's program calls for reforestation of some 2 million hectares of these lands, but the area reforested annually totals less than 6,000 hectares, or less than one-tenth the area annually deforested.[2] The Bureau operates some 38 forest nurseries, and is testing the value of a number of exotic tree species.

It is highly unlikely that reforestation from public funds will ever restock the idle lands or even keep apace with the area annually deforested. Meanwhile, until adequate protection is assured for existing forests and for cutover areas dedicated to permanent forest purposes, expenditures for reforestation are difficult to justify.

Causes of forest destruction

The wave of destruction now sweeping over the Philippine forests is the result of several causes. Abuse of the "Land for the Landless" doctrine is one cause, together with the rumor that under this doctrine all the public forests are to be released for agriculture. Another cause is the widely held belief that forests are an obstacle, a burden to be swiftly removed in order to release the land for good crops. This attitude would be justified only wherever the land is actually agricultural and capable of raising permanent crops. But to remove the forest cover from hectares that are incapable of supporting permanent agriculture amounts to an economic crime.

Throughout the world, history has amply proved that the removal of forests from non-agricultural lands is usually followed by soil deterioration, erosion, silting, and floods, and, if spread over sufficiently wide areas, renders the land unsuitable for human occupancy.

History too has proved that the removal of forest cover, especially in the tropics, often creates conditions prejudicial to health. In India and Mexico, winds sweeping over deforested areas fill the air with infectious dusts which are a source of discomfort and disease.

Yet the concept of the forest as something to be burned and got rid of exists very strongly in the Philippines, and in recent years has been systematically promoted by individuals and groups interested in gaining possesion of land.

Except under very unusual conditions, a nation requires about a third of its area to be forest covered, in order to avoid the hazards that attend too complete deforestation. The precise amount varies with topography, degree of industrialization, and other factors, but it is hazardous to reduce

[2] In an attempt to accelerate the reforestation program, the government has inaugurated a system of tree-farm leases under which idle public lands are leased for tree planting. This lease system has never accomplished its purpose, but is being used as additional tool to acquire public forests for private gain.

the forested area below 30 percent. This minimum will be reached in the Philippines as a whole within the foreseeable future unless the rate of destruction is drastically and promptly reduced. Forested areas in many of the provinces have already fallen below this minimum.[3]

Another factor contributing to forest destruction stems from the general misconceptions as to what constitutes agricultural land. Any patch of earth that will grow two or three meager crops of corn is generally considered agricultural by the Filipino "pioneer" farmer, and gives him an adequate reason for destroying the forest cover. Actually all that has made those two or three crops possible is the stored-up fertility contributed by years of forest growth and decay, and the ash produced by burning the forest cover.

It is very easy to fall into the error of believing that any soil which can produce forests as luxuriant as the rain forests of the Philippines must necessarily be of surpassing fertility. But much of this soil is not fertile at all. The fertility that sustains these great forests lies 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 in clearing the land for agriculture, and in a very short while all that is left is a very sterile, inhospitable soil, totally unfit for raising food crops. Such soil then, after brief cultivation, is abandoned, and may with good fortune return to trees, but more likely it will be taken over by cogon. This may be burned for a few years to provide pasture, after which the grass becomes too sparse to have any value. By now the soil itself may have lost its life. If these hectares happen to be on step slopes they may begin a destructive cycle of erosion, menacing the agricultural lands below and silting up dams and reservoirs — in a word, making the region less habitable.

The loss of forests, serious as that may be, does not directly involve the menace to human living that follows the destruction of the soil, for the soil is the basic source of the world's wealth, the indispensable commodity that makes human life possible. And the soils of the tropics are particularly fragile. Once the protection of a forest canopy is removed, the baking sun and torrential rains bring on swift deterioration that in a few months may convert the soil to a hard and sterile substance, unable to support the scantiest vegetation. Throughout history man's attempt to establish permanent agriculture on sterile forest soils has been doomed to failure. Proof of this failure is amply evident in the Philippines.

In a country where population is increasing as explosively as in the Philippines, no one can be unsympathetic toward using every hectare for food crops, provided these hectares are suited for permanent agricultural production. Every forester must share wholeheartedly the common interest in increasing food supplies, but there seems little hope from the present policy of encouraging squatters to destroy a great renewable resource for a few short-lived harvests.

Contrary to popular belief, there is already more cleared land in the Philippines than the farmer can make use of. Until these idle or partially cultivated lands are put into agricultural production, further clearing of lands now producing values in terms of tree growth would seem an economic blunder. No country can exist indefinitely on the ashes of its burned forests.

Certainly, the present suicidal process of annually destroying forests and forest soil, with no permanent gain in food production, can only aggravate the two crucial problems of mounting population and ris-

[3] Statistics released in 1959 indicate that the area of commercial forest has been reduced to 31.4 percent, and it is pointed out that the rate of timber cutting and land clearing in 1958 reached in all-time high.

ing unemployment. It can only hasten the day when the Philippines may have to import both food and timber. In an effort to help prevent this dual catastrophe and to strengthen the Philippine economy, the following section presents a number of recommendations.

RECOMMENDATIONS

Soil destruction, burned forests, and man-made deserts do not solve themselves. Dead civilizations of yesterday have proved that. Yet while it requires little wisdom to catalogue a nation's errors in handling its forests or to indicate in general terms what should be done, difficulties become at once apparent when an attempt is made to indicate the specific steps. For precisely at this point the proposals run afoul of human lethargy, established customs, and political expedience.

To deal successfully with the forest problem of the Philippines, remedial measures must include legislation, law enforcement, administration, and education. Complete success must wait upon changes in public attitudes and the creation of public land conscience that will not tolerate the destruction of a great national asset.

Fortunately, the changes that are fundamental to an effective program lie within the reach of immediate action; other recommendations can be postponed without endangering the basic program, although their early adoption would make for more effective forest management and utilization. For this reason, the recommendations that follow have been divided into "immediate" and "long-range". The first four immediate recommendations, if promptly adopted and adequately implemented, will go very far toward protecting the forests of the Philippines from present wholesale destruction; the remaining recommendations (Nos. 5-15) would place them upon a secure basis of perpetual production.

But the compelling need is to make a beginning, for, faced with increasing forest devastation, the Filipino people cannot afford to wait upon a fully developed resource program. The very fact that a beginning has been made should help advance the day when the nation can be said to have embarked upon a rational, comprehensive program of resource conservation.

Immediate recommendations

Public Forests

1. *Determine amount and location of permanent forests needed by the nation, establish the boundaries of these areas, and proclaim them.* This is the one indispensable step before any program of forest conservation is possible. This is a step that should be taken with all possible speed. To expedite it, the present land classification program should be concentrated on establishing the boundaries of these permanent forests rather than on releasing forest lands for agriculture. In so doing, full consideration should be given to the fact that sufficient areas must be included in permanent forest not only to sustain existing forest industries but to provide raw material for future requirements from probable population increase and industrial expansion.

In addition to the areas set aside for production purposes, all areas needed for the protection of watersheds and present or expected hydro-electric development should be proclaimed as permanent forest. On these protection forests the public good may require that logging be curtailed or wholly eliminated.

2. *Enact legislation to maintain the nation's permanent forests inviolate from release.* No useful purpose is served by proclaiming permanent forests unless they are protected by law, with unchangeable status that may not be altered except by Act of Congress. Since the entire forest economy will have to be based upon successful management of these areas, there must be absolute certainty that the areas will not be removed from public ownership and admi-

nistration except under extreme emergencies. If the forest products industry is to make its full contribution to the national economy, it must be able to depend on continuous harvests of timber, based upon sustained yield, and this dependence cannot exist unless there is complete assurance that the public forest, once proclaimed as permanent, will remain permanent in fact.

3. *Enact legislation providing adequate penalties for theft and trespass.* Penalties at present imposed for theft and trespass are so lenient that they fail to serve as a deterrent. Law officers, usually sympathetic to the squatter, impose such light punishment that the intent of the law is annulled. Minimum penalties for the various types of theft and trespass on public forests should be mandatory, so that when guilt is proven the penalty may not be nullified by some too sympathetic judiciary officer.

4. *Establish a system of forest police.* The present forest guard system has proven wholly ineffective in protecting the public forests. Legislation, however, perfect in itself, is of small value unless implemented by an efficient system of enforcement. Simply to announce the creation of permanent forests or national parks is no least guarantee against fire, despoilment, vandalism, trespass, or any other depredation. Forest areas must be cared for and guarded. In the absence of public support and the wholehearted backing of government, it is idle to expect the undermanned Forestry Bureau to enforce regulations.

For the effective implementation of forest legislation, a system of forest police must be created, composed of mature, responsible men, uniformed and armed, thoroughly instructed as to their duties, unhampered by political interference, and supervised by competent inspectors. To build up an esprit-de-corps and a sense of service and integrity in such a body of men is the ideal to be sought, for once attained, it would insure the existence of the public forests for the benefit of the present generation and the generations to follow.

The Forest Industry

5. *Issue permits to cut timber on the permanent forests in the form of long-term leases.* The present method of granting and renewing timber concessions on a year-to-year basis imposes unnecessary hardships upon the industry and militates against efficient forest management and utilization. Under the present concession system, few operators can be expected to risk investments in costly permanent installations for fear of cancellations of their concessions and of serious timber shortage from the depredations of squatters. Leases of sufficient duration to justify the investments necessary for permanent well-managed installations, combined with a guarantee on the part of government of sufficient available timber, would encourage the timber operator to cooperate with the Forestry Bureau in adopting methods of conservative forest management that should result in added values to the forest, added revenues to the nation, and added employment.

6. *Award bids for cutting timber on the permanent forests only to operators competent to carry out management plans of the Bureau, based on sustained yield.* Equity both for the public and for the operator would be best served by awarding leases for timber cutting on the basis of competitive bids, submitted by timber operators who have presented satisfactory evidence of financial and managerial responsibility. Leases for timber cutting should be of such size and under such terms of sale and management as will justify private investments and return the greatest public benefit, both with respect to revenue and continued forest productivity. Timber operations should be carried out in accordance with management plans prepared by the Bureau of Forestry, and no permit should be granted until the logger's plan of

operation has been submitted to and approved by the Bureau.

7. *Place upon the lessee responsibility and authority for protecting permanent forest under lease and for insuring its continued productivity.* Responsibility for forest protection on concessions now lies with the Forestry Bureau, but the protection actually afforded has been ineffective. The Bureau has neither the manpower nor the facilities to protect the operator, and the operator himself, under the present system, cannot deal directly with the law violator on his own concession area.

A workable solution is to give the operator under long-term lease the responsibility and authority to protect his timber holdings against theft, trespass, and other forest violations. Under the terms of this lease, the depredations of the squatter could be handled directly by the operator, since these depredations would then come under the heading of property trespass. The protection thus afforded to permanent forest industries should materially decrease the damage done by squatters, help protect the forest from destruction, and increase employment.

8. *Cancel leases granted for timber cutting on permanent forests whenever the lessee fails to begin active operation within six months,* Many timber concessions are now being held without development for speculative purposes or other reasons. Any holding of forest lands on which operations are unnecesarily delayed represents a loss of growth potential to the nation, and prevents legitimate operators from securing concessions on the permanent forest.

9. *Reduce log exports.* A high percentage of top-grade logs is now exported in the form of raw material for manufacturing into finished products in other countries. If manufacturing were carried on in the Philippines, it would lead to increased income and increased employment possibilities. A gradual reduction in the quantity of log exports appears advisable, although any sudden decrease would be harmful to local economies. However, future cutting permits should favor operators equipped to manufacture the finished product in the Philippines over those who intend to export logs or rough lumber.

The Forestry Bureau

10. *Provide for the effective functioning of the Bureau of Forestry.* This recommendation envisages sufficient budget, personnel, and equipment (especially transportation) to enable the Bureau of Forestry to attain full professional status and to carry out its allotted tasks. Civil service standards governing entrance requirements and promotion should be provided, as well as freedom from political influence, and the Bureau should be assured of full governmental support in the proper pursuit of its duties. The Bureau's activities should be gradually decentralized, to give district offices more authority and responsibility, and to lighten the work load of the Manila office. From the standpoint of morale, it might be advantageous to follow the custom of many countries and require all forest officers to wear uniforms when on field duty.

General

11. *Allocate a portion of all forest revenues to local governments within the cutting areas for the purposes of education and cooperation in forest protection.* The knowledge that money which has become available to the local government for education and forest protection is derived from the forests should serve to impress upon local authorities and population alike the need to protect this source of perpetual revenue from destruction. If the money is derived from timber cut on a sustained yield basis, the amounts should remain fairly predictable throughout the years. The expenditures of such money should be strictly limited to the purposes provided by law.

12. *Allocate all fines collected for forest violations to the local governments under which such fines are imposed.* At present, long delays in bringing cases of forest trespass to trial are not unusual. The purpose of this recommendation is to compensate for expenses entailed in securing convictions, and provide an incentive for local authorities to bring to prompt completion cases against forest violators.

13. *Strenghten facilities for technical education.* The need for a technically trained body of men to implement any forest program in the Philippines has already been touched on. Technically, trained foresters are the men who will be responsible for the management and perpetuation of the forest resource. It is a matter of greatest importance, then, that they receive training adequate to enable them to carry out their tasks. This schooling should cover not only the technical aspects of forestry, but should inculcate a sense of public service and responsibility.

The Philippines is fortunate in having an excellent College of Forestry at Los Baños, the only institution of its kind in the Republic. It possesses a high-caliber faculty and a Dean whose outstanding merits are recognized throughout the forestry profession. But the College is still faced with serious needs, among which are a larger operating budget, a modernized library, and an expanded faculty. The development of opportunities for post-graduate study and courses leading to the master's degree are additional requisites.

Under any intensive management program the number of foresters will have to be increased, both in government service and in industry. To create the leadership and strength needed to carry out future programs, the quality of the graduate forester must be brought to the highest level through education and training. To this end, the College of Forestry should be enlarged and strengthened.

At present many students are dropping out at the end of the second year, after achieving the ranger's certificate, rather than continuing on to obtain a degree for the full professional four-year course. Although a need for subprofessional foresters, and the emphasis, wherever possible, should be on the four-year course in order to provide men of adequate training who are certain to be needed as the forests of the Philippines develop and require intensive management.

The present contract between the College of Forestry and Cornell University, whereby visiting professors are in residence for varying periods, will terminate in April 1960, after two and a half years of actual implementation. By that time it will not have achieved its intended long-range objectives. The present contract should be extended or a new contract negotiated.

As part of a training program, men should be selected for advanced work both in the United States of America and in English-speaking countries which are working chiefly in the field of tropical forestry.

14. *Explore additional methods of dealing with the squatter and kainginero.* Many ways of decreasing the damages caused by the squatter have been suggested. One lumber company in the Philippines reports success in employing kaingineros to carry out clean-up operations on cut-over areas. Others have proposed various methods of utilizing their manpower for useful ends. Thus, the British and French Governments have had some success in developing working agreements with the user in which the shifting cultivator plants his plot to trees before abandoning it for another. In Taiwan, areas cleared for shifting cultivation must be reforested by the land user after two or three years of cultivation. Financial returns from the sale of the timber belong to the user, except for 20 percent which is returned to the government in lieu of taxes.

It may be profitable to examine all these developments in the hope that one

or more might apply to the Philippine situation. Needless to say, any such procedures would supplement but not replace strict law enforcement.

15. *Initiate an intensive national campaign of public education as to the role that forests play in human welfare.* The ultimate goal of this campaign is to get conservation beliefs and practices into the folkways and customs, so that legislation and government policy will be reinforced rather than resisted. Where, as in the Philippines, many groups of the population have been isolated from modern developments, the coating of habit is thick and tough, and people not acquainted with any other mode of life are reluctant to discard the old for fear the new will be even less acceptable.

Beyond the immediate steps that can be taken lies the immense need for education, embracing the many forms of conservation information for adults, and the inclusion of resource teaching in the schools. This may well be the most difficult task of all. But until far greater numbers of the Filipino people are made to realize their inescapable 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, and it cannot be effected by legislation alone — only education. For a program of conservation is largely one of social control; final success depends on translating its ideals into routine custom and tradition.

The difficulties of including a new attitude toward the forests can scarcely be overestimated. Every effort is sure to be fought, resisted, and wilfully distorted, for it will interfere with age-old patterns and will run athwart of organized greed. To curb the destructive trends before too late will require all the courage and selfless labor of those Filipinos who today are writing, speaking, and teaching. No one knows better than they the task that is involved — the long, tedious processes of education, the need for new attitudes on the part of government if any program of conservation is to be translated into action out on the nation's burned and gullied hectares.

The specific purpose of this recomendation, then, is to acquaint the Filipino people — especially the Filipino legislators — with the manifold benefits of the forest and the evils that attend its destruction. Legislation must come first — legislation and enforcement — for in the Philippines one cannot wait for the long-term process of education. But ultimately, and however difficult the task, there must be created a national will for forest protection, and this cannot be created until the people realize the importance and the extent of the problem and are able to relate it to their own way of life.

Probably the initiative in formulating such an educational campaign should be taken by the Bureau of Forestry, but development of the plans and the actual labors should be shared by all organizations having to do with the forest resource, including the National Economic Council, the Philippine Lumber Producers' Association, the College of Forestry, and the International Cooperation Administration.

Long-range recommendations

Any distinction between immediate and long-range recommendations should not be regarded as hard and fast. For it is based largely on the difference between those steps that can and should be taken at once and those which can and probably must be put off until some later day because of financial, administrative, or other reasons. It goes without saying, of course, that the forest situation in the Philippines would be improved if both immediate and long-term recommendations could be adopted at once.

16. *Initiate a forest inventory based on aerial survey.* Until the volume and growth

of a nation's accessible production forests are known, a national policy for the sustained harvesting of forest products cannot be accurately formulated. To determine the volume and kind of wood in a given forest area, together with the rate of growth, is the purpose of a forest inventory. An inventory is to a forest manager what a knowledge of capital and income is to a business enterprise.

The last inventory in the Philippines was completed in 1935. The Bureau of Forestry is now engaged on a 2 percent inventory of the timber resources, which at the present rate will take ninety years to complete. By far the simplest and quickest method for obtaining satisfactory data would be through the use of aerial photographs. Once the mosaics and maps are available, a satisfactory forest inventory could be completed within two years. An aerial survey would give sufficient accuracy, particularly regarding the area and size classes. Such a survey should eventually be undertaken.

But until the boundaries of permanent forests are proclaimed and assurance given that they will remain inviolate from release, expenditures for an aerial survey or a forest inventory will not be justified. Neither would there be any purpose in spending funds for an inventory of inaccessible and more remote areas until such time as they may be ready for exploitation.

17. *Expand research.* From the long-term viewpoint, forest research, properly planned and conducted by competent personnel, probably returns as high dividends as any phase of forestry. Nevertheless, adequate appropriations for research are usually difficult to obtain. In the Philippines, where the forest industry is of national importance and where the tree species have established values, a comprehensive program of research is not only economically justified, but economically demanded.

Already a sound and logical organizational structure for forest research has been established and a good skeleton program developed. The Philippines is fortunate in having the service of one of the world's most eminent authorities on forest products research, and full advantage should be taken of his presence at the Forest Products Research Institute by providing adequate facilities and equipment. The task ahead is to continue and enlarge the work of the Institute and to raise the facilities and staff of the forest experiment stations to the point where they can perform effectively.

Cooperative arrangements between research personnel of the Bureau of Forestry and private lumber companies should be continued and expanded. Demonstration forests are particularly needed, where the results of good forest management can be made manifest in terms of more valuable wood production and better soil protection. These "show windows of forestry" bring home the lesson of conservation far better than any written word.

18. *Step up the pace of reforestation.* Well over 5 million hectares of land once under forest cover are now idle and denuded. Present plans call for reforesting 2 million of these hectares and leasing the remainder for grazing. Although the annual rate of reforestation has been increased from about 1,000 hectares in 1952 to 6,000 hectares in 1957, the areas annually planted are far smaller than those annually deforested. In fact, it has been conservatively estimated that annual deforestation is ten times greater than reforestation.

A fee of 40 centavos per cubic meter of cut timber is charged for reforestation purposes, but a considerable portion of the money collected (about 1.8 million pesos annually) is directed to other uses. Since it is scarcely probable that public funds will be sufficient to restock the idle lands, means should be explored for enlisting private support through a land-lease system, with planting stock furnished free to cooperators.

It is questionable, however, whether money spent on reforestation can be justified unless and until the resulting plantations are made safe from trespass and fire.

19. *Continue the ICA forestry program.* International Cooperation Administration assistance to the forestry program in the Philippines began in 1952. During the years in which it has been operating, significant contributions have been made to the progress of forestry. Already in many categories the desired results are becoming apparent, but in view of the economic importance of forestry, the work should be continued so long as the ICA program is in existence.

SUMMARY

Throughout history no nation has long continued prosperous after wrecking its resources.

Today, the Philippines is well on the way to devastating their magnificent forest resource, largely through the activities of the kainginero. It is quite possible, of course, that a nation can destroy the forest and wipe out the lumber industry and still survive. But human living will certainly be on a much lower level, and the national economy pitifully curtailed. Almost inevitably, however, the destruction of forests is followed by destruction of the soil itself. In the Philippines this is no mere prophecy; already it has happened on Cebu, Bohol, most of Negros, and in the Mountain Provinces. If this soil destruction is allowed to spread over wide areas, life in the Philippines will ultimately be degraded to the sub-human levels of bare existence.

But there is no need for the Philippines to face a future impoverished by forest devastation. The Republic has all the ingredients for perpetuating its forests, provided it has the will to make use of these ingredients. But first the Philippine Government must recognize that the perpetuation of the forests is inescapably linked not only with the maintenance of the nation's living standards but with its very economic existence, and that public welfare requires the protection, rehabilitation, and management of forests and forest soils for purposes of reducing erosion, protecting agriculture, insuring continuous stream-flow, and providing a perpetual source of wood. It must recognize that forests serve two major uses — protection and production — and that in dealing with those forests whose chief function is protection, the public interest is paramount, and a continuous forest cover must be preserved, undisturbed by human actions. In dealing with forests whose chief function is production, government must recognize that they should be placed under scientific management by the Bureau of Forestry and maintained as a perpetually renewable resource.

Above all else, government must proclaim as permanent forests those areas of forest and forest land needed by the nation for the dual purposes of protection and production, and definitely establish their boundaries. It must make these permanent forests inviolate from release, except by Act of Congress, and must provide for their protection from all forms of occupancy and trespass.

Unless and until these basic steps are taken, it makes very little difference whether other steps are taken or not. For the indispensable foundation of any forestry program is the establishment and protection of the permanent forest that public welfare requires.

Once this is done, once a realistic program is adopted for the perpetual harvesting of the Philippines' magnificent forests, government and industry alike can look confidently forward to more stable employment, continuously increased revenues, and the protection of the nation's most precious possession — her life-sustaining soil.

LIST OF RECOMMENDATIONS

Immediate recommendations

Public Forests

1. Determine amount and location of permanent forests needed by the Nation, establish the boundaries of these areas, and proclaim them.

2. Enact legislation to maintain the nation's permanent forests inviolate from release.

3. Enact legislation providing adequate penalties for theft and trespass.

4. Establish a system of forest police.

The Forest Industry

5. Issue permits to cut timber on the permanent forests in the form of long-term leases.

6. Award bids for cutting timber on the permanent forests only to operators competent to carry out management plans of the Bureau, based on sustained yield.

7. Place upon the lessee responsibility and authority for protecting permanent forest under lease and for insuring its continued productivity.

8. Cancel leases granted for timber cutting on permanent forests whenever the lessee fails to begin active operation within six months.

9. Reduce log exports.

The Forestry Bureau

10. Provide for the effective functioning of the Bureau of Forestry.

General

11. Allocate a portion of all forest revenues to local governments within the cutting areas for the purpose of education and cooperation in forest protection.

12. Allocate all fines collected for forest violations to the local governments under which such fines are imposed.

13. Strenghten facilities for technical education.

14. Explore additional methods of dealing with the squatter and kainginero.

15. Initiate an intensive national campaign of public education as to the role that forests play in human welfare.

Long-range recommendations

16. Initiate a forest inventory based on aerial survey.

17. Expand research.

18. Step up the pace of reforestation.

19. Continue the ICA forestry program.

An Appraisal of Forestry in the Philippines[1]

By

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INTRODUCTION

For nearly a century forestry of a sort has been in practice in the Philippines. But long even before the present century, the various primitive tribes inhabiting our country — like most tribes the world over — had their own customs and mores which governed the tillage of land and the use of the timberlands. The practices varied from tribe to tribe, from region to region. From the point of view of conservation, we see on one extreme the nomadic concept of agriculture known as *kaingin* which brought about the beginnings of the denuded areas in many of our mountains today; on the other extreme, we see in the age-old rice terraces of the Ifugaos in Northern Luzon a sample of a wonderful appreciation of rational resource utilization and an intimate knowledge of the application of conservation principles.

But what really marked the beginning of forestry in the Philippines on a national concept was the organization by the Spanish Government in 1863 of the "Inspection General de Montes". This forest service undertook the study of the Philippine forest resources, laid down the basis for the regulations of opening virgin lands and the cutting of timber. Many comprehensive laws were subsequently passed but until the turn of the century not much had been accomplished in the implementation of these laws.

It was after the United States succeeded Spain in the Philippines that the local forest resources received serious attention. In 1900, with the smoke of battle hardly settling, a Forestry Bureau was organized under the U.S. Military Government. While the campaign for pacification went on, the new bureau was establishing the groundwork for the forestry practice that we have today. The Commonwealth Government took over in 1935, the Japanese imposed a war-time forest economy from 1941 to 1945, the Republic of the Philippines resumed the task in 1946 and it has since then been undertaking the job of reconstruction and development.

In the face of the growing concern about our forest resources brought about by reports of a dwindling forest, and with interruptions and failures of our hydroelectric plants, irrigation and waterworks systems bringing home most dramatically the problem of the adequacy of the watersheds feeding these systems, an appraisal of the forest situation in the country is believed most timely.

[1] Abstract of this paper was presented before the General Meeting and Symposium of the Society of Filipino Foresters, Manila, August 1, 1959.

OBJECTIVES OF FORESTRY IN THE PHILIPPINES

Obviously, a prerequisite to such an appraisal is to ascertain what the objectives of Philippine forestry are and weigh the performance against the objectives. For this purpose, two sources reflecting an expression of the objectives were selected: (a) the definition of forestry, and (b) what our laws explicitly say how we should handle our forests:

a) Forestry defined: "Forestry is the art and science of managing or caring for forests in continuity for forest purposes." — Arthur Read.

b) Legal mandate: "The forests of the Philippines shall be held and administered for the protection of public interest, the utility and safety of the forests, and the perpetuation thereof in productive condition by wise use x x x." Sec. 1824, Revised Administrative Code (Act 2711).

From either of these sources, one underlying objective of forestry is evident: management of forests in perpetuity. Our forest law makes this objective even more specific by providing that our forests shall be administered:

1) for the protection of public interest,
2) for the utility and safety of the forests, and
3) for the perpetuation of the forests in productive condition by wise use.

FINDINGS AND OBSERVATIONS

Against this background, the accomplishments in the various phases of Philippine forestry are presented. These accomplishments were those reflected in the major activities of the three agencies of the Government most concerned with Philippine forestry, i.e., the Bureau of Forestry, the College of Forestry, and the Forest Products Research Institute, but most particularly of the first. Data are as of 1957, but wherever possible are up-dated to 1958. Observations are made as to whether or not the activities are along the intents of forestry, or whether or not the performance is adequate to insure carrying out the objectives.

FINDINGS AND OBSERVATIONS OUR REMAINING FOREST LANDS

The words *vast, fabulous, magnificent, inexhaustible* and other superlatives hitherto used to describe our forests hardly hold now. These words have been used so often, and even by those in official circles, that nearly everybody has accepted them to be based on facts. Needless to say, such acceptance has lulled our people to complacency and to a false sense of security.

The latest estimates[1] put our total forest land area at 13,171,400 hectares as shown in the following table:

[1] Unpublished report of the Inter-Agency Committee on Up-Dating Forest Statistics (1959).

Vegetative Cover of the Philippines, 1957

Nature of Cover	Area (hectares)	Percent of Total Land Area
Commercial forest	9,329,280	31.37
Non-commercial forest	3,842,120	12.92
Brushland	2,077,230	6.98
Open land	3,402,860	11.44
Swamps and marshes	716,260	2.41
Cultivated and others	10,373.540	34.88
T o t a l	29,741,290	100.00

Between the estimates of 1933 and 1957 — in a brief span of 24 years — the area of our commercial forests dropped from 11,415,000 hectares to 9,329,280 or a loss of 2,085,720 hectares. Changes in vegetative cover during the period are shown as follows:

Up-Dated and Previous Data on Vegetative Cover Compared

Vegetative Cover	Previous Data (Hectares)	Previous Data (Per Cent)	Up-Dated Data (Hectares)	Up-Dated Data (Per Cent)	Difference (Hectares)
Commercial forest:[2]	11,415,000	38.38	9,329,280	31.37	—2,085,720
Accessible	(6,639,000)		(7,342,580)		
Inaccessible	(4,776,000)		(1,986,700)		
Non-commercial forest[2]	4,459,920	15.00	3,842,120	12.92	— 617,800
Brushland	—	—.—	2,077,230	6.98)	
				18.42)	+ 406,790
Open Land	5,073,300	17,06	3,402,860	11.44)	
Cultivated	8,179,992	27.50	10,373,450	34.88	+2,193,558
Swamps and Marshes	612,740	2.06	716,260	2.41	+ 103,520
T O T A L	29,740,952	100.00	29,741,290	100.00	

[2] Commercial forests are forests of commercial species in which the volume of trees 30 cm. and above in diameter (d.b.h.) exceeds 40 cu.m. per hectare. Non-commercial refers to forest in which the volume of commercial tree species 30 cm. and above in diameter is less than 40 cu.m. per hectare.

Thus, as of 1957 our forest per capita is 0.56 hectare. In 1933 it was 1.17 hectares and at the rate our population is expanding, and if depletion of our forest lands goes on as fast as it had gone so far, by 1980 or only 21 years from now, our forest per capita would be 0.17 hectare only. An idea of our position compared with some countries picked out at random may be seen in this comparative tabulation:

Philippines Compared with Some Countries On Forest Per Capita, 1957

Country	Hectares Per Capita	Country	Hectares Per Capita
Finland	5.3	Japan	0.97
Argentina	3.9	PHILIPPINES	0.56
New Zealand	3.6	Greece	0.3
Norway	2.3	Korea	0.3
Cambodia	2.3	India	0.2
Burma	2.0	China	0.18
United States	1.8	Arabia	0.07
Thailand	1.6	Israel	0.06
Taiwan	1.6	Pakistan	0.04
Indonesia	1.0	WORLD AVERAGE	1.6

OUR TIMBER STOCK

Heretofore, literature on Philippine forests and pamphlets aimed evidently to attract investments in our forest industries, and even official circles, made much of the claim that we have tremendous timber wealth. The following table will show the aggregate timber stock we have in trees 30 cm. and above in diameter and how it is distributed in the different categories of forest:

Timber Stock[1] in Philippine Forest, 1957

Kind of Forest	Timber Contents Million cu. meters	Billion bd. ft.	Per Cent
Commercial Forest:			
Accessible	718.9	304.8	73
Inaccessible	182.0	77.2	19
Sub-Total	900.9	382.0	92
Non-Commercial Forest	81.2	34.4	8
T O T A L	982.1	416.4	100

[1] Excluding that in mangrove swamps.

Hitherto, the official figure was 464 billion bd. ft. This figure, however, represents the stock of all trees from 40 cm. and above in diameter. The comparable figure in the current estimate would be 389 billion bd. ft. It would appear that there had been a reduction in our stock from 458 to 389 or 75 billion bd. ft. in 24 years or roughly 3.1 billion board feet a year.

The position of the Philippines in timber stock per capita may be seen in the following:

Philippines Compared with Some Countries in Timber Stock Per Capita

Country	Total Timber (Million cu.m.)	Population (Million	Per Capita (Cu. M.)
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
Italy	329	48.02	69
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
Mexico	450	29.68	15
Taiwan	70	8.91	8
India	894	381.69	2
Korea (South)	31	21.53	1.8

If the rate of timber depletion would proceed undiminished, our timber stock per capita in 1980 would be around 16.7 cu. m. only. This would bring us down to the level of Greece and Mexico — both of which are among countries notoriously deficient in timber.

The contents of our commercial and non-commercial forests and the distribution of the timber into different diameter classes may be seen in the following tabulation:

Timber Stock in Philippine Forests
By Diameter Classes

Diameter Class	In Commercial Forest (Thousand Cubic Meters)	In Non-Commercial Forest (Thousand Cubic Meters)	Total	Per Cent
30	54,535	9,714	64,249	7
40	97,831	15,057	112,888	11
50	125,186	17,344	142,530	15
60	164,336)			
70	140,711)			
80	124,648)			
	.....	39,070	662,456	67
90	95,797)			
100	96,213)			
Over 100	1,681)			
TOTAL	900,937	81,185	982,123	100

LAND CLASSIFICATION

What is expected

The classification of lands of the public domain is a basic activity of the Bureau of Forestry, the ultimate aim being to put land into its best use. Very properly our laws (Sec. 1827, Adm. Code) provide that no lands can be declared agricultural lands or released from the public forests unless "upon the certification of the Director of Forestry that said lands are better adopted and more valuable for agricultural than for forest purposes and not required by the public interest to be kept under forest . . ." It is expected, therefore, that by now there is an orderly land classification system which would bring about the: 1) delimitation of the permanent forests with the ultimate goal of placing these areas under scientific management for the production of timber and other minor forest products as well as the perpetuation of forest values and influences; and 2) release of all areas that are non-forestry in character from the mass of the public domain to make them available for agriculture and settlement.

The situation

a) In practice, a land classification team is supposed to consider various criteria, the most important of which are topography, soil, soil cover, climate and comparative economic consequences of alternate uses. Thus, lands found adopted for agricultural uses are to be certified as not needed for forest purposes, and those found to be forestry in character are retained as forest lands to be set aside and proclaimed as "timberlands" and, eventually, as "forest reserves."

Again, in its classification activity, the Bureau of Forestry is supposed to be implementing the 42-58 plan. Under this plan, the Bureau plans to keep 42 per cent of the total land area of the country in forest lands and to release 58 per cent for agricultural purposes, i.e., of the 29.7 million hectares total land area, 12.5 million would be for forestry and 17.2 million would be for agriculture. Individual targets are prescribed for each province of the country, the

percentage of forest varying with the topography of each province.

b) Up to June 30, 1958, after nearly 40 years of work, the Bureau had classified an area of 15,090,080 hectares, or nearly 51 per cent of our total land area. Of this, 11,630,607 hectares were released for agriculture and 3,459,473 hectares were retained as forest lands. Roughly, therefore, around 14.6 million hectares have yet to be classified.

The inability to finish the classification of the public domain has contributed no little to the confusion. As it is now, as the great bulk of the public domain is still unclassified, and with boundary lines between classified and unclassified areas not readily recognizable on the ground, and with population pressure increasing as it does with the years, landseekers generally go to the nearest forest land to hack out their kaingins. Hardly are there signs or notices to warn the people that the areas are not for entry or cultivation.

In fact, instead of the Bureau of Forestry helping in directing where migration and settlement should flow, as it was doing in the past by classifying lands ahead of settlement, it has now lost the initiative in most cases. There are thousands of requests and petitions in the Bureau of Forestry for releases of land and most often the land are already occupied and cleared by the petitioners. The Bureau of Forestry has no recourse except to classify these lands and it finds its hands full merely trying to keep up with requests.

c) As it is, forested lands in 31 provinces are now below the targets set for them, in 8 provinces there are still adequate forest lands, and only in 13 provinces are there still forests above the goals. The provincial goals are not clearly understood, or hardly adhered to, and land classification for release still goes on even in provinces where further land releases could only throw off the goal farther.

d) Is land classification accomplishing its objective of delimiting the lands to be established as permanent forests? With the funds poured into the work, hardly one third of the area to be kept in forest has been delimited. In fact, where releases of lands for agriculture were to be only incidental, the work as now carried on, stresses more on releases rather than on segregating the permanent forests from the mass of public domain.

e) There is even nothing "permanent" in areas hoped to be held permanent as forest lands. Forest reserves, timberlands, communal forests, etc., could be entered and cleared and, if pressure is strong enough, could be carved out and released.

FOREST MANAGEMENT

What is expected

Forest management determines the conduct of the work needed to treat the forest profitably and at the same time guarantee its continuity of production. Our laws very explicitly provide that the regulations of the Bureau of Forestry shall contain provisions "to insure a continued supply of valuable timber and other forest products for the future" (Sec. 1817, Adm. Code). To bring this about, management plans or working plans were to be prepared. In fact, the Bureau of Forestry Manual of Procedure carries a detailed outline who are called upon to prepare such plans and what such plans should contain. Forest reserves and timberlands which are under exploitation are to receive priorities in the plans. It is to be expected thereof that before large-scale logging operations are allowed, management plans for the areas would be available especially so for forest reserves, timberlands and other forests to be retained for forestry uses.

The situation

a) Many forest reserves and timberlands have been under exploitation for years —

and are almost cleaned out of timber — and unfortunately to this day there are no worthwhile plans to speak of for any of these reserves. For over 50 years, except for a couple of plans for very limited areas — and which later on were even abandoned — we have had no plans. What had been passing for a management plan for our forests is the so-called "diameter limit system" which stipulates in timber licenses, among others, that trees of the first group woods below 60 cm. in diameter (40 cm. for second group and 50 cm. for all dipterocarps, except yakal) shall not be cut. In other words, all trees below these diameter sizes shall be left uncut with the expectation that these young trees would be given a chance to grow and take over the forest. Yet after over 50 years of forest exploitation, there is no substantial forest area where the expected second or subsequent cut had been made, attesting either to its failure as a system or to its impracticability.

b) Barely three years ago, the present selective logging system was launched. This requires tree-marking before felling. It is still too early to appraise the system on its technical merits, but it can be said even now that unless the logged-over areas are adequately protected from squatters and kaingineros, the effort and expense in implementing the system would go to naught. So far, of the 5.0 million hectares under timber exploitation, the areas selectively logged hardly amount to 25,000 hectares.

c) Our forest reserves and national parks are supposed to be under more strict cutting rules. For a forest reserve established, for instance, for watershed protection or soil erosion control, no cutting is to be allowed except for improvement of the forest; if the reserve is for timber production, unless conditions so warrant, timber cutting is to be allowed only to small licensees who would not use power logging. In national parks, the rules are even more strict. Yet, exploitation in most of these reservations has for over 50 years followed almost the same destructive pattern used in an ordinary public forest. There are 96 forest reserves with an aggregate area of approximately 1.2 million hectares and none is scientifically managed.

d) The quantity of timber to be removed from our forests is reckoned from the assumption that our timber stock grows at the rate of 1.5 per cent a year. Figured on another assumption that we have 458 billion bd. ft. in timber stock, this rate of growth, so it was thought, should give us around 7.0 billion bd. ft. new wood a year. This concept needs a thorough review before it is too late. Practically all of the forests under exploitation are virgin forests, and in such forests, any wood growth would only tend to compensate death and decay.

Working on this assumption, planned timber removal, or allowable cut, has been set higher and higher and is now around 3.8 billion bd ft. (9.0 million cu. m.). The reasoning is that the timber stock is 458 billion bd. ft., annual growth yield us at least 7.0 billion. And since commercial cut is only 2.0 billion and growth is 7.0 billion, there is much to spare. And so we thought.

e) Thus, timber drain during the past 50 years of exploitation is simply cutting deep in the timber capital. And what is meaningful is that this goes on even after it is realized that there is a general failure to enforce cutting rules, that logged-over areas have hardly a chance to grow back to the "productive condition" envisioned in the law. One would think that a brake would be applied on timber cutting, or in granting more areas to logging operators until after perhaps some assurance that present logging operations would be better supervised or cutting regulations could be more strictly complied with. On the contrary, more applications for timber licenses for new areas are being screened.

f) As of 1958, the recorded volume of timber removal has passed the 2.0 (B) billion bd ft. level. To be added to this —

but no one knows how much — is the unrecorded drain arising from damages from destructive logging and from kaingin making.

g) Also, the exploitation of other forest products like rattan, gums, resins, tan bark, etc., proceeds at a rate and under a system that should alarm any conscientious custodian of our forest resources. There is not even any adequate knowledge as to whether the forest could withstand the drain, nor is there any serious concern to find this out.

h) There is all over the country a chain of communal forests set aside where the residents of the municipality for whom each was established could get their timber and firewood for personal use free of charge. There are around 2,130 such parcels with a total area of approximately 259,000 hectares. Around 800 municipalities are supposed to be beneficiaries of these. There is practically no management plan for these forests, hardly could they be inspected regularly as required, and it did happen often that when at last it is inspected the forest had been cleared and the area squatted on. In many instances, there was no other recourse but to disestablish the communal forest and give the area to the squatters.

UTILIZATION

What is expected

The conversion of standing timber and other products into useful forms and goods is forest utilization. The forests, the timber and other products they contain are to be made use of. Use is not incompatible with conservation. Further, a sound economy dictates that these products are to be utilized as completely and as efficiently as possible. In the case of timber in the production forests, it is logical that those that are mature have to be harvested. Accordingly, timber licenses are granted giving the holders the privilege to cut and remove the trees upon payment of required fees and forest charges. It is to be expected that the licensing would be orderly, that the cutting of the timber would proceed in accordance with sound rules and with the least harm to the forest, that the revenues due the government are collected, that the wood-using industries created would generate employment and exercise a stabilizing influence on rural communities, etc. It would be reasonable also to expect that those who would defeat such public interests in our forests would be penalized adequately and weeded out.

The situation

a) As of 1958, there were 1,670 licensees, distributed as to size of area granted as follows: *

b) How and by whom these licenses came to be distributed in such fashion — many of them uneconomical units — is not the subject of this paper. Suffice is it to raise the question as to whether or not the

**Details of Licenses*

Size	Operators		Extent	
	Number	Percent	Area (has.)	Percent
UP TO 500 Has.	613	37	182,568	4
501 " 1,000 "	346	21	286,849	6
1,001 " 5,000 "	477	29	1,170,907	23
5,001 " 10,000 "	123	7	732,415	15
10,001 " 20,000 "	56	3	809,525	16
20,001 " 50,000 "	28	2	812,100	16
50,000 " AND OVER	10	1	1,001,830	20
	1,653[a]	100	4,996,194	100

[a] Plus 17 license agreements overlaping other areas.

operators of such small areas could be expected to go on sustained-yield, or if there is assurance that they could be properly supervised and make them comply with the cutting regulations. Of the 1,670 licenses, 1,022 are for areas less than 2,000 hectares, an area obviously far too inadequate for sustained-yield operations. It would be excusable if all such areas were in potential agricultural lands where the kind of logging employed would be of no consequence. But a great many of these are in potential permanent forests, and as their operations are practically unsupervised and destructive logging is the rule, sustained yield management in such areas could be written off as impracticable.

c) Dummying, farming out and speculation in licenses, etc. are of common knowledge and effective remedial measures are still to be worked out.

d) There are only about 400 scalers available so that over 1,000 operators are left to themselves to measure and declare the timber they cut and remove, thus, substantial revenues leak out.

e) The licenses and agreements entered into between the government and the operators contain strict cutting rules and regulatory provisions and non-compliance with any could be penalized by fines, even by cancellation of the license itself. But despite the broad powers of the Director to impose such penalties, an incredibly very few have thus been penalized. Such toleration of violations had demoralized the field forest officers and emboldened other operators to commit violations.

f) Sound business principles dictate that the lumber industry must be put on a stable basis. Thus, in the system of granting licenses, the investors must be enabled to make range plans of investments and operations. For this purpose, licenses should be of long enough duration to permit some long range planning. It is also desirable that before a long term license is granted, there should be a probationary period whereby the licensee must prove himself deserving of a long term contract.

But despite the fact that most of the 1,670 timber licensees have been operating for years and years and there had been considerable time to ascertain whether the licensees are to be weeded out or have proved themselves deserving of long term licenses, there are to date only 13 licenses for 20 years duration, 14 for 10 years and 38 for 4 years, or a total of 65 which would amount to a long-term grants. The rest are still on the uncertain annual basis, going through the tedious process, harassment and red tape of getting their licenses renewed every year. The renewal process is so long drawn out renewals are hardly made for the year, and operations are technically illegal.

g) To many, it is inconceivable why widespread destructive logging has been tolerated for so long. Except for a few areas being put under selective logging and where there are men to mark trees for felling and supervising the felling, most of the logging operators are left to their own devices, with little or no regard to destruction to the young trees.

h) For lack of supervision, many of the small logging operators merely skim the forest, removing only the trees they like and could make money out of, leaving the unwanted wood species and the trees of defective boles or too decayed to be of any use. Thus, instead of leaving the forest in a productive condition or in a position to develop a desirable tree vegetation, the area is left to degenerate into a potentially worthless forest.

i) A substantial amount of waste occurs in logging, sawing and conversion of timber into products. For lack of supervision, there is much unjustified wood waste in many logging. High stumps, shattered stems, improper bucking, abandoned logs, etc. contribute to the waste. In manufacturing, what can be accomplished in closer utilization could be seen in the pioneering

done by Insular Lumber Company in manufacturing door jambs, bed rails, moldings, etc. from dimension stocks, by the Philippine Wallboard Corporation into converting sawdust and wood waste to hardboard, etc.

j) The Director of Forestry has supervision over the operation of sawmills. He is the official charged with issuing the permit to operate. Yet knowing that many such sawmills have no forest concessions and, that more often than not, these sawmills receive and mill unmanifested and smuggled timber, a good system of supervision could have been developed by now or the guilty sawmills weeded out from operation.

k) Worse than in logging, the gathering of gums, resins, rattans and other products is hardly supervised so that much destruction is caused.

SPECIAL LAND USES

What is expected

Lands under the jurisdiction of the Bureau of Forestry are not exclusively for the production of timber and other forest products. They could also be used for the promotion of health, for recreation, and in the case of mangrove swamps for fishery development, and of grasslands for raising livestock. The law empowers the Director to issue so-called special use permits and leases for lands suitable for these purposes. And to encourage the reforestation of denuded areas, there is the system of tree farm permits and woodland leases. It is expected, therefore, that such lands of the public domain suitable for these purposes would be put to such uses, that a system of orderly disposition would have been worked out by now, that revenues due from such uses are properly collected and that the land so leased is developed to the use intended for.

The situation

a) Our grasslands cover 3.4 million hectares. There are (in 1958) 2,577 pasture permits and leases in force for areas ranging from 100 to 2,000 hectares, and all in all aggregating an area of 543,000 hectares. How many of the areas held under permits are used actually for ranches or simply held for speculation is a matter of conjecture, there being no overall periodic check-up of the operations of the permitees. As a matter of fact, most of the areas have been granted under annual permits, to be renewed from year to year, with seldom any plan of development for the area leased. For quite a limited number held under lease agreements and granted credit assistance by the Development Bank of the Philippines, there is a system of periodic check of their development, but this has been instituted more due to banking requirements rather than from the standpoint of forest administration. In the vast majority of cases, supervision is nominal. As a matter of fact, of the 2,577 permits in force in 1958, no less than 2,172 cases or 84 percent were pending renewal at the close of the year. And this inability to renew permits has been going on for the last several years. No one can tell just how many cattle are in these ranches, if there are cattle at all in many of them, or how many of the areas leased have already been converted into other uses not countenanced by the lease.

b) In the case of tree farms, implementation has been unsatisfactory. Conceived to put back a tree cover on the open areas and to help people with a piece of land to till by allowing the permittee to plant even agricultural tree crops, many an applicant under the guise of the application occupies even forested lands, resulting in additional forest destruction. This is traceable to a lack of an adequate information campaign.

c) The potentialities of woodland leases, a sister-scheme to tree farms, which would

permit occupation of even large tracts of open grasslands for long periods as to make them deal for the development of forest plantations accessory to wood or forest-product using enterprises, like pulp making, varnish and paint manufacture, firewood and charcoal making, have not been adequately exploited.

d) There is no clear-cut program as to the development and disposition of mangrove swamps. One looks in vain for any overall plan as to what role these swamps are to play in the economy of the region or of the country, or as to how much of these shall be reserved for firewood production, communal fishing or coastal protection, how much could be cleared for fishpond development, etc. As it is, there is a constant tug-of-war between the alternative uses of firewood production and fishpond development, and as in many such circumstances, whichever happens to have the stronger backing generally wins. Before long, most of the swamps would be depleted and policy decision and plans for the mangroves would be too late to do any good.

REFORESTATION

What is expected

The latest estimate shows there is at least an area of 3.4 million hectares of open grasslands all over the country, constituting the accumulation of once-forested areas which our people cleared, planted with agricultural crops, but had to be abandoned when fertility gave out. Grass and scrubs have taken these over. Grass fires every now and then have prevented a return to forest vegetation. The Bureau of Forestry intends to put a forest cover on at least 1.4 million hectares of this, constituting the critical watersheds of our major rivers, irrigation and hydroelectric power systems. To undertake this, a stable source of fund was provided by levying a special forest charge of ₱.40 to ₱.50 from every cubic meter of timber cut for commercial purposes from the public forests. From this source alone, around ₱1.5 million is available annually. To augment this, an additional reforestation fund of ₱10 million to be spent in a three-year period was provided in 1958. It is to be expected, therefore, that reforestation of at least our critical watershed areas would be fairly on the way, that areas planted at so much expense and effort would be adequately protected, etc.

The situation

a) Reforestation starting on a trial basis in 1910 and pursued with more vigor in 1932, netted us up to 1941 a total planted area of 27,983 hectares, at an expense of around ₱3.6 million (roughly at ₱127 a hectare). Only 5,069 hectares of these plantations were salvaged after the war. Reforestation work was resumed in 1946, and since then (up to 1958) ₱13 million had been spent and a total area of 28,246 hectares has been planted.

b) The best planting rate so far was 10,519 hectares (made in 1959) when 3,616 hectares were seedling-planted and 6,903 hectares directly seeded. Even granting that the effective planting rate is 7,000 hectares a year, to replant the critical 1.4 million hectares would take at least 200 years or until 2160 A.D.

c) Reforestation is proving very expensive. And not all reforestation money is used exclusively for the purpose. Even at the estimate of ₱250 a hectare, it would take around ₱350 million to finish planting the critical 1.4 million hectares.

d) If at all. For reforestation is badly losing out to deforestation at least 3 to 1. Against the 7,000 hectares which could be planted a year, kaingin making and destructive logging in permanent forest zones could be destroying around 30,000 hectares which, following the cycle of kaingins, would eventually be abandoned to become grasslands and potential areas for reforestation.

e) There is even no certainty that a reforested area would remain a forest. Areas

earmarked for reforestation — even a man-made forest on which years of efforts and expense had been poured in — could be parcelled out to so-called landless. One example is the Salinas reforested area in Nueva Vizcaya.

f) As at present carried out, reforestation is essentially a national government project, with practically no participation by local governments or community organizations. With the slowness with which the work progresses under the system, other approaches and system should have by now been tried, especially towards making local governments and communities take a more active interest and participation in the undertaking.

g) As of now, there is no effective coordination between the Bureau of Forestry and those government entities with interests in specific watershed areas, as with the National Power Corporation for the reforestation of the denuded watersheds of hydroelectric plants, as with the Bureau of Public Works for the planting of drainage basins of irrigations systems and for flood control, as with the National Waterworks and Sewerage Authority for the planting and protection of the sources of water supply.

h) As of now, there is no long range programming for developing in each region such as plantations of raw materials for potential wood-using industries suitable for the region.

FOREST PROTECTION

What is expected

Forestry is 90 per cent protection. The forests are expected to be protected from all destructive agencies as would deteriorate their value or reduce their usefulness. Protection does not imply only physical preservation of the forests but also safeguarding of the common interest in them, both from those who would use them wastefully or grasp them to serve their selfish interests. It is to be expected, therefore, that an effective system of protection has been set up whereby the forests would be reasonably safe from trespass and kaingin making, that infraction of forest laws are meted out their due punishment, that there is a healthy respect for forest laws, etc.

The situation

a) The Bureau of Forestry has under its administrative jurisdiction around 18.0 million hectares of public lands. The main concern of the Bureau is of course centered on over 13 million hectares of really forested lands. To manage even these, protect and develop them, it has a total force (in 1958) of 1,942 consisting of 1,099 permanent and 864 temporary employees. Of this number, around 1,600 are in the category of forest officers (from forest guards and up). Removing from the effective field protection force all the office-bound forest officers, those in research work and reforestation, etc., it is conservatively estimated that every field forest officer has to reckon on looking after 15,000 hectares (roughly a territory 10 kilometers wide and 15 kilometers long). Expecting one man to police such a big territory is expecting the impossible. The task is made doubly impossible as the tract has no roads or communications system, the forest officer is underpaid and harrassed by interferences.

b) Most difficult to control is squatting in the forest and forest destruction through kaingin making. For a four-year period, the record of kaingins detected and investigated is as follows:

Year	Cases Detected	Cases Investigated
1955	3,548	1,466
1956	2,381	1,687
1957	58,365	6,659
1958	1,520	1,039

Not all kaingins made during the year are reported. This is because forest officers could not go out for field work extensively for lack of travel funds, many have been

so demoralized by sad experiences in apprehending kaingin law violators that they have lost interest in the work. But an idea of the extent of kaingin-making rampant all over the country could be gleaned in 1957 when 58,365 cases were reported. This was after the Department Secretary ordered an all-out tally of kaingin cases. It is estimated that at least 30,000 hectares are cleared every year and timber and forest products destroyed could run to ₱10 to ₱15 million.

c) For the many good things President Magsaysay did to the country, for his great concern for the masses, our people are most grateful to him and would remember him with the highest regard. But in the case of forestry, he unwittingly did it the greatest dis-service. His love for the masses blinded him from seeing the consequences of his act. Ever since he set free on the spot in 1953 the 63 kaingineros in the Masbate provincial jail and reprimanded the local forest officers for enforcing the kaingin laws, the job of protecting the forests has become extremely difficult. His act was given the widest publicity and from then on it served as the "green light" for kaingin making all over the country. Kaingineros flaunted the forest laws, they stopped heeding forest officers, they went inside any forest be it inside parks, forest reserves or proclaimed timberlands. The President in one day undid what mass respect for forest laws the forestry service had been slowly building up for over 40 years.

Many a forest officer still continues to apprehend but the situation since then has never been the same. Even provincial fiscals, courts of justice have become uncooperative. Influential politicians could always be found to intercede for the kaingineros.

d) The penalties provided in our kaingin laws are believed adequate. The only trouble is the inability to enforce them. There is even lack of cooperation from local authorities. Many municipal governments are reluctant to keep prisoners in their jails as feeding them entails expenses they cannot afford. Not many municipalities are aware that 50 per cent of fines collected go to the municipal coffers.

e) Of much concern to forestry is how to protect the areas selectively-logged from kaingin making. Small and few as these areas are as yet at present (only around 25,000 hectares), keeping them safe from kaingineros has become a problem.

f) Realizing the serious lack of manpower in the Bureau of Forestry, the National Forestry Council worked out a system of coordination on forest protection with the Philippine Constabulary and the judiciary department but inaction has not led to effective coordination in the provincial and municipal levels.

g) Contributory to the deterioration of forest protection work are the following:

1. Absence of clear and recognizable boundary lines around permanent forest areas;
2. Acceptance of applications for assessment of even public forest lands by provincial assessors;
3. Survey of forest lands under the guise of private claims;
4. Timber licensees failing to cooperate by not reporting kaingin making in their concessions;
5. Lack of coordination among the land disposition and settlement agencies of the government.

h) Timber licensees are required to hire so-called concession guards (one for a forest concession 5,000 hectares in area, two guards for 5,000 to 10,000 hectares and an additional guard for every 10,000 hectares). The system is far from being satisfactory.

FOREST AND FOREST PRODUCTS RESEARCH

What is expected

Forest research has for its purpose the gathering of data which would serve as basis for the best possible management of

our forest lands and for the most effective use of our forest products. The field covers diverse studies on growth of species and forests, production of timber and other forest products, and the inter-play of social and economic factors on all these. In the case of forest products, from 50 to 70 per cent of a tree is lost along the way from the time of its cutting in the forest to the end of its journey to the final user. Many trees are even left to die and rot in the forest, either because they are defective or we cannot find some use for them. Wood residues and wastes of sawmilling are hardly converted into useful commodities. The life span of our woods, their beauty and utility can be vastly improved through research. It is to be expected therefore that since basic data are indispensable in planning for the management of our forest, that a good program of research is under implementation, that there is a competent staff to handle this program, and that adequate financing and satisfactory working facilities are provided for all these.

The situation

a) Forest research in the Philippines was recently divided into two major fields and assigned to their respective research agencies: (1) those on forest products have been concentrated in the Forest Products Research Institute located in Los Baños, and (2) those on the forest itself have been left with the Bureau of Forestry. In a limited way, the College of Forestry, U.P. dabbles on the both fields.

b) The recognition of the need for studies on forest products and the vast possibilities in increasing the usefulness and diversity of the uses of wood and the establishment recently of a well-equipped laboratory to handle this, constitute one bright spot in Philippine forestry. There is a good program started, equipment are modern, a competent staff is being built up and, if the initial results obtained are any indication at all, we are headed to a fruitful era in forest products research. Studies are now underway on the suitability of our woods for pulp, paper, wallboard; on the classification of wood as regards specific gravity, shrinkage and strength qualities; on how to prevent or control insect and fungi attack on wood and many others.

c) But this wholesome situation could not be said of forest research. There is dire lack of basic forest information on our forest soil, the seeding habits of our commercial tree species, on systematic dendrology, forest geography and on many phases of forestry. There are not even enough data on which to work out sustained-yield management. What research data we were able to gather before the war, the sample plots established then, the botanical collections, all these were wiped out. There have been recently organized five experiment stations to start all over again, but these have only skeleton staffs and funds and facilities are entirely inadequate. Some sample plots have been established but even their protection and periodic measurements have become a problem. On studies on forest influences, especially as to the significance of forest and forest cover on soil erosion, waterflow, etc., practically nothing has as yet been started. Investigation on the protection of the forest against insects and fungi has received no adequate protection. There has entirely been too much pre-occupation on the exploitation and revenue-raising activities of forestry to the utter neglect of the basic phases on which the very practice of forestry must rest.

FOREST EDUCATION

What is expected

Forest education in the Philippines has two aspects: (1) the professional forest education which aims to produce a body of technically trained men in forestry, and (2) the education of the masses on the elementary principles of conservation and proper appreciation of the forest resources. In the

case of the first, it is to be expected that we have by now a going institution which regularly turns out the technically trained foresters needed for service in the government and those to man the technical forestry work in our expanding forest and wood-using industries. In the case of the latter, it is to be expected that we should be fairly on the way in our campaign to make our masses conservation-conscious, or in the very least, there is an organized attempt to keep the public informed adequately and properly on such phases of forestry as affect their daily life.

The situation

a) The backbone of the present forest service of the country is composed of graduates of the College of Forestry, while the number of forestry graduates in the wood-using industries is increasing. The latter are specially strategically placed because their forestry background should make it easy for the programming and implementation of utilization activities based on sound forestry. The College is still in the process of rehabilitation and expansion after it was rather abruptly placed under the exclusive administration of the University of the Philippines. Its faculty is being strengthened, putting up of buildings and facilities is provided for in a moderate scale, it has a curriculum adopted to the needs of the times, etc. It is of course beset with many problems, including those relating to the quality of students it is getting, inadequate laboratory equipment, but by and large it is doing its job as well as could be expected and has prospects of further improvements.

b) It should be apparent by now that the success or failure of any forestry program depends upon the public attitude towards it. In many phases of public service or movement, the need for molding a favorable public attitude has already been recognized and measures and projects to achieve it have long been underway. Agricultural extension work, for one, is a case in point. There is now a nationwide movement to educate the rural areas on better farm techniques.

In contrast, informational efforts on forestry have been desultory, haphazard and disorganized. And the best measure of the failure of the effort is the apathy, indifference, and even hostility of the masses to forest conservation. Literature on forestry is wanting, grade and elementary textbooks on forest conservation are still to be prepared, and the vast possibilities of information media now available are hardly utilized. The resources latent in the network of our schools, the nationwide system of parent-teachers associations, the barrio clubs, civic organizations, etc. are hardly tapped.

FOREST ADMINISTRATION

What is expected

It should be reasonable to expect that sound business principles are applied in our forest administration. Of immediate concern would be those relating to the determination of objectives and setting of goals, matters on personnel, property, equipment and funds; and the development of an administrative machinery which can render reasonably adequate public service.

The situation

a) Quite symbolic of the anemic condition of forestry administration in the Philippines is the run-down, crowded and disorganized building at Juan Luna, Manila, housing the Central Office of the Bureau of Forestry. Long priding itself as a big money-making agency of the government, this Bureau has not been able to have its quarters improved. Working conditions are way below par, public service is unsatisfactory, there are not even adequate files and shelves for important papers nor is there security from fires and tampering.

Conditions are no better of in the field offices. District offices and forest stations are generally crowded and lacking of essential equipment.

Reputed to be one of the best disciplined and most efficient agencies of the government before the war, this Bureau finds itself unable to cope with its duties adequately and further deterioration of public service is inevitable from the circumstances under which the forestry men now find themselves in.

b) In personnel matters, political meddling has demoralized many in the service. Appointments, promotions, transfers in key positions are subjected to so much political interference as to affect the good of the service. Pay-scale of forest officers is low and many forest officers have moved out to the industries and elsewhere. Also, the low salaries have failed to attract a good number of quality students to the College of Forestry from which the finished technical men have to come.

c) There is an unwieldy centralization of authority, i.e., in granting of licenses, permits, and leases, and in acting on routinary matters ranking fieldmen, even district foresters, have been reduced to impotence. In turn, there is too little left for the Director of Forestry to make a final decision of, many matters have to be acted on by the Secretary of Agriculture and Natural Resources himself. Also, there is no determined stand against outside influence on releases of lands already earmarked for forestry, etc., there is dictation from above and outside.

d) In the Bureau itself, much could be done by more coordination. Oftentimes, one division does not know what is happening in the next. Staff meetings are infrequent. Field offices could be more frequently visited, efficiency of personnel increased by refresher or orientation courses, administrative routine streamlined, and backlogs reduced by a system of priorities. In the case of backlogs, for instance, in special land uses alone there are over 50,000 pending cases, some for over 10 years.

e) Of course, it should be evident that the present situation has been brought about by many factors, chief among which is that the Bureau is handicapped with lack of personnel and funds. Activities have expanded considerably but funds and personnel have not increased proportionately. Too much is being expected from too few and too little. Even travel funds are good only for very limited fieldwork, grounding many forest officers in the office for long periods to the prejudice of essential field surveys or inspection. Transportation facilties are very limited. Typewriters, surveying instruments, even marking hatchets are too few. Representations have been made for needed facilities but selling the need has met with very little success.

SUMMARY

What is expected

According to the definition of forestry, the objective of forestry practice is to manage forests "in continuity for forest purposes", and according to our laws our forests are to be held for their perpetuation "in productive condition by wise use." These objectives of forestry should lead us to expect that after six decades of forestry practice in the Philippines, we should expect among others the following:

1. That we have still forest lands adequate in extent to meet our national requirements, that these are well distributed among the different regions where they would do the most good to help control waterflow and soil erosion, that we have a fairly good system of releasing from the forest zone what lands we do not need for forest purposes, and that areas intended to be kept for permanent forests are already surveyed and set aside as such;

2. That we have still a good portion of the "magnificent" and "vast" timber stock we are supposed to be endowed with;

3. That there is assurance that our remaining forests are now being managed or well on the way to be managed on sustained-yeld basis as to assure us a continued supply of timber and forest products indefinitely, and that timber removal and drain are within the capacity of our forests to replenish;

4. That we have instituted a business-like system of granting licenses for the utilization of our timber and forest products, that the products removed are efficiently utilized, that the removal does not unduly damage the forest, that forest revenues are duly collected, and that undesirable timber licensees are weeded out;

5. That such portions of our public domain as are not used for timber production, as the grasslands and mangrove swamps, are made available for beneficial uses under special use permits, and that such lands are granted orderly to qualified parties to insure their development;

6. That after so many years and millions of pesos of public funds made available for reforestation, we should at least be fairly well on our way to putting a forest cover back to very critical denuded watershed areas;

7. That an effective system of protecting the forest has been set up;

8. That there is underway a good program of research on forest and forest products;

9. That there is an adequate forestry college turning out well trained forestry men, and that there is an organized and vigorous campaign informing the public of the role of the forests in the national economy and their relation to their everyday life; and

10. That there has been developed an administrative machinery charged with the custody of the forests which is efficiently manned and could render reasonably adequate service.

The situation

After taking a good hard work look at Philippine forestry, the following are obvious;

a) There are two bright areas in Philippine forestry: that of the rehabilitation and development program of the College of Forestry, U.P., at Los Baños and that of forest products research made possible with the establishment of a well-equipped Forest Products Research Institute, also at Los Baños, Laguna. The former gives some assurance of a fairly adequate source of technically trained men needed for the expanding activities of the Bureau of Forestry and for the growing forest and wood-using industries; the latter has a good research program that is already beginning to tap the vast potentialities in the diversification of the uses and more efficient utilization of our forest products, especially in converting residues and wastes into useful commodities.

b) As to what forests still remain with us, it is high time we stop deluding ourselves as being among the forest-rich countries of the world; our forest per capita is down to 0.56 hectare, quite a drop from the 1.17 hectares we had in 1933; and this is likely to drop still to 0.17 hectare by 1980.

c) Compared with some countries, we can hardly measure up to the off-repeated claim that we have still tremendous timber wealth; our timber per capita is only 38.6 cubic meters; it was 78.1 cubic meters in 1933.

d) While the land-use-balance goal calls for keeping 42 per cent of our total land area in forest, we have only 31 per cent of our land area now under commercial forest (this could go up to 44 per cent if the 13 per cent under non-commercial forest is included); that the remaining forests are so very poorly distributed; that there are critical shortages in some regions; that some provinces had been subjected to so much excessive deforestation that the protective forest cover is gone from the moun-

tain sides giving rise to excessive soil erosion, unregulated waterflow, and periodic failures of irrigation, water and power systems; actually 31 provinces have some excess forests.

e) Land classification of the Philippines is far from complete nor what has been undertaken able to bring about the orderly releases of agricultural lands, neither has it helped direct and confine land settlement to lands suitable for agriculture; the delimitation of areas to be established as permanent forests is so slow that squatters usually are ahead destroying the forests before these could even be marked and proclaimed as reserves.

f) After 50 years, characterized by so much forests and timber already gone as a result of rapid releases of forest lands and the frantic haste in timber exploitation, there is even now no management plan for the Philippine forests, even only for the forest reserves; logged-over areas have not been left in productive condition nor in a position to grow back to a desirable tree vegetation; the selective logging system started only three years ago is actually being implemented only on very limited areas and would yet have to improve itself as a system; and while timber drain is eating deeply in the wood capital, there is no brake as yet to processing more licenses for new timber operations.

g) Destructive logging is still the rule; violations of cutting regulations are widespread, speculation is rampant but punishment of the guilty and cancellation of licenses are far between; there is much waste in logging; there is widespread timber smuggling, often small operators are entrusted the job of measuring and reporting their log output and substantial revenues leak out; extraction to gums, resins, rattans, etc. is going on a large scale but no one knows if this is within the capacity of our forests to replenish.

h) The procedure of leasing of open lands for pastures, tree farms, woodland leases, etc. is far from re-assuring that the lands so granted would be used or developed for the purpose; supervision of leased areas is only token and nominal; there is no clear-cut plan for the mangrove swamps, alternative uses for firewood and fishpond development are in constant tug-of-war, the one with the stronger pressure generally wins.

i) Reforestation is essentially an exclusive job of the national government so that it is slow and expensive: it would take around 200 years and about ₱350 million to finish replanting even the critical watershed areas alone of 1.4 million hectares; as it is, reforestation is an endless, hopeless task as planting rate is badly losing out to the rate of deforestation: about 1 hectare planted to 3 hectares deforested.

j) Forest destruction has never been more widespread; kaingineros and squatters have the run of the forest; there is official timidity to enforce protection laws.

k) An effective education of the masses on forest appreciation has yet to be launched, actually there is public indifference to forest conservation; the potentialities of the school system, community councils, civic organizations, etc. and the various mass education media have not been utilized.

l) There is a hard core of well-trained, dedicated forestry men in the Bureau of Forestry but low pay, political meddling, lack of support from above, an anemic leadership and the perennial inadequacy of funds and facilities, etc. have lowered their efficiency and morale; there is very little delegation of authority and the administrative machinery is squeaking its way to a worsening backlog of thousands of pending cases.

What must be done

Forestry is a long-time proposition and a century — interpersed by two wars — admittedly is too short a time to be expecting much. The Bureau of Forestry is doing its very best, its activities are within the

objectives of forestry and the intent of our laws, but it is a case of trying to do too much with too few and too little. Shortcomings traceable to these deficiencies are inevitable.

But what is of great concern to us is the attitude, especially of the public and the authorities, on forests and their conservation. It is the apathy, the lack of understanding of the public of what our forests are for, and what forestry is attempting to do, that have largely made it difficult to practice forestry. The handling of the forests is a technical activity and should best be left to those qualified to handle it. Political interference—generally shortsighted and selfish — is harmful to forestry. To repair past mistakes and to save what forests we still have demand statesmanship of a high order from leaders. Forestry concerns with the future and only the farsighted leaders could think beyond the present.

Numerous development plans have been worked out. Generally, these plans are good but for the most part implementation bogs down. Briefly what are needed, among others, are bold and firm steps such as the following:

(1) Launch immediately an all-out sustained and systematic information campaign to make the public appreciate the importance of forests and secure the cooperation and support of the masses in conservation measures. All available educational media and all pertinent agencies and organizations — public and private — shall be mobilized for the purpose. The schools, boy and girl scout units, parent-teacher's associations, rural improvement clubs, civic organizations, etc. among others shall be enlisted in the campaign. The national, provincial and municipal forestry councils should be reorganized and revitalized to lead in the movement.

(2) There must be no more vacillation in the enforcement of forest laws. An adequate protection system for the forests from kaingin-making, squatting and wanton destruction must be developed. Settlers shall be directed to and accommodated in alienable agricultural lands; a close cooperation and coordination should be worked out between the Bureau of Forestry and the local units of Philippine Constabularly, municipal police, courts of justice, etc. on matters relating to the prevention, detection, and/or apprehension, prosecution and speedy disposition of cases of forest law violations.

(3) Redirect the present land classification system towards accelerating: (a) the delimitation of areas to be set aside as permanent forests, marking boundaries clearly and providing signboards on conspicious places; (b) the classification and establishment of permanent zones for pastures, tree farms, woodlands, etc. In this connection, a law giving security to areas declared as permanent forests and pasture zones should be enacted.

(4) To plug leakages in forest revenues arising from lack of scalers who will measure and invoice logs in many logging areas and who will levy corresponding forest charges on logs abandoned in the forests and penalize damage done to young timber by destructive logging, more government scalers should be provided.

(5) Make the selective logging mandatory in all permanent forests. Licensees shall be charged with more responsibility over the management and protection of the areas granted to them; deserving operators shall be extended long term licenses, the speculators and undeserving shall be weeded out; and operators of forest concessions (10,000 hectares and over) shall be required to put up a wood processing plant, at least a sawmill, to make use of the major portion of the logs cut in the concession. Exportation of logs shall be restricted to prevent other countries from underselling us with plywood and lumber manufactured from our logs.

(6) Reforestation should be re-oriented and accelerated by: (a) improvement plantings of logged-over areas and, (b) drawing in, through proper incentives, the participation of villagers and private enterprise in the reforestation of open lands. The program should give priority to barren critical watersheds; provide mass employment among those living in the rural districts; promote the development of plantations of quick-maturing forest crops, such as bamboo, acacia, firewood, matchwood, pulpwood, lumbang, etc. to supply raw materials for existing and prospective industries.

(7) Provide the Bureau of Forestry with adequate funds and facilities to enable it to discharge its responsibilities properly.

Details of these measures are not wanting. What is needed is action on them. It is already much later than we think.

REFERENCES

1. Abella, Ceferino: Field procedure in land classification, Phil. Jour. For., 1955, II (3-4).
2. Acogido, Juan: Administrative problems of the Bur. of Forestry, Forestry Leaves, 1950, 4(3).
3. Alas, Antonio de las: Should the exportation of logs be prohibited? The Lumberman, 1958, (IV) 2.
4. Almonte, Pedro, et al: Report of the DANR Inter-Agency Committee on forestry problems, 1959, (Unpublished).
5. Amos, Felipe: Forest resources of the Philippines, 1954, (Unpublished).
6. Ardieta, Rodrigo: Determination of yield of cut-over areas in Mt. Makiling, 1956, Phil. Journ. For 1954, (XII) 3-4.
7. Bedard, Paul: The place of logging in the general forestry picture, Phil. Journ. For., 1954, (X) 1-4.
8. Brown, W. H.: Vegetation of Philippine Mountains, 1919, Bur. of Printing, Manila.
9. Bureau of Forestry: Annual Reports of the Director of Forestry, 1956, 1957, 1958 (Mimeographed).
10. ..... : Manual of Procedure, 1953, Bur. of Printing, Manila.
11. Cenabre, Agapito L.: A compilation of forest laws and orders affecting the Bur. of Forestry. The Filipino Forester, 1954, 6.
12. Chiñte, Felix: Revenue from forest resources, Forestry Leaves, 1951, (IV) 4.
13. Chapman, H. H., Walter H. Meyer: Forest Valuation, 1947, McGraw-Hill Book Co., N.Y.
14. Cruz, Eugenio de la: Urgency of forest research, Forestry Leaves, 1947, (II) 2.
15. Dacanay, Placido: Forest resources of the Philippines, 1943, (Unpublished).
16. Food and Agriculture Organization (FAO): World Forest Resources, 1955, Rome.
17. .....: Yearbook of Forest Products Statistics, 1957, Rome.
18. Gill, Tom: Forestry Proposals for the Philippines, A report to the ICA and NEC, 1959, (mimeographed) Manila.
19. Gooch, Winslow: Forest Industries of the Philippines, 1953, (Mimeographed), Manila.
20. Guerrero, F. A.: Modern logging, The lumberman, 1957, (II) 6.
21. Illick, Joseph: An Outline of General Forestry, 1956, Barnes and Noble, N.Y.
22. Keith, H. G., Forest policy and legislation, A report to the Government of the Philippines, 1956, (Unpublished).
23. Lansigan, N. P.: The School of Forestry and the Philippine Forest Service, Phil. Journ. For., 1939, (2) 1.
24. ..... :Later than we think, Kislap-Graphic, 1958 (XXV) 17.
25. ..... : More off than on, Kislap-Graphic, 1958 (XXV) 21.
26. ..... : Our dwindling forests, The lumberman, 1959 (V) 3; Also in Central Bank News Digest, 1959 (XI) 37.
27. National Economic Council: Raw material resources survey, Forestry Sector, 1959, (Unpublished).
28. Panshin, A. J., E. S. Harrar, W. J. Baker, P. B. Proctor: Forest Products, 1950, McGraw-Hill Book Co., N.Y.
29. Reyes, L. J.: Are we over-cutting our forests? Forestry Leaves, 1955 (8) 1.
30. Sajor, Valentin: The administration of government-owned grazed forest areas, Filipino Forester, 1956, 8.
31. Santos, Teofilo: Philippine Forestry Laws, 1958, (Mimeographed compilation).

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Selective Logging—No Longer A Lip Service *

By DR. AMANDO M. DALISAY

Mr. Toastmaster, fellow guests, members of the graduating class of the seminar, ladies and gentlemen, my friends:

If there is a round about way of getting to the seminar, the trip I made yesterday up to now — from Davao to Samal and then to ADECOR — is one. It is a pleasure to be with you, a very rare privilege indeed to visit you here in the seminar and to convey to you the greetings of Secretary Rodriguez. I know that he cannot come here because of other engagements, but I am conveying to you, I believe, his sentiments, when I say that he would rather be here than be somewhere else. I know, too, that the Secretary of Agriculture and Natural Resources as well as the whole department are with you in anticipating not only the pleasure of this graduation, but also of work well done during the last few weeks.

As I was looking into the initial work of the ADECOR Pearl Farm at the Island of Samal, I was wondering how long it would take to get a pearl produced out of that very difficult but very intriguing work. When I arrived here I know that the pearl has already been produced, but perhaps the ADECOR does not know it yet. The pearl is your seminar here and the results that you have obtained so far. Perhaps it will not be too much to say that this pearl will not only adorn the forest of Davao; it will also be a valuable jewel for the whole forestry service in the Philippines, because what we are doing today will have great significance for the preservation and the maintenance of our forestry resources.

I am one of those who believe that any method, simple or complex, that will preserve our forests for posterity should be welcomed; more than that, it should be put into practice. And today I have seen, although perhaps with very blurred eyes and very blurred glasses, the manifestation of a desire to preserve and to perpetuate this forest for the people who will come after us.

Selective cutting is not a new process; it is not something new that we have here in the Philippines. But what we are doing today is a recognition and appreciation of the fact that unless we do something for our forest, this valuable resources of the Filipino people will not be here a few years from now. More important, selective cutting gives opportunity, from the forest service point of view, the sustained returns from the forest, a continuation of the profits that the lumberman get from it today — and from year to year a yield that would mean to him, not only greater profits but an assurance of income that will cover his costs and return to him a continuing incentive. From the stand point of policy and national welfare, selective cutting is a means to getting through and across the minds of our people that these forests are not for the lumbermen who now get out of them tremendous and enduring profits, but they are for our people to whom this resource has been bequeathed. And it

* Speech delivered by Dr. Amando M. Dalisay, Undersecretary for natural resources, during the closing program on the workshop seminar on selective logging held at Asuncion, Davao on Sept. 28, 1958.

is now our duty to see to it that these forests are transmitted to those who will come after us in undiminished and, if possible, in greater measures.

Our people have so far paid lip service to selective cutting methods. We know as an intelligent people that selective cutting is a method that is desirable both from the stand point of the selfish interests of the loggers and the interests of the national economy; that it will pay ADECOR and the friends of ADECOR to show that selective cutting can be put into practice, to the great benefit of those who will adopt it in the real sense.

Perhaps it is not too much to say that as a growing country we have been for this and for that. We know that selective logging is a valuable method. We have recognized this in our minds. But when these things clash with our selfish interests we forget the benefits that it would give. Or perhaps we only remember that we will be cutting logs now and may be in a decade or two or after that you say: well, I quit, let my children do the logging anyway — so you log and cut over everything.

My friends, this seminar is very significant to me, if only in the sense that it will carry over to the minds of our people in a concrete way and in more ways than one that if we practice selective cutting we will be assured, not only of continuous profit, but of the sublime duty of the present administration to our people to help preserve what is given to us only as a trust. As the Director of Forestry said sometime ago, it is not enough to graduate from the seminar. My friends, let us have a management group that will work with zeal to put into practice what you have learned during the past few weeks. And it is also the duty of the Bureau of Forestry, my colleagues in the Department, to see to it that those who practice selective cutting may be encouraged and those who do not practice it, because of selfish motives will be punished.

Because the Department, through the Bureau of Forestry, is a guardian of these resources, we will not only grant favors but also punish those who break the law. Most important, we will try to punish those who break the agreement with us when they get a timber concession that they will practice selective cutting. These are very strong words my friends — and you will excuse me — but the time has come when we must speak plain words, because so much of our resources is already put in jeopardy.

Today, when I speak of forest preservation, I am only voicing what is part of a tangible conservation policy. We do not have to worry only about our forests; we must also worry about our fisheries and our mines. What we are trying to do for our forestry is only a part of a broad conservation policy designed to preserve for our people the resources, of which the Department is only a humble guardian. And so when we look at you with misgivings, because you are not trying to cooperate with us in preserving our forests and fisheries, please do not get mad with us. We are only trying to do a duty as we see it—a duty under the Constitution. But this duty is given to us as a trust should be preserved with all the powers of the Constitution. But like selective logging and all the methods of conservation, these methods of preservation are not enough. They are a stop gap—these are preventives, curatives, but they do not and will not solve the problem. The real problem lies in the education among our people, in the realization that what is given us in trust must be preserved at all costs and that each one of us must make an individual sacrifice. If all of us had until now recognized that when we get a concession or when we get a fishery permit or when we get a mining license, we are given only the privilege to mine out of these forests, out of these fisheries and out of these mines that will bring us a good income and make prosperous the family to which this income is due. But, my friends, it is more than

this. This is not individual ownership to do what you please. This is only to do with it what you can under the laws of the land; and a conservation policy that must stick should be observed at all times. We are determined to use all the powers under the law to see to it that these conservation measures are enforced.

But, as I have just said, these conservation practices are not enough. We need the understanding, the support and the participation of all our people. It is not enough to do selective cutting; we must also see to it as public citizens that the others also observe this method, and if necessary, to see to it that all our civic organizations, all the leading citizens of the country, especially of Davao, see to it that those who disobey these conservation policies face the courts of justice.

It is not enough my friends, to just say: let the government do it. As our toastmaster, perhaps thru a slip of the tongue, said, let the government also adopt the other measures that will assure to the loggers and to the lumbermen the full implementation of what they have seen to be workable here. The government cannot do very much, even granting that it has all the resources, all the funds. The forests areas are so vast, the length of the coast-lines so long and far distant and the islands so numerous to think of, that we cannot possibly guard all of these through our government agencies.

Our hope lies in that each responsible citizen, each of us who loves his country and recognizes that these resources are for all of us to enjoy, must help to see to it that those who disobey the laws or who wilfully disregard our conservation policy should be brought before the law.

Perhaps this is too much to ask you my friends, because the first reaction of an individual is: hands off. One may say, "I am not concerned, why should I get myself involved in a law suit; why should I approach the government to charge somebody of infraction of forestry and other laws? I'll only step on somebody else's toes". My friends, this Republic will not grow and will not endure, if each of us will hide behind these selfish motives. The opportunity and challenge for all of us is to see that our resources are anybody's business. That all these forests are ours, but only a few given the privilege to utilize them. Nor is it too early to say that a country like ours that is in the process of growth, will have many problems. Many of these problems we face today, such as devaluation, shortage of rice, Quemoy and Matsu and other things, are part of the growing process. Individual citizens cannot do much about these. Nor should we compromise our resources because of a few powerful politicians. Let us take courage in that fact that unless each of us feel an individual responsibility to do something, unless each of us tries to look at these things from the broad welfare point of view, this Republic cannot last nor can it endure.

And those of us, from the humblest forester to the Secretary of Agriculture, if we become afraid to tell them and to step on somebody else's toes or to fail to call the attention of politicians, no matter who they may be, will not succeed in conserving our forests, no matter how many seminars we will have like this one. It is our duty — and a challenge to all of us — to study our conservation laws, our forestry laws, to cooperate with our officials, to begin to ask questions, and, above all, to demand an accounting from those who are entrusted with the preservation and the perpetuation of our national resources.

It is good to have a program like this. We welcome it, we are very happy over it, but let us adopt careful planning and programming. Let us also evaluate periodically what we have done. Let us also evaluate what our efforts mean in terms of the general and national interest. Let us also evaluate our work in our forests in terms of preserving these forests for posterity.

And after these evaluations, my friends, both the government and the citizen must try to cooperate and adopt the measures essential to making these resources yield them becaues they do not belong to us. We are only trustees.

My friends, I would like to close with my humble congratulations for the efforts you have exerted, and I hope that those of you who participated in this seminar will be able to put into practice and to uphold in your minds and hearts the principles of conservation. I wish also to take this opportunity to congratulate the ADECOR for its initiative, its resourcefulness, and its interest in preserving what is given to it as a temporary trust.

And I would also like to congratulate Mr. Elayda, for showing to us in the Department that initiative, understanding and hard work would produce here in Davao an example for the rest of the country to follow. You know, he is not only my co-official in the department, he is also my brother-in-law. And I would like you to know that I am very happy about his work here.

Thank you for all your hospitality, and if you have a chance to come to Manila, please drop in and try to see what your undersecretary is doing in his office and what he is trying to achieve. THANK YOU.

The Potentialities of the Philippine Lumber Industry*

HON. ANTONIO DE LAS ALAS

When the Philippines was called the "Pearl of the Orient" it was the purpose, not only to attribute it with dazzling beauty, but also to describe the fabulous wealth with which it is blessed. On its surface is the vast fertile lands which, favored by a temperate climate and well-apportioned rainfall, can yield food and other necessities of life for our population and products needed or which can find acceptance in other countries. Covering a good portion of the surface are the forests which can provide shelter for the people, protection against soil erosion and destructive flood calamity, raw materials for various industries and products which can find profitable markets abroad. Beneath the surface are priceless gold, silver, copper, iron, chromite, manganese, quicksilver, lead and undoubtedly other metals that scientific exploration will uncover. Between the Islands composing the Philippine Archipelago and surrounding the Archipelago are bodies of water which teem with fish and marine products.

It is indeed paradoxical that with such immense wealth, the Philippines still has to import even food products like rice and fish, and actually is beset with serious problems which are economic in nature such as the shrinkage to a dangerous level of its dollar reserve.

On this occasion my subject has been restricted to a phase of our national economy — the lumber industry. Necessarily this involves a discussion of our forest resources which, for lack of time, I cannot do as it has many ramifications of which the lumber industry is one.

Admittedly the Philippine forest reserve is among the most extensive and richest in the world. Out of the total land area of the Philippines consisting of 29,740,972 hectares, 72.5 per cent is at present classified as forest lands. Of this area 11,354,341 hectares or about 38 per cent is considered commercial forest. Noncommercial forest has been placed at 4,459,900 hectares or 15 per cent. Estimated conservatively, the aggregate commercial stand is around 2,105,000,000 cubic meters or 646,729,000,000 board feet. Based on forest charges (government stumpage tax), this stand has a value of over ₱2,341,550,000. Its commercial value is calculated to be ₱63,150,000,000 based on the minimum price of about ₱30.00 per cubic meter.

The exploration of Philippine forests started from the beginning of the Spanish regime which covered a period of almost four centuries. However, during the Spanish time the development was in very small scale and even during the early stage of the American occupation, it was crudely done with man and animal power and as a consequence, it was extremely slow and wasteful. The Bureau of Forestry, one of the first bureaus created immediately after the American occupation as an initial step in the development of Philippine forests, had to undertake surveys of forest areas to locate attractive forest growth suitable for logging and sawmill operations. The lumber industry steadily progressed,

and at the outbreak of the last world war in December, 1941, there were 163 sawmills with a combined daily capacity of 1,693,000 board feet representing an estimated investment of ₱46,000,000. But the war almost wiped out the lumber industry and after liberation with a daily capacity of 291,000 board feet. The rehabilitation of the industry, however, progressed rapidly since the end of the war and at present 403 sawmills are operating in the entire archipelago with an aggregate daily capacity of 2,554,100 board feet and representing a capital investment of about ₱53,828,880.

The Philippines began exporting Philippine mahogany to the United States in 1906. There was a constant increase of exports and at the outbreak of the war in 1941, lumber already constituted one of our principal export products, having exported during the year 1941, 114,900,000 board feet of logs and 74,100,000 board feet of lumber or a total of 189,000,000 board feet valued at ₱8,041,386.

After liberation, the people were unprepared to undertake the immediate rehabilitation of the lumber industry in view of the destruction of sawmills and operation equipment during the war, coupled with inadequate financial facilities with which to start the industry. Surplus equipment left by the American Forces were utilized at the beginning. With the extension of more credit facilities, new equipment were steadily acquired and used for logging and sawmill operations. The payment of war damage claims and the utilization of American financial aid to the devastated country, helped immeasurably the growth of the lumber industry. Immediately after the war, the Philippine government, in its desire to help rehabilitate the damaged or destroyed homes of the people, banned the exportation of Philippine woods. After less than two years the ban was partially lifted and later totally abrogated. Thereafter the production and exportation of Philippine logs and lumber to the United States, Japan and other foreign countries increased steadily. The rapid growth of the industry is shown by the volume of yearly production which rose in 1956 to 2,202,701,321 board feet which figures surpassed greatly that of the pre-war period. This tremendous increase in the volume of production was due partly to the large quantity of logs absorbed by the Japanese market.

This pattern of timber development under which a considerable portion of the exportation was in logs, has been criticized severely and is generally regarded as unwholesome and undesirable. There is a growing feeling in the Philippines today that the country should take advantage of its vast forest resources by developing greater industrialization of the forest products. More emphasis should be given on extensive and diversified wood utilization instead of merely exporting logs to foreign countries. Philippine woods offer great commercial possibilities as they can easily be converted into sawn lumber, plywood, veneer, wallboard, furniture, prefabricated houses or parts thereof such as panels and door jambs, boat building and an endless variety of other wood products. It is also assured that some species of Philippine woods are suitable for the production of pulp and paper of different grades and quality.

By not processing the logs locally we do not only fail to make full use of our timber resources to develop and establish industries which will stabilize our economy as they will be utilizing local raw materials but also deprive the local laborers of work and thus increase unemployment.

We have already started to process our timber products in the Philippines. We now supply the lumber requirement of our population. During the fiscal year 1956-57 we produced 479,136,787 board feet of sawn lumber, about 50,000,000 of which was exported to different countries, especially the United States. Many plywood factories have been established and in 1957,

they manufactured a sizable volume of plywood 24,853,812 square feet of which were shipped to the United States. Some veneer plants have also been installed which produced 183,670,253 square feet of veneer in the fiscal year 1956-1957 almost all of which were exported to the United States. As some new plywood and veneer projects have been approved, it is to be expected that the production and exportation of these processed products will increase. Other plants manufacturing wood products like wallboard have been established or are under consideration.

However, there is no doubt that we have not yet gone far in industrializing the forest products. As this will help immensely and effectively in building up the economy of our country especially as it will obviously contribute greatly in conserving our dollar reserve, immediate measures should be taken to effect full utilization of our forest products through the establishment of appropriate industries. I will discuss briefly some such measures that I urge be adopted forthwith.

Capital or funds must be made available for the development of the lumber industry. There should be provided adequate financing for machineries and equipment needed for processing plants or for efficient and economical operation. Many of the present log producers and many who are not yet in the business but are seriously considering engaging in it, have no sufficient funds and cannot secure the necessary credit for the purpose. Some of the producers have machineries which are already obsolete and they would like to have the necessary financing to replace such machineries. Unfortunately they have failed to obtain the required credit. If necessary we should not hesitate to invite and encourage foreign capital in financing this industry.

The industry must be given positive assistance and encouragement. Every effort should be made to reduce the cost of production so as to make the price of our export products competitive abroad. To this end the many taxes, fees and charges that now burden the lumber industry should be eliminated or reduced radically. The necessity for this nature of assistance is not realized by some of the officials concerned. For instance, notwithstanding the repeated representation of the lumber people that, on account of the large aggregate amount of impositions being shouldered by the lumber industry, they are experiencing hardships in opening new markets or even holding what they now have, sometime ago the fee for grading or identification and scaling of logs was increased from ₱1 to ₱3 per M.B.F. It looks like it is the intention to derive revenues from this source but the charge being a service fee, the legality of the measure is very doubtful. The vehement protest of the Philippine Lumber Producers' Association against the increase has so far been ignored.

All assistance and facilities should be extended by the different offices and officials concerned to any corporation or individual engaged in manufacturing lumber products or in a position to do so. For the purpose the necessary dollar allocation should be granted to those needing it to acquire machineries and equipment or to be able to replace wornout or obsolete machineries or to acquire spare parts. In this connection there must be understanding and coordination among the different officials concerned. The Honorable Secretary of Agriculture and Natural Resources recently made it clear that his policy is to give preference to any company or person willing and in a position to establish processing plants in granting forest concessions. The attitude of some officials under the same Department of granting short leases only for land to be occupied by the plants will surely frustrate the policy for no one will spend hundreds of thousands of pesos on land which he can hold only for a short period of time.

Positive and aggressive policy to assist

and encourage foreign trade must be adopted if we mean to hold our own in the world market. Unfortunately very little has been done in this connection. Other countries have a department for foreign trade the duty of which is to promote commerce abroad. Here we have urged the creation of a bureau of foreign trade and this must be done without further procrastination. Capable and alert commercial attaches should be assigned in strategic commercial centers of the world and they should be instructed to investigate and have a thorough knowledge of the market, to carry on relentless propaganda for our products, to protect such products from insidious competitive talk and to make every effort to stabilize the market for our products. At home if our export products cannot be subsidized, at least it must be free from all taxes, fees and any sort of burden and all facilities must be extended for their exportation, all for the purpose of making their prices in foreign markets competitive. The countries that have succeeded in building up their foreign trade have done all these and we can do no less.

Logs and lumber at present occupy third place in rank and importance among Philippine exports, next to copra and sugar which occupy first and second places, respectively. If what I have suggested above is carried out it can be predicted that logs and lumber together with the processed wood products like plywood, veneer and wallboard, will eventually assume the premier position in our foreign export trade.

The Philippines realizes that log and lumber trade should not be limited to Japan and the United States. Countries of the sterling block have shown eagerness to buy Philippine woods and there is a growing feeling today that our foreign market should be expanded to our neighboring nations and even to European countries. The high quality of Philippine mahogany and its suitability for building construction, furniture making, boat construction and a variety of other uses are well known in the United States and other countries. Much correspondence has been received from foreign firms coursed through our Department of Foreign Affairs or directly to the Philippine Lumber Producers' Association, inquiring about possible supply of logs and lumber.

I am particularly privileged to be present as Phiilppine delegate at the Fourth All Australia Timber Congress held in Sydney, Australia, two years ago. There I met delegates from many parts of the world. With the information I gathered at the Congress, I can now state that the forest resources of the Philippines is one of the most extensive; that wood products assume top importance among the materials useful and essential to human welfare, and that there is universal demand for the common and collective consideration of greater utilization of wood and of scientific problems pertaining to the conservation of forests, the preservation of wood and the perfection in the use of wood. The Philippines must not lag behind in these respects.

On account of the potentiality of the lumber industry no effort should be spared to protect and conserve our forests. The survey of the forest regions of the Philippines must be continued for the purpose of delimiting areas adopted for forest growth and permanently maintaining such areas as forest reserves. The policy of sustained yield operation should be enforced to preserve the forest wealth for future generations. The people must be educated on the usefulness of trees and the importance that forests play in their economic and social life.

In view of the vastness and potentiality of our forest resources, the Philippines must pay special attention to the technological development. We must be interested in problems of technical nature such as the seasoning and preservation of woods, their industrial and household uses, their physical and mechanical properties, and their tex-

ture, color, figure, density, finishing properties and all their characteristics that affect their value and their usefulness for different purposes. Scientific researches must be undertaken persistently and systematically. One purpose can be to improve the technique and methods in harvesting, production and utilization. Research and experiments may discover new uses for wood and its by-products, residues and waste, leading to the discovery and development of new industries in order to attain the maximum utilization of timber and incidentally, to reduce the overall cost of manufacturing. We are fortunate in this connection that a modern forest products laboratory has already been established in Los Baños.

Finally, it must be stated that the lumber industry is the kind the establishment of which should be encouraged for the reason that its raw materials are available here in any quantity and at any time.

The growing feeling today is that the Philippine economy is far from being sound; it is not stable. The government revenues appear inadequate for the exigencies of an independent nation; the national income is low and the per capita income is below what would give the people the standard of living that would make them happy and contended; our production of rice and other essential food products is insufficient so that we have to import yet a good quantity of these staple products, and the balance of international trade continues to be against this country and as a result the dollar reserve is below what is required to insure currency stability. These problems are serious and no doubt demand prompt radical remedies. Many government organizations and officials have already taken cognizance of the situation and are currently considering various measures. But I am afraid they are missing the point. The principal cause of our economic malady is the imbalance of trade and this can only be remedied by greater production and larger exportation and sale of Philippine products abroad. Our immense forest resources can contribute effectively and decisively in the solution of these grave economic problems.

AN APPRAISAL OF . . .

(*Continued from page* 36)

32. Serevo, Tiburcio: Classification of public forests based on use, Forestry Leaves, 1958, (XI) 1.
33. Singson, M. P. and Mamisao, I. P.: Agricultural land utilization in the Philippines, Filipino Forester, 1954, 6.
34. Soriano, Doroteo: The necessary balance of soil cover of the Philippines, Filipino Forester, 6.
35. Sulit, Carlos: Why conceive our forest? Forestry Leaves, 1949, (III) 1.
36. Sulit, Carlos: Brief history of forestry and lumbering in the Philippines, Forestry Leaves, 1958 (XI) 1.
37. Tamesis, Florencio: The need for a forest conservation movement, Forestry Leaves, 1958, (XI) 1.
38. Utleg, Juan: Land classification in the Philippines, Filipino Forester, 1957-1958, 9 and 10.
39. Viado, Jose: Reforestation with government fund, Forestry Leaves, 1954, (VII) 3.
40. Villanueva, Roberto: Education campaign for forest conservation, Filipino Forester, 1954, 6.
41. Zamuco, Gregorio: The role of forestry education and research, Forestry Leaves, 1958, (XI) 1.

(Delivered by Hon. A. de las Alas at the seminar conducted by the Department of Agricultural Economics, College of Agriculture, University of the Philippines, Los Baños, Laguna, on Sept. 11, 1958).

A New Perspective in Student Affairs

ARTURO M. GUERRERO
Dean, Student Affairs, U.P.

Whenever the first semester comes around, a feeling of uneasy expectancy grips the University constituency. To many, the reason is obvious. In this semester, University organizations, fraternities, and sororities become alive again after months of inactivity during the long vacation. Undertones about screenings and initiations spread around. And because of past events, a form of tension pervades the campus atmosphere. The administration is worried that brutal initiations may be linked with a fatality, as it was some years ago, and may involve the University in a lot of unpleasant publicity and merciless narrow criticism. And the students themselves are worried for fear that their malevolence may be discovered and a suspension or an expulsion, which may delay the completion of their studies, may be meted out to them. While this tension exists, watchful waiting is the order of the day.

And then, when the period of anxious expectancy has almost drawn to a close, giving the administrators some feeling of relief that nothing untoward would no longer happen, something erupts. News spreads around that a student in a college has been brutally initiated, that a neophyte has had to be confined in the University Infirmary, or that a certain organization has indulged in a wild orgy. Events of this kind, or even only the anxiety over the prospect of their occurrence, give the administrators the jitters or untimely grey hair. The students are not free from concern either; many times they live under uneasy apprehension of imminent discovery and penalty.

It is because of this recurring situation that I have chosen to talk on a changed or a new perspective on student organizations. But before I do so, let me indulge in a bit of history which may form the background of the rest of this talk.

Time was when the university or college existed merely for the instruction of students in their academic pursuits. So long as the university satisfied the intellectual needs of students, it felt that it had done its duty fully. But then, together with the growing complexity of society and the pervading concepts of humanism and concern for the human personalities as a whole, universities reexamined their functions. No longer did they think that their sole function was the intellectual enhancement of students, nor yet only the acquisition of new knowledge through research. It dawned on university officials that students came to the campus not merely as intellectual personalities, leaving behind the social. They came as whole personalities and while in residence, they adopted the campus as their foster homes.

The extent of misbehavior on the campus in those times brought home the point more strongly. For instance, when the activities of the Princeton University clubs hurt the academic efforts of the students and the then President Wilson tried to kill off the organizations — a decision which precipitated his resignation, — it became clear that the trend was not so much toward abolition as it was toward wise and understanding supervision.

University administrations viewed their obligations in this new perspective. They

introduced changes. As a university president once said, it was incumbent upon the university to supplement its organizational set-up with certain agencies that would give it a heart and a soul. This statement gave birth to the idea of student personnel services in the United States. When the University of Michigan appointed the first dean of student affairs, later elevating him to the rank of vice-president, it started a form of organization which was to exert a tremendous influence on the university organizations to this day.

Thus we have in practically all colleges and universities in the United States offices which are concerned with student welfare. They come by different names — office of the dean of students, or student personnel services — but their main functions are the same: to promote the welfare of the students. The University of the Philippines has not been impervious to this idea. Precisely, it has had for some time now the offices of the dean of men and the dean of women. But it was only lately, in fact only this year, that it saw fit to create an agency, similar to offices of deans of students abroad, which should be the instrument of the administration in coordinating and supervising all administrative activities connected wth student welfare. This is the new Office of Student Affairs.

But despite these agencies, student problems remained prevalent. Witness the panty raids in some campuses several years ago. Again, look at the much-publicized problems at the University of Minnesota which furnished the rationale for the experiment on changing student attitudes in this respect. Why is it so? Why is it that at some period of the academic year students practically go on a rampage, seemingly defiant and arrogant in their behavior and conduct or apparently out to put one over university authorities in secret violations of the rules and regulations? Why is it that despite these rules and regulations, discipline still looms in the university horizon as a spectre which gives University officials nights of wakefulness and moments of obssessing worry?

The answer, I think, lies in the poor appreciation of values.

The primary function of offices of student affairs lies not so much in imposing rules and regulations for the government of the conduct of the students, nor yet in wielding an iron hand to control their behavior, but largely, I think, in reorienting the students in the values that are involved in university and student relationships. I feel that most of the troubles that the University of the Philippines has had for years now, placing it as well as the student body in a bad light in the eyes of the public and the state which supports it, is due partly to its failure to exert efforts in reorienting all concerned to the values that should govern human behavior. And the governing concept in this connection should be what is commonly termed the personnel point of view, which is really, to quote an authority on this subject, —

> the humanistic philosophy which expresses the dignity and worth of each individual. It gives emphasis to the concept that man is an end within himself and worthy of special consideration regardless of background or status in life. The student personnel point of view in programmatic form is the concept of creating within each student the motivation to seek experiences and knowledge, both of an academic and non-academic nature, which will assist him in becoming a self-reliant, self-evaluative, self-analyzing, self-directing and a productive person in socially accepted endeavors of life. This is not coddling students but is a sound educational principle of improving individuals and their ability to become productive members of our society.

In this light, what should be the values that should form the goal or objectives of the administrative operation of the office designed to promote the welfare of the students?

In the first place, there should be trust founded on understanding and respect. The administration should consider the students trustworthy unless proven otherwise. Dealings with new students should not be colored by prejudices due to misbehavior of former students. This is the value which should prevent the university administration from adopting a suspicious attitude on the activities of the students, as if they are all criminals committing crimes, always planning to embarrass the administration, or putting one over its officials. If proper respect and understanding is accorded the students, university officials should be able to draw out of these students, not arrogance nor defiance, but a reciprocal attitude of trust and respect for the administration.

This should lead to the value of self-responsibility which should be aroused, stimulated and developed in the students in order to make them feel that they are important, that they belong, or that they are part of the whole organization. The administration should not stand aloof towards students activities; it should lend a hand either in pursuing an activity or, if rather objectionable, in steering the activity in the right direction. For in the complex development of modern society, in which man finds himself practically torn away from nature, he may feel lonely if he cannot establish ties with his fellowmen, if he cannot belong to a group and participate in group activities. "This necessity to unite with other living beings," wrote Erich Fromm in his book, *The Sane Society,* "to be related to them, is an imperative need on the fulfillment of which man's sanity depends. This need is behind all phenomena which constitute the whole gamut of human relationships . . . Man can attempt to become one with the world by *submission* to a person, to a group, to an institution, to God."

Lastly, all these administrative efforts in connection with students affairs should be characterized by a sincerity which will leave no room for doubt in the minds of the students as to the aim of the administration to promote their welfare.

These are some of the great expectations in the administration in its efforts to cope with the multifarious problems and activities that now beset the extra-academic life of the students. All these, however, should not create the impression, that this is a one-way street. While we would want in the administration the feeling of trust, understanding and respect for the students, that it should cooperate in a very constructive way with the students, that it should be sincere in its dealings, the students should also strive for these values in their behavior. University-student relations are two-way propositions; they should be viewed in the perspective of family relations of parents and children in that, for instance, the parents will trust their children only if the children make themselves worthy of this trust. For it seems to me that a person may not be treated with trust, understanding or respect unless he shows himself worthy of them. For instance, students should not try or attempt to dupe university officials, nor engage in objectionable activities on the sly. They should cooperate with the University administration in the enforcement of the rules and regulations of the University.

In this regard, participation of the students in the formulation of these rules is necessary in order to develop in the students the sense of self-responsibility which in many instances I have felt to be lacking.

But then this participation in this administrative endeavor should not only be characterized by a sense of cooperative action but should also be in accordance with the accepted ethical standards of the society in which the student moves around.

Ethical ideas are many but let me mention just a couple. Erich Fromm in his book entitled *Man For Himself,* says "that our knowledge of human nature does not lead to ethical relativism but on the con-

trary to the conviction that the sources of norms for ethical conduct are to be found in man's nature himself; that moral norms are based upon man's inherent qualities and that their violation results in mental and emotional disintegration."

Henri Bergson, the famous Jewish philosopher who has often been considered the unofficial spokesman of the Roman Catholic Church says that the sources of morality are, first, the orders which society itself lays down regarding the behavior of the members and second, the model lives of outstanding citizens like patriots, mystics, and others, which furnish examples of good behavior and conduct to some people.

Whether one takes Erich Fromm's idea or subscribes to Bergson's thinking on the matter is not very significant for there are only slight differences between the two. What is important is that human conduct should be subject to certain rules and regulations which have been laid down by the group. Violations of these rules and regulations are therefore to be considered as anti-social and are designed for the destruction of the social structure.

These are the values to which both the administration and the student body should train their rights. There should be mutual trust, understanding and respect; there should be cooperation in all their undertakings characterized by self-responsibility and sincerity. These are the great expectations.

Without these values, university-student relationships will simply be cat-and-mouse affairs, where one is alert and ready to pounce the minute the other misbehaves. Unless the expectations regarding reorientation in values are realized, student affairs will remain in a deteriorated condition and will recurringly and inadvertently sabotage the more important functions and concerns of university education.

KNOW YOUR CIVIL SERVICE OPINIONS AND RULINGS

By
TEOFILO A. SANTOS

Beginning with this issue of the FORESTRY LEAVES, the writer will run a column, "KNOW YOUR CIVIL SERVICE OPINIONS AND RULINGS", selected from the CIVIL SERVICE REPORTER, official organ of the Civil Service Commission. These will be of interest to Bureau employees at all levels and in all types of work, and to the students of the College of Forestry. For they are old and/or new basic concepts of good public administration and personnel management.

IMMORALITY COMMITTED BEFORE MARRIAGE
(BCS Decision, May 21, 1955)
FACTS:

During the Japanese occupation the respondent and the complainant fell in love and got engaged. Within the period of their engagement, the respondent, for promises of marriage, succeeded in having sexual relations with his fiancee as a result of which she begot a child. Before the birth of the child, however, they got separated incident to the liberation of the Philippines, but upon restoration of order, they communicated with each other. The respondent acknowledged his child and assured the complainant that he would marry her as soon as he finished his studies. However, after finishing his studies and getting employment in the government, he married another.

RESPONDENT'S DEFENSE:

The respondent claimed that their indiscretion occurred during the uncertain days of Japanese occupation when they were both single and he was not yet in the government service; that he had lost track of his fiancee for quite a time and in 1948, he heard that she intended to get married to another; and that their indiscretion was not accompanied by any public scandal.

DECISION:

The respondent was held guilty of disreputable conduct committed prior to entering the government.

"It is conceded that the offense was committed by him at a time when conditions were precarious and uncertain. Nevertheless, it would seem that he had all the chances to rectify his error. Instead, however, of doing the right thing by her when opportunity presented itself, the respondent merely carried on correspondence with the complainant which was full of promises, but said promises proved to be empty, culminating in marriage to another. Granting that during the Japanese occupation prevailing condition or social milieu was not conducive to the maintenance of strict moral standards, that in the midst of uncertainty everybody seemed to have adopted a careless and indifferent attitude toward the future, nevertheless, from the record, this Bureau finds the respondent guilty of inexcusable callousness and most unchivalrous conduct in that he deceived a poor unsophisticated girl, trained in a religious school, whose chastity appears to be beyond reproach."

PENALTY:

The respondent was given 30 days from receipt of the decision to resign from the service, failure in which would be separated for cause. (4-56)

FALSIFICATION OF DAILY TIME RECORD

(Decision, BCS, Dec. 3, 1953)

FACTS:

Respondent, a clerk in the Office of the Provincial Treasurer assigned to District No. 15 comprising the municipalities of Silago, Hinunañgan and Hinundayan, made it appear in his daily time records that during the periods December 23-31, 1952, January 1-7 and February 24-28, 1953, he was performing his official duties as tax campaigner although actually he was in Tacloban.

RESPONDENT'S DEFENSE:

Respondent admits he was in Tacloban from December 23, 1952, to January 7, 1953, where he spent Christmas and New Year with his family and worked in the office on RTC campaign activities. With regard to his absence from February 24 to 28, 1953 he avers that he had to go home (Tacloban) early due to his information that his three children were sick and that his wife was not able to draw his salary from February 1-15, 1953. He states that he did not intend to falsify his time records but was compelled to submit them as they were so he could collect his salary.

DECISION:

The foregoing explanation is virtual admission of his guilt. The desire of the respondent to draw his salary certainly does not warrant the falsification of his daily time records. As regards his absence from February 24 to 28, the respondent could have informed his superior thereof anytime before he left his station either by note or personally. He is therefore found guilty of reprehensible conduct. However, the fact that this is his first offense on record may be considered a mitigating circumstance in his favor.

PENALTY:

Respondent is hereby fined his one month's pay, reprimanded and warned. (2-57)

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COURT HEARING CONSIDERED AS FORMAL HEARING IN ADMINISTRATIVE CASES

(Decision, CSBA, May 25, 1955)

Due to their conviction in court for drunkenness, in accordance with the provisions of Section 695 of the Revised Administrative Code, as amended, in connection with paragraph 7 of Civil Service Rule II, the Bureau of Service handed down a decision dismissing from the service two government laborers effective their last day of service with pay.

Respondents appealed from the above decision of BCS on the following grounds:

"1. That respondents were never informed of the nature of charge or charges preferred against them;

"2. That they were not given an opportunity to submit their answer to whatever charge or charges that have been preferred against them;

"3. That no formal inquiry has been conducted to determine whether a cause exists to warrant the removal of the respondents; and

"4. That the decision of the Honorable Commissioner of Civil Service is too drastic and severe."

BCS decision was affirmed by the Civil Service Board of Appeals with commend that "formal hearing was correctly dispensed with in this case, inasmuch as the decision appealed from is based upon a final decision of a court of justice x x x for the reason that judicial trial in criminal cases required a higher degree of proof — beyond reasonable doubt to sustain a conviction — than that in an administrative hearing

where only a preponderance of evidence is required." (12-55)

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EFFECT OF DEATH ON ADMINISTRATIVE PROCEEDINGS

(4th Indorsement, BCS, March 17, 1956)

QUERY:

Does the death of a respondent terminate the administrative proceedings against him and entitle his heirs to all the benefits due him, together with his unpaid salaries from the date of his suspension to the date of his death?

OPINION:

In view of the death of the respondent which in the opinion of this Bureau had the effect of dismissing or dropping the case, this Office sees no reason for not recommending approval of the claim made by the widow for payment of her claim and whatever leave is allowable. (5-56)

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OFFICIAL TIME IN ADMINISTRATIVE PROCEEDINGS

QUERIES:

1. May the time spent by Mr. A in appearing at the hearing of the administrative complaints filed by him and others against a certain government official be considered official?
2. May the time spent by him in consulting the records of his office about certain documents pertaining to the case also be considered official?

OPINION:

Sec. 258 of the Revised Administrative Code, as amended, provides:

"Sec. 258. *Attendance of Government employee in certain Proceedings.* — When a Government employee is required to attend court as a witness or is required by lawful authority to render service as a witness or otherwise before a court-martial or in any extradition case or administrative proceedings of any sort, such service shall be deemed to be service in regular course of employment, and the salary accruing during the period thereof shall not be withheld."

This Office is of the opinion that Mr. A's appearance in the hearing of the case may be considered within the purview of the aforequoted provisions of the Revised Administrative Code and the time spent by him in attending the hearing of the case may, therefore, be considered official. As to the second question, it may be stated that in preparing this case, Mr. A is acting in his personal and private capacity as party complainant and, therefore, the time spent by him for said purpose may not be considered official and not covered by the aforequoted provision of the Revised Administrative Code. (9-56)

LEGAL COUNSEL

ATTORNEY EMPLOYEE CANNOT ACT AS COUNSEL FOR ANOTHER EMPLOYEE FACING ADMINISTRATIVE CHARGES

(1st Indorsement, BCS, August 26, 1955)

QUERY:

May Mr. X who is facing an administrative case be allowed to hire the services of an attorney fellow employee in the investigation of the administrative case against him?

OPINION:

Although BCS is not aware of any legal prohibition against an attorney employee in the government from representing his fellow employee in the investigation of an administrative case against the latter, BCS is of the opinion that it is improper for such an attorney to represent his fellow employee in said investigation. Unlike a government investigator, who represents neither the complainant nor the respondent in an administrative case, the attorney employee in appearing for his fellow employee in

the investigation of the administrative case against the latter will be presenting only said employee whose interest in the subject matter of the administrative case may be adverse to that of the government and in his desire to absolve his client, he might be suspected of placing his client's interest over that of the government.

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LEAVE — ENJOYMENT THEREOF MAY BE SCHEDULED

(1st Indoresement, BCS, April 12, 1957)

QUERIES:

1. Can the management of the NDC regulate the granting of vacation leave to its employees?
2. Can the management fix the date when certain classes of employees may go on leave?

OPINION:

"It may be noted from the provisions of Sec. 284 of the RAC that the grant of vacation leave with pay to an employees or laborer is discretionary with the President, the proper head of department or the chief of office as the case may be. As such, in the opinion of this Office, these officials may allow or refuse to allow their employees or laborers to go on vacation leave with pay depending on the requirements and exigencies of the service. This does not mean, however, that the withholding of the enjoyment of the vacation leave with pay will result in the forfeiture of the employee's earned leave. Such leave is still credited in the employee's favor and may be enjoyed at some future time".

"With respect to the second query, it should be noted that a periodic leave of absence has been accepted as desirable from the standpoint of efficiency, as it permits an opportunity for physical and mental recuperation. It is, therefore, within the authority and responsibility of the agency head to draw up a schedule when certain classes of employees may go on leave, taking into consideration the agency work program." (6-57)

(To be continued)

One Way to Prevent "Kaingin" in Public Forest

By FRANCISCO ABIJAY
District Forester

Forest protection is one of the basic functions of the Bureau of Forestry in the administration of the public forest of the Philippines. In the implementation of this major project for the management of the forest, the Bureau has promulgated administrative orders, rules and regulations in the utilization of forest products as well as in the use of the forest lands. At the same time, the Bureau has taken necessary measure in enforcing provisions of Section 2751 of the Administrative Code as amended for the purpose of preventing forest destruction by a system of cultivation generally known as "kaingin" making in public forest.

Prevention of kaingin in public forest proved to be the most serious problem the Bureau has encountered in the management of the forest. This problem remains unsolved to the present time. The enforcement of kaingin law has so far failed to discourage people in rural communities from clearing forest vegetation for the sole purpose of planting seasonal agricultural crops. In fact it appeared in some instances that the kaingin law itself seemed to have served as an incentive for landless people in rural areas to cut down trees and clear forest vegetation because of their belief that the land they may cultivate would become eventually their private property after serving terms in prison. This belief has found expression and become more clearly in evidence when the "the land for the landless" policy was introduced by the Magsaysay administration in the early period of his regime.

The Bureau of Forestry has for the past twenty or more years launched intensively educational campaign through such media of information as community assembly in rural areas, group discussion and press releases that the people may come to appreciate and understand the immensed economic value of forest products and the forest itself in building up an enduring and progressive economy of the country and people. However, despite all efforts of the Bureau of Forestry in popularizing the importance of the forest in the economic development of the nation, the people in rural areas seemed to persist in their belief that the forest does not necessarily give them tangible material benefits other than the lumber extracted from trees for the construction of houses wherein to live with their families. In fact, the common mass of people in rural communities is of the opinion that the presence of forest vegetation on hillsides and mountain ranges retards perceptively farming activities for early development of agricultural projects in rural communities.

It is now recognized that the Bureau of Forestry alone unaided by local officials is totally powerless in protecting public forest from wanton destruction by kaingin making. It requires no less than the full cooperation and unqualified support of responsible officials in local government to prevent, if not ultimately stop, forest destruction by the people in rural areas. It

may, however, be emphasized the fact that for the present, most officials of local government consider the public forest as simply the exclusive property of the national government. Some local officials appeared to be of the belief that they are not called upon in the performance of their official duty to extend assistance to forestry officials in preventing kaingin in their respective localities. These officials seemed to be entertaining the belief that the presence of forest vegetation on hills and mountains had deprived them of the best source of local revenue in the form of land taxes if the people were permitted to farm forested lands on hillsides and mountains in their municipalities.

Majority of local officials seemed to persist in their belief that public forest is more of a liability rather than an economic asset to local government for the forest has not helped solve financial difficulties in running the affairs of local government. This attitude of responsible local officials explains clearly why provincial assessor allowed people to declare forested land for taxation purposes in order to collect local revenue.

With the present frame of mind on the part of local officials, forest protection becomes the sole responsibility of the Bureau of Forestry. Here lies the obvious truth why the Bureau of Forestry has miserably failed in its mission of protecting the forest from being wantonly destroyed by kaingin making.

Forest protection may become a reality only when municipal mayors could be induced to cooperate with local forestry officials in preventing kaingin in public forest in his municipality. The municipal mayor is the most influential person in authority over the residents of his municipality. Because of his official position, his words have the effect of law and the people generally follow his counsel on matters affecting their rights, duties and responsibilities as residents of the municipality. This is so because a municipal mayor may, if he so desires, impose discipline over his subjects. He has the power to make a resident quite uncomfortable by harassing tactics if he appeared indifferent or non-cooperative to whatever civic projects the mayor may undertake for the welfare of the community.

The municipal mayor may perhaps be induced to cooperate in the protection of public forest from kaingin if it could be demonstrated to him that the forest itself shall become one of the sources of raising municipal revenues for the support of local government. As incentive for municipal mayor, it is suggested that the following legislation be proposed:

1. Fifteen percent of all revenues derived from timber cutting shall be given to local government for the construction and maintenance of barrio roads, schools and for participation in forest protection.
2. All fines collected for forest violations will be retained by local authorities imposing such fines.
3. All revenues derived from timber cutting as share of local government shall be deemed available for payment on charges due on forest products cut and/or destroyed inside permanent forest by kaingin within the municipality.
4. All revenues derived from fines for violation of Section 2751 of the Administrative Code as amended shall accrue to the national government.

WANTED: Foresters

By EUGENIO DE LA CRUZ
Director, Forest Products
Research Institute

The College of Forestry, University of the Philippines, is confronted with the problem of training foresters in sufficient numbers adequate to meet the fast increasing demand of government offices such as the Bureau of Forestry, the Forest Products Research Institute, the College of Forestry, the Bureau of Internal Revenue and many others. The fact is that forestry, being a less glamorous profession, does not attract enough of the best materials from the different high schools of the land to enroll in the course. Presently, out of the number of students that enters the college, only a few could be expected to graduate as foresters. A good many of these students drop out during the first two years. Most of the residuals managed to finish the ranger course and only a few become foresters.

With the proposed up-grading of the curriculum of the College of Forestry by including various cultural subjects besides the compulsory twelve units of Spanish, it becomes necessary to lengthen the course to five years for B.S.F. and three years for ranger. So if this is realized, it is easy to see that it will materially impair our efforts of producing sufficient forestry graduates to meet the needs of the government and the industries. Personally, I am of the opinion that there is no necessity of increasing the length of time to train foresters and rangers at this time. Never before had there been so much desire on the part of the different industries using wood as raw materials to adopt not only modern methods on wood technology but also sustained yield management of their forest areas. To do these they must have to avail themselves of the services of foresters wherever they may find them. Meaning to say, that if we do not produce enough foresters, the men in the government services today will be lured to the private industries who are always ready to offer much higher remunerations. As a consequence, the different government entities affected by such depletion of technical personnel will be forced to curtail certain phases of their activities to the detriment of public service.

There is so much complaint of unemployment among the graduates of different professions but not in forestry. And in point of pay, foresters who are capable of handling a man-size job are paid better than any profession I know. I wish to encourage young men who are not afraid to work that they take forestry. It offers plenty of opportunities of good employment and healthful and very fascinating studies.

OFFICIAL COMMON NAMES
OF
TREES AND OTHER PLANTS
As Adopted by the Bureau of Forestry
PART I
Common Names Their Scientific Names

Official Names	*Scientific Names*
Abúab	Lophopetalum toxicum Loher (Celastr.)
Acacia (or Rain tree)	Samanea saman (Jacq.) Merr. (Leg.)
Achuete	Bixa orellana L. (Bixa.)
Adina	Adina multifolia Havil. (Rub.)
Afú	Anisoptera brunnea Foxw. (Dipt.)
Agohó	Casuarina equisetifolia L. (Casuar.)
Agoho, Mountain	Casuarina rumphiana Miq. (Casuar.)
Agpói	Bauhinia cumingiana (Benth.) F. Vill (Leg.)
Agusahis	Setaria palmifolia (Koen.) Stapf (Gram.)
Agus-us	Paratrophis philippinensis (Bur.) F. Vill. (Mroac.)
Akle	Albizzia acle (Blanco) Merr. (Leg.)
Akleng-parang	Albizzia procera (Roxb.) Benth (Leg.)
Alagasi	Leucosyke capitellata (Poir.) Wedd. (Urtic.)
Alagáu	Premna odorata Blanco (Verb.)
Alahan	Guioa koelreuteria (Blanco) Merr. (Sapind.)
Alakáak	Palaquium gigantifolium Merr. (Sapot.)
Alas-ás	Pandanus luzonensis Merr. (Pand.)
Alasíis	Aphananthe philippinensis Planch. (Ulm.)
Alasán	Arytera littoralis Blume (Sapind.)
Albutra	Archangelisia flava (L.) Merr. (Menis.)
Alibangbáng	Bauhinia malabarica (Roxb. (Leg.)
Aligángo	Hymenodictyon excelsum (Roxb.) Wall. (Rub.)
Alím	Melanolepis multiglandulosa (Reinw.) Reichb. f. & Zoll. (Euph.)
Alinang	Cyperus radiatus Vahl (Cyper.)
Aliñgaro	Elaeagnus philippinensis Perr. (Elaeagn.)
Alintatáu	Neonauclea sp. (Rub.)
Alipatsáu	Pygeum coccineum Elm. (Rosac.)
Almáciga	Agathis alba (Lam.) Foxw. (Pin.)
Almón	Shorea almon Foxw. (Dipt.)
Alolokdó	Nephrolepis hirsutula Presl. (Polyp.)
Alúpag	Euphoria didyma Blanco (Sapind.)
Alupag-amo	Litchi philippinensis Radlk. (Sapind.)
Alupag-lalaki	Euphoria gracilis Radlk. (Sapind.)
Amamangkas	Pleomele multiflora (Warb.) Merr. (Lil.)
Amayan	Angelesia splendens Korth. (Rosac.)
Ambalag	Mischocarpus fuscescens Blume (Sapind.)
Amboi-uan	Grewia acuminata Juss. (Tiliac.)
Ambúng	Arenga ambong Becc. (Palm.)

Official Names	*Scientific Names*
American Mahogany	*See* Mahogany, American, Large-leaved
Amor-seco	Andropogon aciculatus Retz. (Gram.)
Amudil	Paratrophis glabra (Merr.) van Steenis (Morac.)
Amugan	Pygeum glandulosum Merr. (Rosac.)
Amugis	Koordersiodendron pinnatum (Blanco) Merr. (Anac.)
Amuyong	Goniothalamus amuyon (Blanco) Merr. (Anon.)
Anabióng	Trema orientalis (L.) Blume (Ulm.)
Anabó	Abroma augusta (L.) L.f. (Sterc.)
Anagap	Pithecolobium scutiferum (Blanco) Benth. (Leg.) (Willd.)
Anagdong	Trema amboinensis (Willd.) Blume (Ulm.
Anáhau	Livistona rotundifolia (Lam.) Mart. var. luzonensis Becc. (Palm.)
Anang	Diospyros pyrhocarpa Miq. (Eben.)
Anauan	Gonystylus philippinensis Elm. (Gonyst.)
Anchoan (or Javanese caña-fistula)	Cassia javanica L. (Leg.)
Anibong	Oncosperma tigillaria (Jack) Ridl. (Palm.)
Anii	Erythrina fusca L. (Leg.)
Anilau	Columbia serratifolia (Cav.) DC. (Tiliac.)
Anislág	Securinega flexuosa Muell.-Arg. (Euph.)
Anonang	Cordia dichotoma Forst. f. (Borag.)
Anónang-lalaki	Cordia cumingiana Vid. (Borag.)
Anónas	Anona reticulata L. (Anon.)
Anoniog	Horsfieldia acuminata Merr. (Myrist.)
Anóngo	Turpinia pomifera (Roxb.) DC. (Sta phyl.)
Anos	Schizostachyum lima (Blanco) Merr. (Gram.)
Antipolo	Artocarpus blancoi (Elm.) Merr. (Morac.)
Anubing	Artocarpus cumingiana Tréc. (Morac.)
Anuling	Pisonia umbellifera (Forst.) Seem. (Nyctag.)
Anuping	Gymnacranthera paniculata (A. DC.) Warb. (Myrist.)
Apali	Mangifera longipes Griff. (Anac.)
Apa-ápi	Avicennia offinalis L. (Verb.)
Apitong	Dipterocarpus grandiflorus Blanco (Dipt.)
Apitong, Basilan	Dipterocarpus basilanicus Foxw. (Dipt.)
Apitong, Broad-winged	Dipterocarpus speciosus Brandis (Dipt.)
Apitong,Hairy-leaved	Dipterocarpus philippinensis Foxw. (Dipt.)
Apitong, Round-leaved	Dipterocarpus orbicularis Foxw. (Dipt.)
Apoakan-amok	Pygeum pubescens Merr. (Rosac.)
Aránga	Homalium luzoniense F.-Vill. (Flac.)
Arañgan-babae	Homalium bracteatum Benth. (Flac.)
Arañgen	Ganophyllum falcatum Blume (Sapind.)
Aróma (or Cassie Flower)	Acacia farnesiana (L.) Willd. (Leg.)
Ash, Philippine	Fraxinus friffitthii C.B. Clarke (Oleac.)
Ata-áta	Diospyros mindanaensis Merr. (Eben.)
Ata-ata, Alvare's	Diospyros alvarezii Mer.. (Eben.)
Atibulnak	Rubus pectinellus Maxim. (Rosac.)
Atikoko	Teijsmanmodendron longifolium Merr. (Verb.)
Atis	Anona squamosa L. (Anon.)
Avocado	Persea americana Mill. (Laur.)
Ayangile	Acacia confusa Merr. (Leg.)
Ayo	Tetrastigma harmandii Planch. (Vitac.)
Badling	Astronia cumingiana Vidal (Melast.)
Bagaluñga	Melia dubia Cav. (Meliac.)
Bagaoring	Beilschmiedia nervosa (Elm.). Merr. (Laur.)
Bagarbas	Hydnocarpus hutchinsonii Merr. (Flac.)

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Bagilumbáng	Aleurites trisperma Blanco (Euph.)
Bagiraua	Terminalia polyantha (Presl. (Combr.)
Bagó	Gnetum gnemon L. (Gnet.)
Bagoadlau	Xanthostemon philippinensis Merr. (Myrt.)
Bagok-bok	Themeda triandra Forsk. (Gram.)
Bagras	Eucalyptus deglupta Blume (Myrt.)
Bagtikan	Parashorea plicata Brandis (Dipt.)
Bagtikan, Southern	Parashorea warburgii Brandis (Dipt.)
Bahai	Ormosia calavensis Azaola (Leg.)
Baibai	Salix tetrasperma Roxb. (Salic.)
Baino or Lotus	Nelumbium nelumbo (L.) Druce (Nymph.)
Bakan	Litsea philippinensis Merr. (Laur.)
Bakauan	Rhizophora apiculata Blume (Rhiz.)
Bakáuan-babáe	Rhizophora mucronata Lam. (Rhiz).
Bakáuan-gúbat	Carallia brachiata (Lour.) Merr. (Rhiz.)
Bakembákes	Malachra capitata L. (Malv.)
Bakto	Cephalostachyum mindorense Gamole (Gram.)
Bakuít	Sporobolus indicus (L.) R. Br. (Gram.)
Balákat	Zizyphus talanai (Blanco) Merr. (Rhamn.)
Balakat-gubat	Sapium luzonicum (Vid.) Merr. (Euph.)
Balanggót	Cyperus malaccensis Lam. (Cyper.)
Balanoi (or Sweet Basil)	Ocimum basilicum L. (Labiat.)
Balanti	Homalanthus populneus Pax. var. levis (Blanco Merr. (Euph.)
Balatbát	Licuala spinosa Wurmb (Palm.)
Balete	Ficus balete Merr. (Morac.)
Balikbikan	Drypetes bordenii (Merr.) Pax & K. Hoffm. (Euph.)
Balimbing	Averrhoa carambola L. (Oxal.)
Balinghásai	Buchanania arborescens Blume (Anac.)
Baling-úai	Flagellaria indica L. (Flagell.)
Balitahan	Bridelia glanca Blume (Euph.)
Balitantan	Buchanania nitida Engl. (Anac.)
Balobó	Diplodiscus paniculatus (Turcz. (Tiliac.)
Balong-kahinai	Pothoidium lobbianum Schott (Arac.)
Balsa	Ochroma lagopus Sw. (Bomb.)
Bálu	Cordia subcordata Lam. (Borag.)
Balukanág	Chisocheton cumingianus (C. DC.) Harms (Meliac.)
Balukok	Grewia philippinensis Perk. (Tiliac.)
Balúno	Mangifera caesia Jack (Anac.)
Bambán	Donax cannaeformis (Forst.) f.) K. Schum. (Marant.)
Banabá	Lagerstroemia speciosa (L.) Pers. (Lythr.)
Banag	Smilax bracteata Presl. (Lil.)
Banai-bánai	Radermachera pinnata (Blanco) Seem. (Bign.)
Banai-báñai, Whitford's	Radermachera whitfordii Merr. (Bign.)
Banálo	Thespesia populnea (L.) Soland. (Malv.)
Banáto	Mallotus philippinensis (Lam.) Muell. Arg. (Euph.)
Banáui	Drypetes grandifolia (C. B. Rob.) Pax. and K. Hoffm. (Euph.)
Bangkál	Nauclea orientalis L. (Rub.)
Bangkal Southern	Nauclea junghuhnii (Mig.) Merr. (Rub.)
Bañgulo	Litsea garciae Vid. (Laur.)
Baní	Pongamia pinnata (L.). Merr. (Leg.)
Banig-usa	Panicum patens (L.) (Gram.)
Banilad	Sterculia philippinensis Merr. (Sterc.)
Baníti	Diploknema ramiflora (Merr.) H. J. Lam (Sapot.)

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Banokbok	Lucuma luzoniensis (Merr.) H. J. Lam (Sapot.)
Bansalágin	Mimusops parvifolia R. Br. (Sapot.)
Bantigi	Pemphis acidula Forst. (Lythr.)
Banúyo	Wallaceodendron celebicum Koord. (Leg.)
Baraibái	Cerbera manghas L. (Apocyn.)
Barák (or Zedoary)	Curcuma zedoaria (Berg.) Rosc. (Zing.)
Barinatnát	Tetrastigma loheri Gagnep. (Vitac.)
Barit	Parinarium costatum Blume (Rosac.)
Bariu	Pandanus copelandii Merr. (Pand.)
Bariu-án	Grewia eriocarpa Juss. (Tiliac.)
Barotangol	Allophylus grossedentatus (Turcz.) F. Vill. (Sapind.)
Basan	Garcinia brevirostris Scheff. (Gutt.)
Batadbataran	Andropogon halepensis (L.) Brot. var. propinquus (Kunth) Merr. (Gram.)
Batikuling	Litseaa leytensis Merr. (Laur.)
Batikuling-surutan	Litsea leytensis Merr. (Laur.)
Batiluk	*See* Oak, Jordana's
Batete	Kingiodendron alternifolium (Elm.) Merr. (Leg.)
Batino	Alstonia macrophylla Wall. (Apocyn.)
Batitínan	Lagerstroemia piriformis Koehne (Lythr.)
Bato-bato	Drypetes littoralis (C.B. Rob.) Pax & K Hoffm. (Euph.)
Batukanág	Aglaia bicolor Merr. (Meliac.)
Batulinau	*See* Ebony.
Bayabas (or Guava)	Psidium guajava L. (Myrt.)
Bayanti	Aglaia llanosiana C. DC (Meliac.)
Bayating	Tinomiscium philippinense Miers (Menisp.)
Bayit	Walsura aherniana Perk. (Meliac.)
Bayóg	Dendrocalamus merillianus Elm. (Gram.)
Bayók	Pterospermum diversifolium Blume (Sterc.)
Bayok-bayókan	Pterospermum niveum Vid. (Sterc.)
Benglaréng	Grewia bilamellata Gagnep. (Tiliac.)
Benguet Pine (or Saleng)	Pinus insularis Endl. (Pin.)
Bermuda grass	Cynodon dactylon (L.) Pers. (Gram.)
Betel Palm (or Buñga)	Areca catechu L. (Palm.)
Betel pepper	*See* Ikmo.
Betis	Madhuca betis (Blanco) Merr. (Sapot.)
Biga	Alocasia Macrorrhiza (L.) Schott (Arac.)
Bigáu (tanlad)	Miscanthus sinensis Anders. (Gram.)
Bignái	Antidesma bunius (L.) Spreng. (Euph.)
Bignái-laláki	Aporosa sphaeridophora Merr. (Euph.)
Bikág	Ternstroemia toquian (Blanco) F-Vill. (Theac.)
Bikal	Schizostachyum diffusum (Blanco) Merr. (Gram.)
Bikál-babai	Schizostachyum dielsianum (Pilg.) Merr. (Gram.)
Bilis	Heterosphathe sibuyanensis Elm. (Palm.)
Binaton	Dacrydium falciforme (Presl.) Pilg. (Tax.)
Binayuyu	Antidesma ghaesembilla Gaertn. (Euph.)
Binggas	Terminalia comintana (Blanco) Merr. (Combr.)
Binoloán	Acmena acuminatissima (Blume) Merr. & Perry (Myrt.)
Binúang	Octomeles sumatrana Miq. (Datisc.)
Binukaw	Garcinia binucao (Blanco) Choisy (Gutt.)
Binuñga	Macaranga tanarius (L.) Muell-Arg. (Euph.)
Bitanhol	Callophyllum blancoi Pl. & Tr. (Gutt.)
Bitaog	Calophyllum inophyllum L. (Gutt.)
Bogo	Garuga floribunda Decne. (Burs.)
Bok-bok	Xanthophyllum excelsum (Blume) Miq. (Polygal.)

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Bolo	Gigantochloa levis (Blanco) Merr. (Gram.)
Bolon	Alphonsea arborea (Blanco) Merr. (Anon.)
Bolong-eta	Diospyros pilosanthera Blanco (Eben.)
Boñgoog	Vitex glabrata R. Br. (Verb.)
Botóng	Barringtonia asiatica (L.) Kurz (Lecyth.)
Bonótan	Sterculia stipularis R. Br. (Sterc.)
Bosili	Tarenna incertao Kord. & Val. (Rub.)
Botobotonis	Euphorbia pilulifera L. (Euph.)
Breadfruit	Artocarpus communis Forst. (Morac.)
Bualtik	Lonicera philippinensis Merr. (Caprif.)
Buho (or Caña-bojo)	Schizostachyum lumampao (Blanco) Merr. (Gram.)
Bukúan	Strychnos multiflora Benth. (Logan.)
Bulakán	Merrenmia peltata (L.) Merr. (Convolv.)
Bulala	Nephelium mutabile Blume (Sapind.)
Bull faced orchid	Dendrobium taurinum Lindl. (Orch.)
Bulóg	Aglaia everettii Merr. (Meliac.)
Buñga	*See* Betel Palm.
Buñgalon	Avicennia marina (Forsk.) Vierh. (Verb.)
Buñga de China	Adonidia merrillii Becc. (Palm.)
Buñgang-gúbat	Areca whitfordii Becc. (Palm.)
Buñgang-ipót	Areca ipot Becc. (Palm.)
Bunóg	Garcinia benthami Pierre (Gutt.)
Bunsikag	Guioa pleuropteris (Blume) Radlk. (Sapind.)
Buntán	Engelhardtia subsimplicifolia Merr. (Jugl.)
Búnut	Rubus elmeri Focke (Rosac.)
Burí	Corypha elata Roxb. (Palm.)
Busáing	Bruguiera conjugata (L.) Merr. (Rhiz.)
Buta-buta	Excoecaria agallocha L. (Euph.)
Butong-manuk	Drypetes microphylla (Merr.) Pax & K. Hoffm. (Euph.)
Cacao	Theobroma cacao L. (Sterc.)
Calachuche	Plumiera acuminata Ait. (Apocyn.)
Camachile	Pithecolobium dulce (Rob.) Benth. (Leg.)
Camote	Ipomoea batatas (L.) Poir. (Convolv.)
Camoteng-kahoi	Manihot utilissima Pohl. (Euph.)
Camphor	Cinnamomum camphora (L.) T. Nees & Eberm. (Laur.)
Caña-bojo	*See* Buho
Caña-fistula (or Golden Shower)	Cassia fistula L. (Leg.)
Cashew nut (or Kasúi)	Anacardium occidentale L. (Anac.)
Cassie Flower	*See* Aróma
Castilloa Rubber	Castilloa elastica Cerv. (Morac.)
Castor-Oil Plant (or Tañgan-tañgan	Ricinus communis L. (Euph.)
Cat-tail	Typha capensis Rohrb. (Typh.)
Ceara Rubber	Manihot glaziovii Muell.-Arg. (Euph.)
Champáka	Michelia champaca L. (Magn.)
Champkang-puti	Michelia alba DC. (Magn.)
Chestnut, Philippine	Castanopsis philipinensis (Blanco) Vid. (Fagac.)
Chico	Achras zapota L. (Sapot.)
Chico-mamei	Calocarpum sapota (Macq.) Merr. (Sapot.)
China-grass (or Ramie)	Boehmeria nivea (L.) Gaudich. (Urt.)
Cinamomo de China	Aglaia odorata Lour. (Meliac.)
Cinamon, Mindanao	Cinnamomum mindanaense Elm. (Laur.)
Coconut Palm	Cocos nucifera L. (Palm.)
Corn	*See* Mais
Croton-Oil-Plant (or Tuba)	Croton tiglium L. (Euph.)

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Dagang	Anisoptera aurea Foxw. (Dipt.)
Dalinas	Cyathocalyx globosus Merr. (Anon.)
Dalingdingan	Hopea foxworthyi Elm. (Dipt.)
Dalinsi	Terminalia pellucida Presl. (Combr.)
Dampálit	Sesuvium portulacastrum L. (Aizoac.)
Danglin	Grewia multiflora Juss. (Tiliac.)
Dañgula	Vitex aherniana Merr. (Verb.)
Danupra	Toona sureni (Blume) Merr. (Meliac.)
Dao	Dracontomelum dao (Blanco) Merr. & Rolfe (Anac.)
Dapdap	Erythrina variegata L. var. orientalis (L.) Merr. (Leg.)
Dapong-kahoi	Loranthus philippensis Champ. and Schlecht (Loran.)
Dapong-tigre	Phalaenopsis schilleriana Reichb. f. (Orch.)
Date Palm	Phoenix dactylifera L. (Palm.)
Datiles	Muntingia calabura L. (Tiliac.)
Digeg	Memecylon lanceolatum Blanco (Melast.)
Dila-Dila	Cynometra inaequifolia A. Gray (Leg.)
Dilak	Baccaurea tetrandra (Baill.) Muell-Arg. (Euph.)
Dilang-butiki	Podocarpus polystachyus R. Br. (Tax.)
Dilau	Curcuma longa L. (Zing.)
Dilimán	Stenochlaena palustris (Burm.) Bedd. (Polyp.)
Diliuáriu	Acanthus ilicifolius L. (Acanth.)
Ditá	Alstonia scholaris (L.) R. Br. (Apocyn.)
Dudoa	Hydnocarpus alcalae C. DC. (Flac.)
Dugkátan	Cryptocarya bicolor Merr. (Laur.)
Dugtong-ahás	Parameria barbata (Blume) K. Schum. (Apocyn.)
Duguan	Myristica philippensis Lam. (Myrist.)
Dúhat	Syzygium cumini (L.) Skeels (Myrt.)
Dúklap	Zizyphus trinervia (Cav.) Poir. (Rhamn.)
Duklítan	Sideroxylon nitidum Blume)Sapot.)
Dulit	Canarium hirsutum Willd. forma multipinnatum (Llanos) H. J. Lam. (Burs.)
Dulítan	Palaquium merrilli Dub. (Sapot.)
Dumayáka	Arenga tremula (Blanco) Becc. (Palm.)
Dungau	Astronia williamsii Merr. (Melast.)
Duñgoi	Litsea luzonica (Blume) F.-Vill. (Laur.)
Duñgon	Tarrietia sylvatica (Vid.) Merr. Sterc.)
Duñgon-late	Heritiera littoralis Dry. (Sterc.)
Durian	Durio zibethinus Merr. (Bomb.)
Duyok-dúyok	Mimusops calophylloides Merr. (Sapot.)
Ebony (or Batulinau)	Diospyros ferrea (Willd.) Bahk. (Eben.)
Eggplant (or Talong)	Solanum melongena L. (Solan.)
Fire-tree	Delonix regia (Boj.) Raf. (Leg.)
Fish-tail Palm (or Pugahan)	Caryota cumingii Lodd. (Palm.)
Gáas	Scirpodendron ghaeri (Gaertn.) Merr. (Cyper.)
Gagatang	Sonchus oleraceus L. (Comp.)
Galo	Anacolosa luzoniensis Merr. (Olac.)
Gapas-gápas	Camptostemon philippinense (Vid.) Becc. (Bomb.)
Gasa	Castanopsis javanica (Blume) DC. (Fagac.)
Gatasan	Garcinia venulosa (Blanco) Choisy (Gutt.)
Ginger	*See* Luya
Gingging	Euphoria longana Lam. (Sapind.)
Ginlin	Ochrosia oppositifolia (Lam.) K. Schum. (Apocyn.)
Gisau	Canarium vrieseanum Engl. (Burs.)
Gisihán	Aglaia laevigata Merr. (Meliac.)
Gisok	Shorea astylosa Foxw. (Dipt.)

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Gísok-gisok	Hopea philippinensis Dyer (Dipt.)
Gogo	Entada phaseoloides (L.) Merr. (Leg.)
Golandrina	Euphorbia thymifolia L. (Euph.)
Golden Shower	*See* Caña-fistula
Granada	Punica granatum L. (Punic.)
Guyabano	Anona muricata L. (Anon.)
Guava	*See* Bayabas
Gúbas	Endospermum peltatum Merr. (Euph.)
Guijo	Shorea guiso (Blanco) Blume (Dipt.)
Guinea grass	Panicum maximum Jack. (Portul.)
Gulasiman	Portulaca oleracea L. (Portul)
Gumamela (Hibiscus)	Hibiscus rosa-sinensis L. (Malv.)
Gumamela de araña	Hibiscus schizopetalus (Mast.) Hook f. (Malv.)
Gumihan	Artorcarpus elastica Reinw. (Morac.)
Guntápai	Alangium salviifolium L.f.) Wang subsp. hexapetalum (Lam.) Wang. (Alang.)
Guyong-gúyong	Cratoxylon blancoi Blume Gutt.)
Gyrocarpus	Gyrocarpus americanus Jacq. (Hernand.)
Hagakhak	Dipterocarpus warburgii Brandis Dipt.)
Hagímit	Ficus minahassae Teysm. & De vr.) Miq. (Morac.)
Halimumog	Ehretia philippinensis A. DC. Borag.)
Halubágat-bagin	Capparis horrida L. F. (Capp.)
Halubagat-kahoi	Capparis micracantha DC. (Capp.)
Hambabalud	Neonauclea formicaria (Elm.) Merr. (Rub.)
Hamindang	Macaranga bicolor Muell.-Arg. (Euph.)
Hanopól	Conocephalus suaveolens (Blume) Merr. (Morac.)
Hañgilo	Michelia platyphylla Merr. (Magn.)
Haras	Garcinia ituman Merr. (Gutt.)
Hauíli	Ficus hauili Blanco (Morac.)
Himamau, Hairy-leaved	Dysoxylum floribundum Merr. (Meliac.)
Himbabaó	Allaeanthus luzonicus (Blanco) F.-Vill. (Morac.)
Hinggíu-kalabaú	Urceola imberbis (Elm.) Merr. (Apocyn.)
Hinggiu-puti	Streptocaulon baumii Decne. (Asclep.)
Hinlaumo	Mallotus ricinoides (Pers.) Muell.-Arg. (Euph.)
Holy Basil (or Sulasi)	Ocimum sanctum L. (Labiat.)
Horse-radish tree (or Malunggai)	Moringa oleifera Lam. (Moring.)
Huani	Mangifera odorata Griff. (Anac.)
Iba	Cicca acida (L.) Merr. (Euph.)
Iba-ibaan	Glochidion philippicum (Cav.) C.B. Rob. (Euph.)
Iboli	Euphoria nephelioides Radlk. (Sapind.)
Idog	Viburnum odoratissimum Ker. (Caprif.)
Igem	Podocarpus javanicus (Burm. f.) Merr. (Tax.)
Igi-ú	Dysoxylum decandrum (Blanco) Merr. (Meliac.)
Ikmo (or Betel pepper)	Piper betel L. Piper.)
Ilang-ilang	Cananga odorata (Linn.) Hook. f & Th. (Anon.)
Ilás	Coix lachryma-jobi L. var-ma-yuen (Roman.) Stapf (Gram.)
Iloilo	Aglaia iloilo (Blanco). Merr. (Meliac.)
India-rubber tree	Ficus elastica Roxb. (Morac.)
Init	Rubus rosaefollius Sm. (Rosac.)
Ipil	Intsia bijuga (Colebr.) O. Ktze. (Leg.)
Ipil-ipil	Leucaena glauca (L.) Benth. (Leg.)
Ipil-laut	Intsia retusa (Kurz) Merr. (Leg.)
Ipil-tilós	Intsia acuminata Merr. (Leg.)
Irau (or Dove orchid)	Dendrobium crumenatum Sw. (Orch.)
Is-ís	Ficus ulmifolia Lam. (Morac.)

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Jade Vine	Strongylodon macrobotrys A. Gray. (Leg.)
Javanese Caña-fistula	*See* Anchoan
Job's Tears (or Tigbi)	Coix lachryma-jobi L. (Gram.)
Jute (or Pásau)	Corchorus olitorius L. (Tiliac.)
Jabikí	Mimusops elengi L. (Sapot.)
Kabling (or Patchouli)	Pogostemon cablin (Blanco) Benth. (Labiat.)
Kaburo	Phoebe sterculioides (Elm.) Merr. (Laur.)
Kabúyau	Citrus hystrix DC. (Rutac.)
Kadiín	Columbia lanceolata Warb. (Tiliac.)
Kaitana	Zanthoxylum rhetsa (Roxb.) DC. (Rutac.)
Kakáag	Commersonia bartramia (L.) Merr. (Sterc.)
Kalabasa	Cucurbita maxima Duch. (Cucur.)
Kalabóa	Ottelia alismoides (L.) Pers. (Hydroch.)
Kalamansakat	Terminaliaa blancoi Merr. (Combr.)
Kalamansánai	Neonauclea calycina (Bartl.) Merr. (Rub.)
Kalamogá	Ehretia microphylla Lam. (Borag.)
Kalamundnig	Citrus microcarpa Bunge (Rutac.)
Kalantas	Toona calantas Merr. & Rolfe (Meliac.)
Kalaóo	Limnophila rugosa (Roth.) Merr. (Scroph.)
Kalapíni	Pluchea indica (L.) Less. (Comp.)
Kalbáng	Schizostachyum textorium (Blanco) Merr. (Gram.)
Kalimatas	Phaeanthus ebracteolatus (Presl.) Merr. (Anon.)
Kaliñgag	Cinnamomum mercadoi Vid. (Laur.)
Kaliós	Streblus asper Lour. (Morac.)
Kaliot	Hopea malibato (Foxw. (Dipt.)
Kalipápa-madam	Vitex quinata (Lour.) F.N. Will. (Verb.)
Kalipaya	Palaquium aherniamum Merr. (Sapot.)
Kalíso	Areta caliso Becc (Palm.)
Kalit-kalít	Cissus repens Lam. (Vitac.)
Kaliuas	Kayea paniculata (Blanco) Merr. (Gutt.)
Kalomála	Elaeocarpus calomala (Blanco) Merr. (Elaeoc.)
Kalubkub	Syzygium calubcob (C. B. Rob.) Merr. (Myrt.)
Kalúkoi	Ficus malunuensis Warb. (Morac.)
Kalulot	Artocarpus rubrovenia Warb. (Morac.)
Kalumpáang	Sterculia foetida L. (Sterc).
Kalúmpit	Terminalia edulis Blanco (Combr.)
Kalúnti	Shorea kalunti Merr. (Dipt.)
Kamagóng (or Mabolo)	Diospyros discolor Willd. (Eben.)
Kamagong, Ponce's	Diospyros poncei Merr. (Eben.)
Kamagsa	Rourea volubilis (Blanco) Merr. (Connar.)
Kamandíis	Garcinia rubra Merr. (Gutt.)
Kamanla	Syzygium ahernii (C.B. Rob.) Merr. Myrt.)
Kamantúgan	Pygeum megaphyllum Merr. (Rosac.)
Kamátog	Erythrophloeum densiflorum (Elm.) Merr. (Leg.)
Kamiás	Averrhoa bilmbi L. (Oxal.)
Kamingi	Dacryodes incurvata (Engl.) H. J. Lam. (Burs.)
Kamiring	Semecarpus philippinensis Engl. (Anac.)
Kamuling	Microcos stylocarpus (Warb.) Burrett (Tiliac.)
Kamuning	Murraya paniculata (L.) Jack (Rutac.)
Kanapai	Ficus nervosa Heyne (Morac.)
Kangko	Aphanamixis perrottetiana A. Juss. (Meliac.)
Kangkong	Ipromoea reptans (L.) Poir. Convolv.)
Kanómoi	Diospyros multiflora Blanco (Eben.)
Kansasaga (or Prayerbean)	Abrus precatorius L. (Leg.)

Official Names	*Scientific Names*
Kansúlud	Aglaia multifoliola Merr. (Meliac.)
Káong (or Sugar Palm)	Arenga pinnata (Wurmb.) Merr. (Palm.)
Kapok, American (or silk cooton tree)	Ceiba pentandra (L.) Gaertn. (Bomo.)
Karagómoi	Pandanus simplex Merr. (Pand.)
Karamiras	Aglaia glomerata Merr. (Meliac.)
Kariis	Garcinia mindanaensis Merr. (Gutt.)
Kariskis	Albizzia lebbekoides (DC.) Benth. (Leg.)
Kásai	Albizzia retusa Benth. (Leg.)
Katabang	Quercus caudatifolia Merr. (Fagac.)
Kasúi	*See* Cashew nut
Katilma	Diospyros nitida Merr. (Eben.)
Katiluk	*See* Jordana's Oak
Katiput	Maesa cumingii Mez (Myrsin.)
Katmo	Vaccinium whitfordii Merr. (Eric.)
Katmón	Dillenia philippinensis Rolfe (Dill.)
Katmon-bayani	Dillenia megalantha Merr. (Dill.)
Katmon-kalabáu	Dillenia reifferscheidia Naves (Dill.)
Kato	Amoora aherniana Merr. (Meliac.)
Katong-matsin	Chisocheton pentandrus (Blanco) Merr. (Meliac.)
Katurai	Sesbania grandiflora (L.) Pers. (Leg.)
Kaua-kauayan	Apluda mutica L. (Gram.)
Kauayan-china	Bambusa multiplex (Lour.) Raeusch. (Gram.)
Kauayan-kiling	Bambusa vulgaris Schrad. (Gram.)
Kauayan-tinik (or Spinny Bamboo)	Bambusa spinosa Roxb. (Gram.)
Kayatau	Dysoxylum turczaninowii C. DC. (Meliac.)
Kayu-gálu	Sindora galedupa Prain (Leg.)
Kayumánis	Clausena anisum-olens (Blanco) Merr. (Rutac).
Keddeng	Columbia mollis Warb. (Tiliac.)
Kiápo	Pistia stratiotes L. (Arac.)
Kilób	Gleichenia linearis (Burm.) Clarke (Gleich.)
Kílog	Quercus luzoniensis Merr. (Fagac.)
Kinubot	Rubus moluccanus L. (Rosac.)
Kirot	Dioscorea divaricata Blanco Diosc.)
Kobbóot	Ischaemum angustifolium Trin.) Hack. (Gram)
Kollo-kollót	Urena lobata L. (Malv.)
Kógon	Imperata exaltata Brongn. (Gram.)
Koron-koron	Hernandia ovigera L. (Hernand.)
Krus-krus	Dactylocterium aegyptium (L.) Richt. (Gram.)
Kubamba	Piper umbellatum L. var. subpeltatum (Willd.) C. DC. Piper.)
Kúbi	Artocarpus lamellosa Blanco (Morac.
Kubíli	Cubilia blancoi Blume (Sapind.)
Kulape	Paspalum conjugatum Berg. (Gram.)
Kulási	Lumnitzera racemosa Willd. (Combr.)
Kulatingan	Pterospermum obliquum (Blanco (Sterc.)
Kulayo	Erioglossum rubiginosum (Roxb.) Blume (Sapind.)
Kulíat	Gnetum indicum (Lour.) Merr. (Gnet.)
Kulilisiau	Machilus philippinensis Merr. (Laur.)
Kuling-manuk	Aglaia luzoniensis (Vid.) Merr. & Rolfe (Meliac.)
Kulis	Memecylon ovatum Sm. (Melast.)
Kulítis	Amaranthus viridis L. (Amaranth.)
Kulituam	Diospyros toposia Ylan. (Eben.)
Kulot-kulótan	Triumfetta bartriamia L. (Tiliac)

Official Names	*Scientific Names*
Kunding	Parkia sherfeseei Merr. (Leg.)
Kupang	Parkia javanica (Lam.) Merr. (Leg.)
Kurao-rao	Dgiitaria corymbosa Merr. (Gram.)
Kurasám	Syzygium claviflorum (Roxb.) Merr. (Myrt.)
Kusibeng	Sapindus saponaria L. forma microcarpa Radlk. (Sapind.)
Kuyos-kuyos	Taxotrophis macrophylla (Blume) Boerl. (Morac.)
Labáyo	Melochia umbellata (Houtt.) Stapf (Sterc.)
Labuág	Hibiscus surattensis L. (Malv.
Lagtikam	Sida mysorensis W. & A. (Malv.)
Lágo	Pygeum vulgare (Koehne) Merr. (Rosac.)
Lagalo	Acrostichum aureum L. (Polyp.)
Lagundi	Vitex negundo L. (Verb.)
Lagunding-dagat	Vitex trifolia L. (Verb.)
Lamio	Dracontomelum edule (Blanco) Skeels (Anac.)
Lamóg	Planchonia spectabilis Merr. (Lecyth.)
Lamon	Enhalus acoroides (L. f.) L. C. Rich: (Hydroch.)
Lamot	Cryptocarya lauriflora (Blanco) Merr. (Laur.)
Lanagon	Flacourtia euphlebia Merr. (Flac.)
Lanéte	Wrightia laniti (Blanco) Merr. (Apocyn.)
Lanete, Southern	Wrightia calycina A. DC. (Apocyn.)
Lanéteng-pula	Wrightia candollei Vid. (Apocyn).
Langarai	Bruguiera parviflora (Roxb.) W. & A. (Rhiz.)
Langil	Albizzia lebbeck (L.) Benth. (Leg.)
Langitngit	Celastrus paniculata Willd. (Celastr.)
Lañgkauás	Languas pyramidata (Blume) Merr. (Zing.)
Lanipau	Terminalia crassiramea Merr. (Combr.)
Lanos	Cynometra simplicifolia Harms (Leg.)
Lansa-lansa	Centotheca latifolia (Osbeck) Trin. (Gram.)
Lansónes	Lansium domesticum Corr. (Meliac.)
Lansónes-búndok	Lansium humile Hauk. (Meliac.)
Lantána	Lantana camara L. (Verb.)
Lanutan	Bombycidendron campylosiphon (Turcz.) Warb. (Malv.)
Lanutan, Rumphius's	Bombycidendron rumphii (Blume) Merr. (Anon.)
Lanutan-bagio	Gonystylus bancanus (Miq.) Gelg (Gonyst.)
Lasa (or Tiger grass)	Thysanolaena maxima (Roxb.) O. Ktze. (Gram.)
Lasa (or Upas)	Antiaris toxicaria (Pers.) Lesch. (Morac.)
Lauan	*See* Red & White Lauans
Lauan, Mindanao	Pentacme mindanensis Foxw. (Dipt.)
Lemon Grass (or Tanglad)	Andropogon citratus (DC.) Stapf. (Gram.)
Libás	Spondias pinnata (L. f.) Kurz (Anac.)
Libáto	Basella rubria L. (Basell.)
Ligáa	Zizyphus inermis Merr. (Rhamn.)
Ligas	Semecarpus cuneiformis Blanco (Anac.)
Ligtáng	Anamirta cocculus (L.) W. & A. (Menisp.)
Lima Bean (or Patani)	Phaseolus lunatus L. (Leg.)
Lima-limá	Dioscorea pentaphylla L. (Diosc.)
Linga (or Sesame)	Sesamum orientale L. (Pedal.)
Lingo-lingo	Vitex turczaninowii (Merr. (Verb.)
Lipa	Laportea luzonensis (Wedd.) Warb. (Urtic.)
Lipang-aso	Fleurya interrupta (L.) Gaudich. (Urtic.)
Lipote	Syzygium polycephaloideum (C.B. Rob.) Merr. (Myrt.)
Lisak	Neonauclea bartlingii (DC.) Merr. (Rub.)
Lisid	Rhynchodia rhynchosperma (Wall.) K. Schum (Apocyn.)
Liusin	Parinarium corymbosum (Blume) Miq. (Rosac.)
Lokdó	Dryopteris pteroides O. Ktze. (Polyp.)

Official Names	*Scientific Names*
Lokinai	Dacrydium elatum (Roxb.) Wall. (Tax.)
Loktób	Duabanga moluccana Blume (Sonn.)
Lopa	Bambusa cornuta Munro (Gram.)
Lotus	*See* Baíno
Lubigan (or Sweet Flag)	Acorus calamus L. (Arac.)
Ludek	Neonauclea bernardoi Merr. (Rub.)
Lukbán (or Pomelo)	Citrus grandis (L.) Osbeck (Rutac.)
Lumbáng	Aleurites moluccana (L.) Willd. (Euph.)
Lumbayau	Tarrietia javanica Blume (Sterc.)
Lumbayau-bato	Tarrieta sp. (Sterc.)
Lumbiá (or Sago Palm)	Metroxylon sagu Rottb. (Palm.)
Lumuluas	Zizyphus hutchinsonii Merr. (Rhamn.)
Lunas	Lunasia amara Blanco (Rutac.)
Lúpi	Phragmites karka (Retz.) Trin. (Gram.)
Lupisan	Engelhardtia spicata Blume (Jugl.)
Lupisan, Small-leaved	Engelhardtia parvifolia C. DC. (Jugl.)
Luya (or Ginger)	Zingiber officinale Rosc. (Zing.)
Mabolo	*See* Kamagong
Madre-cacáo	Gliricidia sepium (Jacq.) Steud. (Leg.)
Magabúyo	Celtis luzonica Warb. (Ulm.)
Magasúsu	Hopea mindanensis (Foxw. (Dpit.)
Magilik	Premna cumingiana Schauer (Verb.)
Magkono	*See* Mancono
Magulipak	Sterculia blancoi Rolfe (Sterc.)
Mahogany	Swietenia mahogani Jacq. (Meliac.)
Mahogany, American, large-leaved	Swietenia macrophylla King (Meliac.)
Maiz	Zea mays L. (Gram.)
Makaásim	Syzygium benthamii (A. Gray) Merr (Myrt.)
Makabuhai	Tinospora rumphii Boerl. (Menis.)
Makabuhai, na-itim	Tinospora negrotica Diels (Menis.)
Makabuhai, na-puti	Tinospora reticulata Miers (Menis.)
Makahia	Mimosa pudica L. (Leg.)
Makapilit	Ormosia villamilii Merr. (Leg.)
Makópa	Syzygium samarangense (Blume) Merr. & Perry (Myrt.)
Mala-almaciga	Podocarpus blumei Endl. (Tax.)
Malaanónang	Shorea polita Vid. (Dipt.)
Malabatíno	Paralstonia clusiacea Baill. (Apocyn.)
Malabayábas	Tristania decorticata Merr. (Myrt.)
Malabignái	Aporosa symplocifolia Merr. (Euph.)
Malabog	Jarishia malabog Merr. (Anac.)
Malabunot	Sterculia oblongata R. Br. (Sterc.)
Malabuaya	Fagraea racemosa Jack (Logan.)
Malabúho	Sterculia oblongata R. Br. (Sterc.)
Malabúlak	Gossampinus heptaphylla (Houtt.) Bakh. (Bomb.)
Malabuñga	Nothaphoebe malaboñga (Blanco) Merr (Laur.)
Malabunóg	Garcinia cumingiana Pierre (Gutt.)
Malachico	Trigonachras falcato-cuspidata Radkl. (Sapind.)
Maladanglin	Grewia dolfei Merr. (Tiliac.)
Malagaítmon	Diospyros curranii Merr. (Eben.)
Malaguijo	Shorea plagata Foxw. (Dipt.)
Malaikmo	Celtis philippensis Blanco (Ulm.)
Malaisís	Malaisia scandens (Lour.) Planch. (Morac.)
Malakadios	Beilschmiedia cairocan Vid. (Laur.)
Malakalumpáng	Sterculia ceramica R. Br. (Sterc.)

Official Names	*Scientific Names*
Malakamañga	Reinwardtiodendron celebicum Koord. (Meeliac.)
Malakamiás	Ailanthus philippinensis Merr. (Simar.)
Malakape	Canthium dicoccum (Gaertn.) Merr. (Rub.)
Malakatmón	Dillenia luzoniensis (Vid.) Mart. (Dill.)
Malakauayan	Podocarpus philippinensis Foxw. (Tax.)
Malak-malak	Palaquium philippense (Perr.) C.B. Rob. (Sapot.)
Malambiñgan	Allaeanthus luzonicus (Blanco) F.-Vill. var. glaber (Warb.) Merr. (Morac.)
Malanángka	Parartocarpus woodii (Merr.) Merr. (Morac.)
Malapaho	Mangifera monandra Merr. (Anac.)
Malapanau	Dipterocarpus kerrii King (Dipt.)
Malapapaya	Polyscias nodosa (Blume) Seem. (Aral.)
Malapiña	Talauma angatensis (Blanco) F.-Vill. (Magn.)
Malap'nggan	Trichadenia philippinensis Merr. (Flac.)
Mala opag	Tristira triptera (Blanco) Radlk. (Sapind.)
Malaruhat	Syzygium simile (Merr.) Merr. (Cyrt.)
Malarúhat-puti	Syzygium bordenii (Merr.) Merr. (Myrt.)
Malaságing	Aglaia diffusa Merr. (Meliac.)
Malasambali	Pleomele angustifolia (Roxb.) N.E.Br. (Lil.)
Malasambóng	Vernonia vidalii Merr.(Comp.)
Malasambong-gubat	Vernonia arborea Ham. (Comp.)
Malasantól	Sandoricum vidalii Merr. (Meliac.)
Malasapsap	Ailanthus blancoi Merr. (Simar.)
Malasulasi	Leptospermum flavescens Sm. (Myrt.)
Malatadiáng	Xanthophyllum philippinense Chod. (Polygal.)
Malataé	Celtis cinnamomea Lindl. (Ulm.)
Malatampúti	Syzygium xanthophyllum (C.B.Rob.) Merr. (Myrt.)
Malatangal	Ceriops roxburghiana Arn. (Rhiz.)
Malatanglad	Themeda gigantea (Cav.) Hack. (Gram.)
Malatanglin	Adenanthera pavonina Linn. (Leg.)
Malatapai	Alangium longiflorum Merr. (Alang.)
Malatínta	Diospyros maritima Blume (Eben.)
Malatumbaga	Aglaia harmsiana Perk. (Meliac.)
Malauisak	Neonauclea reticulata (Havil.) Merr. (Rub.)
Mala-usa	Premna adenosticta Schauer (Verb.)
Malayakal	Shorea seminis (De Vr.) V. Sl. (Dipt.)
Malibáto	Shorea malibato Foxw. (Dipt.)
Malibayo	Berria cordifolia (Willd.) Burret (Tiliac.)
Malikmik	Palaquium cuneifolium Merr. (Sapot.)
Malabágo	Hibiscus tiliaceus L. (Malv.)
Malugái	Pometia pinnata Forst. (Sapind.)
Malunggái	*See* Horse-radish tree
Mamális	Pittosporum pentandrum (Blanco) Merr. (Pitt.)
Mamauéd	Columbia blancoi Rolfe (Tiliac.)
Mambóg	Mitragyna rotundifolia (Roxb.) O. Ktze. (Rub.)
Mana	Jatropha multifida L. (Euph.)
Manayau	Cryptocarya ampla Merr. (Laur.)
Manalu	Semecarpus gigantifolia Vid. (Anac.)
Manangkíl	Syzygium mananquil (Blanco) Merr. (Myrt.)
Manáring	*See* Oak, Soler's
Mancono (or Magkono)	Xanthostemon verdugonianus Naves (Myrt.)
Manga (or Mangga)	Mangifera indica L. (Anac.)
Manggachapui	Hopia acuminata Merr. (Dipt.)
Manggasinoro	Shorea philippinensis Brandis (Dipt.)
Manggasiríki	Quercus ovalis Blanco (Fagac.)
Manggís	Koompassia excelsa (Becc.) Taub. (Leg.)

Official Names	*Scientific Names*
Mangkas	Sideroxylon ferrugineum Hoock, & Arn (Sapot.)
Mangkau	Evodia confusa Merr. (Rutac.)
Mangosteen	Garcinia mangostana L. (Gutt.)
Maniknik	Palaquum teinuipetiolatum Merr. (Sapot.)
Manunggál	Samadera indica Gaertn. (Simar.)
Manzanitas	Zizyphus jujuba (Linn.) Lam. (Rahm.)
Mapilig	Xanthostemon bracteatus Merr. (Myrt.)
Mapple, Philippine	Acer niveum Blume (Acer.)
Marabaráni	Eriobotrya philippinensis Vid. (Rosac.)
Marabitaóg	Calophyllum cumingii Pl. & Tr. (Gutt.)
Maragómon	Brownlowia lanceolata aBenth. (Tiliac.)
Marakápas	Thespesia lampas (Cav. Dals & Gibs. (Malv.)
Marang	Litsea perrottetii (Blume) F. Vill. (Laur.)
Marang I	Artocarpus odoratissima Blanco (Morac.)
Maránggo	Azadirachta integrifoliola Merr. (Meliac.)
Marangub	Protium connarifolium (Perk.) Merr. (Burs.)
Margapáli	Dehaasia triandra Merr. (Laur.)
Maribuhok	Casuarina sumatrana Jungh. (Casuar.)
Mariíg	Syzygium glaucicalyx (Merr.) Merr. (Myrt.)
Matá-mata	Aglaia elaeagnoidea (Juss.) Benth. (Meliac.)
Matang-usa	Litsea euphlebia Merr. (Laur.)
Matting-rush (or Pinggót)	Juncus effusus L. (Junc.)
Mayapis	Shorea squamata (Turez.) Dyer (Dipt.)
Melindres	Lagerstroemia indica L. (Lythr.)
Mesquite, Vidal's	Prosopis vidaliana Naves (Leg.)
Miáo	Dysoxylum euphlebium Merr. (Meliac.)
Mindoro Pine (or Tapúlau)	Pinus merkusii Jungh. & DDe Vr. (Pin.)
Moláve	Vitex parviflora Juss. (Verb.)
Molave, Hairy-leaved	Vitex pubescens Vahl (Verb.)
Mulauin-áso	Vetiveria zizanioides (L.) Stapf. (Gram.)
Moras (or Vetiver)	Premna nauseosa Blanco (Verb.)
Nami	Dioscorea hispida Dennst. (Diosc.)
Nángka	Artocarpus heterophylla Lam. (Morac.)
Nangka-nangka	Vavaea amicorum Benth. (Meliac.)
Narek	Balanocarpus cagayanensis Foxw. (Dipt.)
Narek, Mindanao	Balanocarpus brachypterus Foxw. (Dipt.)
Narig	Vaticia mangachapoi Blanco (Dipt.)
Narig, Blanco's	Vatica blancoana Elm. (Dipt.)
Narig, Kaladi's	Vatica elliptica Foxw. (Dipt.)
Narig, Mindanao	Vatica mindanensis Foxw. (Dipt.)
Narig, Tawi-Tawi	Vatica papuana Dyer (Dipt.)
Narig, Thick-leaved	Vatica pachyphylla Merr. (Dipt.)
Narig, Palawan	Vatica obtusifolia Elm. (Dipt.)
Narig, Whitford's	Vatica whitfordii (Foxw. (Dipt.)
Narra	Pterocarpus indicus Willd. (Leg.)
Narra, Blanco's	Pterocarpus blancoi Merr. (Leg.)
Narra, Hairy-leaved	Pterocarpus pubescens Merr. (Leg.)
Narra, Prickly	Pterocarpus vidalianus Rolfe (Leg.)
Nato	Palaquium luzoniense (F.-Vill.) Vid. (Sapot.)
Nílad	Scyphiphora hydrophyllacea Gaertn. f. (Rub.)
Niog	*See* coconut Palm
Nipa (or Sasá)	Nypa fruticans Wurmb. (Palm.)
Níto	Lygodium sp. (Schiz.)
Oak, Bennett's (or Pangnan)	Quercus bennettii Miq. (Fagac.)
Oak, Jordena's (or Batiluk)	Quercus jordanae Lag. (Fagac.)

Official Names	*Scientific Names*
Oak, Llano's (or Ulaian)	Quercus llanossi A.D.C. (Fagac.)
Oak, Soler's (or Manaring)	Quercus soleriana Vid. (Fagac.)
Oak, Mindanao	Quercus mindnnaensis Elm. (Fagac.)
Oi-oi	Diospyros philippinensis A. DC. (Eben.)
Oñgali	Agelaea everettii Merr. (Connar.)
Oyañgo	Pandanus radicans Blanco (Pand.)
Paang-balíuis	Malachra fasciata Jacq. (Malv.)
Pagatpát	Sonneratia alba Sm. (Sonn.)
Pagong-pagongan	Hoya imbricata L. (Asclep.)
Pagsahiñgin	Canarium aspersum Benth. (Burs.)
Pagsahiñgin-liitan	Canarium calophyllum Perk. (Burs.)
Paguríngon	Cratoxylon celebicum Blume (Gutt.)
Pahutan	Mangifera altissima Blanco (Anac.)
Paitan	Syzygium costulatum (C.B. Rob.) Merr. (Myrt.)
Pakit	Dioscorea luzonensis Schauer (Diosc.)
Pako	Athyrium esculentum (Retz.) Copel. (Polyp.)
Palagtiki (or Yard Grass)	Eleusine indica (L.) Gaertn. (Gram.)
Palai (or Rice)	Oryza sativa L. (Gram.)
Palak-palak	Palaquium lanceolatum Blanco (Sapot.)
Palanau	Rubus fraxinifolius Poir (Rosac.)
Palauán	Cyrtosperma merkusii (Hassk.) Schott (Arac.)
Palindán	Orania palindan (Blanco) Merr. (Palm.)
Palosápis	Anisoptera thurifera (Blanco) Blume. (Dipt.)
Palosapis, Mindanao	Anisoptera mindanensis Foxw. (Dipt.)
Pamago	Pericampylus glaucus (Lam.) Merr. (Menisp.)
Pamintaogon	Calophyllum soulattri Burm. f. (Gutt.)
Panitaogen	Calophyllum whitfordii Merr. (Gutt.)
Panau	Dipterocarpus gracilis Blume (Dipt.)
Panau, Hasselt's	Dipterocarpus hasseltii Blume (Dipt.)
Panau, Highland	Dipterocarpus subalpinus Foxw. (Dipt.)
Panau, Tail-leaved	Dipterocarpus caudatus Foxw. (Dipt.)
Pandakaki	Tabernaemontana pandacaqui Poir. (Apocyn.)
Pandan, Common (or Beach)	Pandanus tectorius Sol. (Pand.)
Pañgi	Pangium edule Reinw. (Flac.)
Panglonboien	Syzygium clausum (C.B. Rob.) Merr. (Myrt.
Pangnán	*See* Oak, Bennett's
Pangoásen	Alectryon fuscus Radlk. (Sapind).
Papaya	Carica papaya L. (Caric.)
Para Rubber	Hevea brasiliensis (HBK.) Muell.-Arg. (Euph.)
Pásau	*See* Jute
Pasau-bilog	Corchorus capsularis L. (Tiliac.)
Patalsik	Decaspermum fruticosum Forst. (Myrt.)
Patañgis	Talauma villariana Rolfe. (Magn.)
Patani	*See* Lima Bean
Patchouli	*See* Kabling
Pedáda	Sonneratia caseolaris (L.) Engl. (Sonn.)
Ped-péd	Engelhardtia colebrookeana Lindl. (Jugl.)
Petroleum Nut	Pittosporum resiniforum Hemsl. (Pitt.)
Phyllocladus	Phyllocladus hypophyllus Hook. f. (Tax.)
Physic Nut (or Tubang-bakod)	Jatropha curcas L. (Euph.)
Piagau	Xylocarpus moluccensis (Lam.) M. Roem. (Meliac.)
Pilai	Rubus niveus Thunb. (Rosac.)
Pili	Canarium ovatum Engl. (Burs.)
Piling-liitan	Canarium luzonicum (Blume) A. Gray (Burs.)
Pine	*See* Benguet Pine, Mindoro Pine

Official Names	*Scientific Names*
Pinggot	*See* Matting-rush
Pingka-pingkáhan	Oroxylum indicum (L.) Vent. (Bign.)
Pink Shower	Cassia grandis L. (Leg.)
Piris	Garcinia vidalii Merr. (Gutt.)
Pisa	Areca hutchinsoniana Becc. (Palm.)
Pitanga	Eugenia uniflora L. (Myrt.)
Pitógo	Cycas circinalis L. (Cycad.)
Polynesian Ivory-nut Palm	Coelococcus amicorum (Wendl.) W. F. Wight (Palm.)
Pomelo	*See* Lukban
Portai	Phalaenopsis portei Reichb. f. (Orch.)
Pototan	Bruguiera sexangula (Lour.) Poir. (Rhiz.)
Pototan-laláki	Bruguiera cylindrica (L.) Blume (Rhiz.)
Prayer-bean	*See* Kansasága
Pugáhan	*See* Fish-tail Palm.
Puláu	Nymphaea nouchali Burm. f. (Nymph.)
Puñgapung	Amorphophallus campanulatus (Roxb.) Blume (Arac.)
Púser	Schizostachyum fenixii Gamble (Gram.)
Puso-puso	Neolitsea vidalii Merr. (Laur.)
Pútat	Barringtonia racemosa (L.) Blume (Lecyth.)
Putían	Alangium meyeri Merr. (Alang.)
Puyot	Homalium panayanum F.-Vill. (Flac.)
Quassia	Quassia amara L. (Simar.)
Ragiu	Rynchospora corymbosa (L.) Britt. (Cyper.)
Rain tree	*See* Acacia
Rambután (or Usén)	Nephelium lappaceum L. (Sapind.)
Ramie	*See* China grass
Raráng	Erythrina subumbrans (Hassk.) Merr. (Leg.)
Rel lauan	Shorea negrosensis Foxw. (Dipt.)
Rice	*See* Palai
Rímas	*See* Breadfruit
Royal Palm	Roystonea regia (HBK.) O. F. Cook (Palm.)
Rubber	*See* Castilloa, Ceara & Para
Sablot	Litsea glutinosa (Lour.) C. B. Rob. (Laur.)
Sabután	Pandanus sabotan Blanco (Pand.)
Sabutan-buáya	Vallisneria gigantea Graebn (Hydroch.)
Sagimsim	Syzygium brevistylis (C.B. Rob.) Merr. (Myrt.)
Ságing-ságing	Aegiceras corniculatum (L.). Blanco (Myrsin.)
Sagipát	Worcesterianthus magallanensis (Elm.) Merr. (Olac.)
Sagisi	Heterosphathe elata Scheff. (Palm.)
Sago Palm	*See* Lumbia
Sakat	Terminalia nitens Presl. (Combr.)
Salago, Lance-leaved	Wikstroemia lanceolata Merr. (Thymel.)
Salago, Large-leaved	Wikstroemia meyeniana Warb. (Thymel.)
Salago, Round-leaved	Wikstroemia ovata C.A. Mey. (Thymel.)
Salago, Small-leaved	Wikstroemia Indica (L.) C.A. Mey. (Thymel)
Salagong-gúbat	Phaleria cumingii (Meisn.) F.-Vill. (Thymel.)
Salai	Zanthoxylum integrifoliolum (Merr.) Merr. (Rutac.)
Salakin	Aphanamixis cumingiana (C. DC.) Harms (Meliac.)
Sáleng	*See* Pine, Benguet
Salinggógon	Cratoxylon cochinchinense (Lour.) Blume (Gutt.)
Salingkugi	Albizzia saponaria (Lour.) Blume (Leg.)
Salisi	Ficus benjamina Linn. (Morac.)
Salsalúyut	Malvastrum coromandelinum (L.) Garcke (Malv.)
Saluai	Heterospathe negrosensis Becc. (Palm.)
Sambong	Blumea balsamifera (L.) DC. (Comp.)

Official Names	*Scientific Names*
Sampálok (or Tamarind)	Taamarindus indica L. (Leg.)
Samúyau	Citrus macroptera Montr. var, microcarpa (West.) Merr. (Rutac.)
Sandit	Michelia philippinensis (Parm.) Dandy (Magn.)
Sañgilo	Pistacia chinensis Bunge (Anac.)
Sangumai	Dendrobium anosmum Lindl. (Orch.)
Santól	Sandoricum koetjape (Burm. f.) Merr. (Meliac.)
Sapluñgan	Hopea plagata (Blanco) Vid. (Dipt.)
Saráuag	Pinanga insignis Becc. (Palm.)
Sasá	*See* Nipa
Sesame	See Liñga
Siar	Peltophorum inerme (Roxb.) Llanos (Leg.)
Sibukau	Caesalpinia sappan L. (Leg.)
Sigid	Ichnocarpus volubilis (Lour.) Merr. (Apocyn.)
Silk-cotton trees	*See* Kapok, American
Sika	Calamus spinifolius Becc. (Palm.)
Sináua (Bow String Hemp)	Cordyline roxburghiana (Schultes) Merr. (Lil.)
Sineguelas	Spondias purpurea L. (Anac.)
Singkámas	Pachyrrhizus erosus (L.) Urb. (Leg.)
Spiny Bamboo	*See* Kauayan-tinik
Subiáng	Bridelia minutiflora Hook. f. (Euph.)
Sudiang	Ctenolophon philippinensis Hall. f. (Linac.)
Sugar cane (or Tubó)	Saccharum officinarum L. (Gram.)
Sugar Palm	*See* Káong
Sulási	*See* Holy Basil
Supa	Sindora supa Merr. (Leg.)
Susung-kalabau	Uvaria rufa Blume (Anon.)
Sweet Basil	*See* Balanoi
Sweet Flag	*See* Lubigan
Taba	Tristania littoralis Merr. (Myrt.)
Tabau	Lumnitzera littorea (Jack) Voight (Combr.)
Tabigi	Xylocarpus granatum Koen. (Meliac.)
Taboán	Pandanus dubius Spreng. (Pand.)
Tabogók	Momordica cochinchinensis (Lour.) Spreng. (Cucurb.)
Tabon-tabón	Parinarium glaberrimum Hassk. (Rosac.)
Tabtábin	Fimbristylis annua (All.) R. & S. (Cyper.)
Tadiang-ánuáng	Canthium monstrosum (A. Rich.) Merr. (Rub.)
Tagatoi	Palaquium foxworthyi Merr. (Sapot.
Tagbak	Kolowratia elegans Pres. (Zing.)
Tagpo	Ardisia squamulosa Presl (Myrsin.)
Tagulínau	Emilia sonchifolia (L.) DC. (Comp.)
Taiñgang-babui	Gonocaryum calleryanum (Baill.) Becc. (Icac.)
Taklang-anák	Garcinia dulcis (Roxb.) Kurz (Gutt.)
Taklíng-baka	Sida rhombifolia L. (Malv.)
Talang-gúbat	Diospyros copelandii Merr. (Eben.)
Talisai	Terminalia catappa L. (Combr.)
Talisai-gúbat	Terminalia oocarpa Merr. (Combr.)
Talóng	*See* Eggplant
Talong-taloñgan	Solanum cumingii Dunal (Solan.)
Talong-punai	Datura metel L. (Solan.)
Talúlong	Lagerstroemia paniculata (Turcz.) Vid. (Lythr.)
Talúto	Pterocymbium tinctorium (Blanco) Merr. (Sterc.)
Tamahó	Gloeocarpus patentivalvis (Radlk.) Rodlk. Sapind.)
Tamarind	*See* Sampalok
Tamayúan	Strombosia philippinensis (Baill.) Rolfe (Olac.)

Official Names	*Scientific Names*
Tambaláu	Knema glomerata (Blanco) Merr. (Myrist.)
Tambís	Syzygium aqueum (Burm. f.) Merr. (Myrt.)
Tambo	Phragmites vulgaris (Lam.) Trin. (Gram.)
Tambúlian	Eusideroxylon zwageri Teysm. & Binn. (Laur.)
Tamil	Diospyros fasciculiflora Merr. (Eben.)
Tampúi	Syzygium jambos (L.) Merr. Myrt.)
Tanaua	Ehrentia polyantha A. DC. (Borag.)
Tan-ag	Kleinhovia hospital L. (Sterc.)
Tandu	Kayea sp. (Gutt.)
Tañga	Pygeum preslii Merr. (Rosac.)
Tañgan-tañgan	*See* Castor-Oil-Plant
Tangal	Ceriops tagal (Perr.) C.B. Rob. (Rhiz.)
Tanghas	Myristica simiarum A. DC. (Myrist.)
Tañgile	Shorea polysperma (Blanco) Merr. (DipDt.)
Tañgisang-bayuak	Ficus variegata Blume (Morac.)
Tanglád	See Lemon Grass
Tanglín	Adenanthera intermedia Merr. (Leg.)
Tangolo	Quisqualis indica L. (Combr.)
Tanigi	Antidesma spicatum Blanco (Euph.)
Tapinag	Sterculia crassiramea Merr. (Sterc.)
Tapinag, Mountain	Sterculia montana Merr. (Sterc.)
Tapol	Horsfieldai ardisiaefolia (A. DC.) Warb. (Myrist.)
Tapúlau	*See* Mindoro Pine
Taráu	Livistona saribas (Lour.) Merr. (Palm.)
Taualis	Osbornia octodonta F. Muell. (Myrt.)
Teak	Tectona grandis L. f. (Verb.)
Teak, Philippines	Tectona philippinensis Benth. & Hook. f. (Verb.)
Tiaui	Crypteronia paniculatan Blume Crypter.)
Tibig	Ficus nota (Blanco) Merr. (Morac.)
Tigá	Tristania micrantha Merr. (Myrt.)
Tigaon	Crypteronia cumingii (Planch.) Endl. (Crypter.)
Tigbau	Acanthus ebracteatus Vahl. (Acanth.)
Tígbi	*See* Job's Tears
Tiger Grass	*See* Lasa
Tiker	Scirpus lacustris L. (Cyper.)
Tikim	Neonauclea vidalii (Elm.) Merr. (Rub.)
Tíkiu	Scirpus grossus L. f. (Cyper.)
Tikoko	Teijsmanniodendron pteropodum (Miq.) Bakh. (Verb.)
Tíkug	Fimbristylis globulosa (Retz.) Kunth (Cyper.)
Timbangan	Aristolochia tagala Champ. (Arist.)
Tinaan-pantái	Drypetes maquilingensis (Merr.) Pax & K. Hoffm. (Euph.)
Tindalo	Pahudia rhomboidea (Blanco) Prain. (Leg.)
Tinduk-tindukan	Aegiceras floridum Roem. & Schultes (Myrsin.)
Tiroron	Neonauclea gracilis (Vid.) Merr. (Rub.)
Tirukan	Beilschmiedia glomerata Merr. (Laur.)
Titau	Rubus ellipticus Sm. (Rosac.)
Tomato	Lycopersicum esculentum Mill. (Solan.)
Tongtongkíng	Helicteres hirsuta Lour. (Sterc.)
Tóog	Petersianthus quadrialata Merr. (Lecyth.)
Tuái	Bischofia javanica Blume (Euph.)
Tuba	*See* Croton-Oil-Plant
Tubang-bákod	*See* Physic Nut
Tubó	*See* Sugar Cane
Tugaui	Pometia tomentosa a(Blume) Teysm. & Binn. (Sapind.)
Tugi (or Yam)	Dioscorea esculenta (Lour.) Burk. (Diosc.)

Official Names	*Scientific Names*
Tuka	Phaleria perrottetiana (Decne.) F.-Vill. (Thymel.)
Tukang-kálau	Aglaia clarkii Merr. (Meliac.)
Túkod-lañgit	Helminthostachys zeylanica (L.) Hook. f. (Ophiogl.)
Tula-tula	Mallotus floribundus (Blume) Muell.-Arg. (Euph.)
Tulip, African	Spathodea campanulata Beau V. (Bign.)
Tulicán	Exocarpus latifolia R. Br. (Santal.)
Tui	Dolichandrone spathacea (L. f.) K. Schum. (Bign.)
Tui-tui	Radermachera acuminata Merr. (Bign.)
Ualís-uálisan	Sida acuta Burm. f. (Malv.)
Uás	Harpullia arborea (Blanco Radlk. (Sapind.)
Uisak	Neonauclea media (Havil.) Merr. (Rub.)
Ulaian	*See* Oak, Llanos's
Ulandog	Dracontomelum sylvestre Blume (Anac.)
Unik	Albizzla chinensis (Osbeck) Merr. Leg.)
Upas	*See* Lata
Urung	Fagraea cochinchinensis (Lour.) S. Chev. (Llogan.)
Utod	Arundinaria niitakayamensis Hay. (Gram.)
Usáu	*See* Rambután
Usiu	Dinochloa luconiae (Munro.) Merr. (Gram.)
Usua	Endiandra coriacea Merr. (Laur.)
Uto	Acronychia pedunculata (L.) Miq. (Rutac.)
Vetiver	*See* Móras.
Vidal's Lanútan	Bombycidendron vidalianum (Naves) Merr. & Rolfe (Malv.)
Voiavoi	Phoenix hanceana Naud. var. philippinensis Becc. (Palm.)
White Lauan	Pentacme contorta (Vid.) Merr & Rolfe (Dipt.)
White Lanutan (Note: name to be adopted in place of Lanutan II).	Papualthia spp. etc. (Anon.)
White Nato	Lucuma macrantha (Merr.) H. J. Lam. (Sapot.)
Yabnob	Horsfieldia megacarpa Merr. (Myrist.)
Yahváhan	Tacca pinnatifida Forst. (Tacc.)
Yakal	Shorea gisok Foxw.(Dipt.)
Yakal, Basilan	Hopea basilanica Foxw. (Dipt.)
Yakal, Smooth-leaved	Shorea ciliata Kngi. (Dipt.)
Yam	*See* Tugi
Yamban	Shorea faciferoides Foxw. (Dipt.)
Yantok	*See* Rattans
Yañgo	Kayea philippinensis Planch. (Gutt.)
Yard Grass	*See* Palagtiki
Yellow Lanutan	Polyalthia flava Merr. (Anon.)
Yew, Mountain	Taxus wallichiana Zucc. (Tax.)
Zacate	Leersia lexandra Sw. (Gram.)
Zapote	Diospyros nigra (Sonn.) Y. P. Gurel (Eben.)
Zedoary	*See* Barák
Zigzag Bamboo	Dinochloa scandens Blume.) O. Ktze. (Gram.)

STUDENTS SECTION

I CAME I SAW, . . .

by

pentacme contorta

SNAFU . . . situation normal, all fouled up. This term originated from army circles to characterize the frequent bungling of the military. The term could just as well be applied to civilian organizations, however. Wanna see how? You don't have to go very far, brother. It's right here under our very noses. Just try borrowing anything — anything at all — from the Property Office, and you will know what we mean.

00O00

Coffee, anyone? Just go to the General Services Office. It seems as if coffee now falls under the "general" classification. (Don't tell me the WAPCO had a hand on this!) One word of caution: don't go there in midmorning when the "traffic" is quite heavy. There is only one small coffeepot, and there may not be enough coffee to go around. Which brings us to the next question: Why can't we do something to improve the service, make the whole thing a standard practice, and make everybody happy and contented? If you think that is a waste of time and effort just visit some of the offices in Manila, government and private, which allow coffee-breaks. Their employees have greater morale and greater efficiency.

00O00

If you complain about the dirty water these days, you are liable to run into a guy who will say: "We have been drinking that water for several decades now, and we are still alive." Which is another way of saying: "What the heck are you talking about anyway? If it was good enough for us, it ought to be good enough for you too." This attitude is not very conducive to progress, is it? Could this be that this is the reason why we are behind in many things?

00O00

While we are at the subject of drinking (water, that is!), we might as well ask why this college cannot get something similar to those electrically-operated drinking fountains that are found in the lobbies of many Diliman units of the University. Boy! what we would give for a nice cool drink after a long field work on a hot day! Can't we use the good PR (public relations to you) that we have been taught in Forest Administration to get this fountain soon?

00O00

Have you been to the vicinity of the Students' Men's Room lately? Did you almost faint? Did you feel that you needed some sort of a gas mask? If so, don't worry, brother. You are not alone. As a matter of fact we should say: Welcome to the club!

The possible causes may be blamed for the sad situation: (a) the students don't use the room properly, and (b) the janitorial service is lousy. These two causes are inter-dependent, in a way. The students don't bother to use it properly because it is dirty in the first place, and the janitor does not clean it very well because the students use it improperly, anyway, and it becomes messy after he cleans it.

Is this situation hopeless? We don't think so. We believe that the improvement of the janitorial services would produce a chain reaction that would ultimately make the students use that room properly.

00O00

There is a beautiful artist's conception of the Forestry Technology buildings in the Dean's office. Unless the artist's perspective is awry, (which we assure you, it's not!) this proposed building will be bigger

than the present College building. We are not so good at praying, but we have been mentioning that building in our evening prayers lately, hoping that God (and the demi-gods) will hear our pleas and make that conception a reality.

00O00

Much hullabaloo about forest depletion in the Philippines has been made since Mr. Tom Gill of the Charles Lathrop Foundation came here, surveyed our forestry situation, and warned us about the bleak prospects of timber famine unless we do something now to save our forests resources from further destruction. There is not much difference between the warnings issued by Mr. Gill and those issued by our Foresters in the near past. The big difference was that, Mr. Gill is a foreigner (more precisely, an American), while our Foresters are Filipinos. It is ridiculous, but it really takes a foreigner to convince our people about something. While we may hate to admit it, traces of colonial mentality are still visible in our attitudes.

00O00

One of the characteristics of a Philippine public market is the incessant noise due to the haggling between buyers and sellers. One of the characteristics of the lobbies of the College of Forestry building is that it is like a public market. Considering that most of the students here are men, it punches a big hole on the theory that women are greater talkers than men.

Right now, this loud talk in the lobbies has nothing but bad effects: it disturbs the classes in the neighboring rooms. But we are optimistic, and we hope that something good may come out of this sometime. We are looking forward to the College's winning the national trophy in talk-athon contest.

ATOP THE PEDESTAL

(BY THE WOODPECKER)

Gee . . . after so many days and weeks of anxious waiting, the "Leaves" has finally come out! And, brother, am I glad about it. Know why? Because once again, we can have a go-look-see at the things going on in and about our college — our one and only U.P. College of Forestry.

Semestral vacation is over and classes for the second semester are already in full swing. The way I observe things from my observation post, it seems as if some of the students are glad it is over while the others, as can be seen from the long faces they are wearing around the campus, feel awfully sad that the semestral break has finally come to its end.

Say, have you ever tried to consider what it would be like to be at the serious side of a joke? I myself never stopped to ponder what this is all about and how it would be like until I overheard one of the students explaining this to another. He claims that it is embarrassing, but most often, very hurting to be on that side of a

joke as he had pointed out. In explaining to his companion the meaning of the phrase, (serious side of a joke), he used this example to illustrate his point.

He began by saying that from his experience and observation, nearly if not all of the subjects being taken up by the students in the pursuit of their course, require some exercises or term papers of some sort, or some other requirements which have some relation to the subject or subjects he is taking. And, according to him, there are some instances when these requirements have no bearing whatsoever, and if there is any at all, very little, to the practice of forestry so that this is where the joke comes in.

Why he claims it is embarrassing, he reasoned out by saying that the student, knowing fully well that what is being required of him is useless and time and effort consuming on his part, the fact that it will not increase his knowledge or training in things that are forestry, he still accepts it, nevertheless, and lets himself be subjected to that kind of nonsense. Therefore, he concludes, is it not embarrassing to your own self if you do something which is against the principles or dictates of your own conscience? On the other hand, he continued, it is also very hurting because unless the student comes across with these requirements, he gets a grade of "Incomplete" and which may eventually turn out into a "5" if he does not complete it within the grace period allotted him.

Of course, he might be all wet with his allegations and therefore, is entirely wrong. Maybe, he is ignorant of the plans of the college authorities to make the forestry course in such a way so that the student will have a little knowledge of this and a little of that. So I think it is best if we just leave him there with his misgivings. I am sure that he will come to realize his mistake later on.

Even from way up here I can see very clearly with my naked eyes those handwritings (and pencil sketches too!) on the walls of the college building, most especially inside the student's men's room. If these students who are dirtying the college building walls have that much ability to "paint" such exquisite signs and portraits, would it not be better if they switched courses for the time being so that after they have finished their studies in the School of Fine Arts and have perfected their strokes, they can then return to the College of Forestry and perhaps paint all the rooms with murals that could compare with the works of such masters like Rembrandt, da Vinci, Michaelangelo and others? For all you know, it might lend more dignity and air of respectability to the college halls and corridors so that the students would be constrained to exercise more "silence" with the "noise" they create during class hours.

Now that we have touched the topic on silence, it reminds me about the "noisy silence" that is being observed in the library. The silence from down there is so loud, you know, so that anyone who hears it is inclined to believe that a political rally is going on. Of course, there are those large signs there marked "SILENCE" but is it being observed? If it is, and in that manner, then Mr. Webster had better change the meaning of that word.

But the fact, however, that the place is a library, silence should be observed strictly at all times — with or without those signs. And as college students, they ought to know by now what a library is and what it is for. Also, it is presumed they already know that "silence" and "noise" are two different things — that they are opposites. Where one is, the other is not. The way these two words are bing confused for each other, however, makes me sometimes wonder what their real meanings are . . . the Forestry student interpretation, that is.

Say, have you heard it? Forestry day is here again and my, how the heart of every Forestry student sings! The word, you know, is like magic to everyone be-

cause it leaves them all smiles whenever there is made mention of it. Why it is so, I'm not very sure but I have a hunch or two. I suppose everybody is happy because of the various meanings they associate the word with! Some are happy because they see in it the perpetuation of an old practice established by the pioneer students of this college. This goes for the upperclassmen. For the new freshmen, on the other hand, it makes them glad to be a part of an experience which is all new to them. Of course, there too are those who are joyous of its being here because it spells fun, eats and . . . well, you said it — dancing for all. As a result, this has led them to wishing every month were November so that they'd have Forestry Day celebrations more often.

Hm . . . m . . . m . . . of the many Forestry days I witnessed in my life this year's is very different from the rest. The students, although they had to do some real sweating and back-straining, considered it fun and enjoyed every minute of it. Maybe it is because the element of formality, which has been present in all of the previous Forestry Day celebrations, was dispensed with this time. But let's not you and I talk about it yet because if we do, that will make me miss the "lechon", "pinapaitan" and all of the other delicacies which had been prepared by the students themselves. Furthermore, I might not be able to witness the games for the day and I would not, for the life of me, miss seeing the students do the tree climbing relay among those tall balakat trees.

So, until next issue, be seeing you then. In the meantime, HAPPY FORESTRY DAY CELEBRATING FOR ALL!

WHY DO YOU SMOKE?

DA BORER

Why do you smoke? What funny feeling do you get out of puffing at that stick of cigarette till you've nothing but a butt left and the craving to light another, tugging at your insides?

Why did you first laugh at others who foolishly spent their money by literally burning them? Just how bad did you feel when somebody puffed smoke right into your nostrils? You couldn't help but cough violently with tears streaming from your eyes? Why? Did you hate it? Was it because you remembered some things? When father used to order you to light his cigar from the stove embers? When you tried to puff at it and couldn't eat your meal afterwards? When he gave you a thrashing for catching you sneaking a smoke of "Kool" inside your room? But why didn't he like you smoking? Didn't he introduce the act to you himself? And of all things, why did he smoke?

Why didn't you turn down that ONE cigarette a friend offered you? And the others after that? Did you think he'd be angry if you said "no" to his offer? Or did

you tell yourself "anyway I'll say 'no' next time"? Was there any next time? Did you accept it because father is not around anymore to thrash you? Because he's back there at home working hard to give you proper education? Did you have to be offered cigarette again or did you buy your own and did your own offering? And, again, why of all things, did you learn to smoke?

Just how much did that field trip really cost you? Did you really pay ₱50.00 for that glass tumbler you broke (that's what you told your parents) or did you really break one? Now, just why do you have to pay any loan, didn't your parent send your matriculation money in full? Where does all this money go? Smoke? Ah! there goes the rub! Why do you smoke a whole pack using only a matchstick or two? Are matchsticks getting to be that expensive? Why do you smoke too much?

Why can't you smoke in the dark? Do you still like to see your money fly away, in a wisp of smoke? Now tell me, buddy, what do you feel when you don't see it?

Say, just why don't you carry a single stick of cigarette on you when you're with that girl? Who's she? What has she got over you? A magic spell perhaps? Is she the greatest cure for that vice? Can't you smoke with her around? Can you make that feeling last? Why don't you always stay with her then? But, after that, why do you still want to smoke?

Will you really stop smoking? That's what you said you'd do last year, didn't you? Why? No more allowance? Found some more things or people to spend on? But why the hurry to the coop when you hear a match strike? Are you going to buy a pack when only a minute ago you wouldn't dare touch one? Why can't you stop smoking?

Why do you blame your friend for teaching you that *"censored"* vice? Why did he ever offer you that ONE cigarette? Is he really to blame? Now why does everybody seem to disapprove of smoking? Why do doctors and physicians disapprove of smoking? Bad for your health? Why did your father not want you to smoke? Bad for his health? Why do most doctors smoke? Why does your father smoke? Why do I smoke? Why does the whole world smoke?

Before I begin asking too many questions, buddy, may I ask you again, "Why do you smoke????"

• Forestry in the News •

"WATER, WATER EVERYWHERE...

Four years old yesterday, the Nawasa was moved on the occasion of its anniversary celebration to announce approval by the Export-Import Bank of a loan for $9.2 million and the diversion of water from two rivers into a new reservoir in Novaliches. These two projects will tide us over until 1965, when the Marikina multi-purpose dam will have been completed and will presumably start delivering enough water for home and industrial consumers in Manila and surroundnig towns.

Meanwhile, Manilans still look back with some nostalgia to the old MWD, which did the job of delivering potable water without interruption, or without incurring a shortage of aluminum sulphate. The Nawasa, which has more money, more men, and presumably more authority, has on the other hand fallen down so badly on its job that the water authorities themselves are not so sure that we won't have another and more serious water shortage during nezt year's summer.

The waterworks firm is plagued by two main problems, neither of which can be solved without sufficient funds. The first has to do with impounding the water in open reservoirs, the biggest of which registered a new alarming low of 65.7 meters this summer. The second problem has to do with distribution, which is so snafued that water that would normally be sufficient for a cluster of homes in, say, a housing project, proves insufficient because of duplicating connections, small-size pipes and unauthorized pumping. In Quezon city for instance, homes on the España boulevard extension connect their pipes to the main España stem when the Nawasa ought to have installed a good-sized pipe to enter the subdivision area. One can imagine hom many thousands, if not millions, of dollars have been needlessly spent for the purchase of privately owned pipes that ought not to have been laid if someone in the waterworks firm had the imagination to stall a good-sized pipe for community consumers.

One other problem involves the expansion of the Nawasa, when the program should be limit operations and hike water delivery efficiency. Municipal users should have their own waterworks system and run them autonomously. But the sprawling Nawasa has to demonstrate that it can branch out, without realizing that the new industries alone consume thousands of gallons of water daily to maintain present operations.

Meanwhile, conservationists are apprehensive over the consequences of poor watershed management, which this summer crippled not only the Nawasa but the electric power system. The water in rivers is of little use unless it is impounded to meet water needs and to generate power; heavy rainfall could be destructive in deforested areas which expose developed lands to erosion, destructive run-offs and rampaging floods.

The *Times* has suggested the creation of a conservation authority to look after this problem before it gets out of hand. Such an authority will represent a wise investment that will not only protect existing resources but will also yield handsome returns in the future. — *Editorial*, Sun*day Times*, *Aug.* 23, 1959

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DALISAY URGES ACTION ON FOREST DEPREDATION

Undersecretary for Natural Resources Amando M. Dalisay, Tuesday called for vigorous implementation of forest regulations, pointing out that utility of irrigation facilities throughout the country rests on the soundness of forest cover.

Dalisay represented Agricultural Secretary Juan de G. Rodriguesz at the opening rites of the USIS-ICA irrigation water exhibits, "Water for Thirsty Land," at the DANR Marble Hall Tuesday afternoon.

Undersecretary Dalisay urged tapping of underground water reserves for irrigation purposes. He recalled that Admiral Raymond Spruance as early as 1953 recommended underground water irrigation for Central Luzon. This Dalisay said will provide cheap and continuous water for irrigation.

Urging a united front by different government agencies against forest infraction, Undersecretary Dalisay feared that networks of rrigation system laced through different regions of the country would not hold water unless they are sustained by well protected watersheds.

The joint USIS-ICA exhibit traces the construction of the Agno River dam and irrigation system and the development of irrigation facilities over the past six years through the efforts of Philippine Government assisted by the U.S. International Cooperation Administration, namely, the construction of 16 river pumping systems, and rehabilitation of 28 irrigation systems.

Dr. Charles E. Palm, visiting dean of the New York State College of Agriculture at Cornell University, talked briefly on Philippine-American Cooperation that had made the construction of Agno irrigation system possible.

Present at the ceremonies were U.S. Minister George Abbot, ICA Director Paul D. Summers, Garland Boykin, Halsey Knapp, both from ICA; U.S. embassy agricultural attache, Quintin Bates, Undersecretary for agriculture Jose M. Trinidad and heads of the bureaus of soils, forestry, irrigation service unit, plant industry and lands. —*Manila Times, Aug.* 23, 1959

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URGE FOREST CONSERVATION

Representatives of the lumber industry and of the government stressed recently the need for conservation of Philippine forests and other natural resources.

At a revival meeting of the Hoo Hoo club at the Philippine Columbian, prominent loggers, plywood manufacturers, foresters and lumbermen pledged assistance to acting Director of Forestry Tiburcio Serevo in the latter's drive or the conservation of domestic natural resources.

Serevo, on the other hand, pledged all-out government assistance and support to the association in its forest and natural resources conservation effort.

The forestry director pointed out that the need for forest conservation-consciousness among the people was made very apparent by the rationing of electric power which, according to him, was due to the denudation of forest areas in the immediate vicinities of hydroelectric stations and watersheds.

Nicolas Capistrano, general manager of the Misamis Lumber Mills and Hoo Hoo club president, said the newly-revived association pledges itself to:

1. The conservation and protection of Philippine forests and other natural resources; and
2. The unification of all segments of the lumber industry in the Philippines in order to attain a common economic objective.

Capistrano also stressed the necessity of establishing a forest park or center in the vicinity of Manila. This center would be utilized to promote forest products and their utilization.

According to the Hoo Hoo Club president, the assistance of Mayor Arsenio H. Lacson towards the accomplishment of this project would be sought.—*Manila Times, Sept.* 13, 1959

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RE-EXAMINATION OF FOREST POLICIES URGED BY REPORT

Reappraisal and revision of forest mangement and utilization has been initiated in the wake of an alarming discovery that the Philippines has less forest lands than at first imagined.

The disclosure was contained in joint raw material resources survey of the National Economic Council and the International Cooperative Administration.

The survey report was submitted yesterday to NEC Chairman Jose C. Locsin by Director B. G. Bantegui of the NEC office of statistical coordination and standards (OSCAS).

The project report which took almost two years to complete is aimed at developing the statistical material and related information covering four raw material fields: agriculture, fisheries, forestry, and minerals.

It also disclosed the slow rate at which mineneral and geological surveys have been made on the total land area of the Philippines of 29.7-million hectares. The surveys, the report said, has only covered 18.6 per cent of the land area.

Before new data was available, the project report said, management and utilization of forest lands was based on the assumption that the country has 11.4-million hectares of commercial forests and a timber stock of 458-billion board feet.

However, later findings disclosed instead that the country has only 9.3 million hectares and a timber stock of 359-million board feet.

The compiled data also revealed that:

1. Area planted to all crops in 1957 reached a total of seven million hectares or eight per cent higher than the 1953-57 average. Production rose to 9,381-million kg. in 1957 with an estimated value of 1,646-million in 1957 exceeding the 1953-57 average by five percent.

2. Total fish production in 1957 amounted to 387.2 million kg. Municipal and sustenance fishing accounted for 253.8-million kg. or 66 per cent of the 1957 output; fishponds, 39-4-million kg. or 10 per cent; and commercial fishing 93.9-million kg. or 24 per cent. —*Manila Times, Sept.* 17, 1959

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WHOLESALE FOREST RAID

Control of the lumber industry by aliens has finally been formally acknowledged. Following a conference with PCAPE officials in Malacañang, President Garcia the other day was told that 80 percent of forest concessions in the Philippines are operated by dummies for aliens. The unpaid miscellaneous fees alone amount to ₱5.6 million, which explains partly why the reforestation and land conservation program exists only on a pitifully limited scale.

The Philippines used to have one of the finest collections of timber stands in the Far East. Our forest resources were rated by experts as one

of our chief economic assets until after the war, when the fight for concessions abetted by raiders of the public domain indiscriminately parcelled out huge areas to so-called "pioneers" fronting for alien financiers. The Korean war in 1950 hiked log imports, stepped up the logging pace, and accelerated the release of public lands to forest concessionaires. Meanwhile, the Japanese were converting Philippine logs into plywood, devising high recovery system for byproducts, and utilizing the latest in science to use "waste" that in the Philippinse we throw away. Incidentally, they were busy reforesting and planning long-range forest management projects while our own forests were being denuded without any compensating program for reforestation. The high cost of neglect has become evident in the series of floods that hit Mindanao, northern and central Luzon during the past five years.

Now the tragedy is compounded by the fact that 80 percent of forest concessions are operated by dummies working for alien financiers. Among the more respectable firms, this is a matter of common knowledge, but nothing has been done primarily because a good many politicians are themselves the dummies for alien backers. Malacañang should do more than collect the ₱5.6 million; it should break the issue wide open ond expose those who, over the years, have allowed themselves to be used as tools to develop and then to threaten the very life of the lumber industry. — *Editorial, Manila Times, Sept.* 19, 1959

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BLAME PI DEFORESTATION ON CARELESS 'KAINGINEROS'

To save the economy of the country, especially lumber industry, and to forestall major catastrophes due to deforestation, a strong move was today launched in Central Luzon by civilians and various agencies of the government to put immediate stop to the illegal activities of "kaingineros."

Under the guise of clearing forests for agricultural purposes, "kaingineros" have been indiscriminately destroying forests. This destruction is blamed for the shortage of water during season in this region and floods during the rainy the rainy season.

Examples cited here in which mountains were being denuded of their useful forests and big trees are those in Arayat and Porac.

Residents in Porac and Arayat said that big portions of their forests and big trees were being destroyed yearly and planted to palay. The destructive effects of said "deforestation" is feared by the residents because they expect a time will soon come when there may not be enough forests and big trees in Porac and Arayat mountains to supply and hold water for the residents of the mountain towns.

Mayor Higinio Gopez of Porac said that the water crisis in Porac last year was blamed to the destruction of forests by "kaingineros". Even the Porac river is drying up during "dry" season which has not occurred in the prewar days, the mayor pointed out.

Gopez continued that during rainy season, the mountain residents were in constant fear because of falling rocks and floods as there are not enough forests to hold mountain rocks and water.

The lumber industry in Central Luzon is also seriously threatened by the indiscriminate activitise of "kaingineros" and loggers because even young timbers are destroyed or cut for lumber purposes.—SS *Manila Times, Sept.* 3, 1959

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LUMBERMEN URGE INCLUSION OF SAWLOGS BARTERABLE

The National Economic Council was recently asked to reconsider its decision to exclude sawlogs from the list of barterable items under R. A. 2261.

The NEC had excluded sawlogs (non-exportable grades) on the basis of the provisions of the law which states that barter can be carried out only on products which cannot be sold profitably for dollars or other freely convertible currency and an adequate supply of the product has met local demands.

The Philippine Lumber Producers Association Inc., cited several reasons for the necessity of including sawlogs in the list of barterable products.

In a letter through its president, Antonio de las Alas, the organization pointed out that the cost of producing one unit of sawlogs is more than its sales rate thus placing the product in the category of a non-profitable product.

De las Alas also noted that there is no justification to anticipate a shortage of sawlogs in the local market as the basis for rejecting the product as a barterable item.

"Existing data" and even "probabilities," De las Alas said, cannot justify a conclusion that the local market is sadly deficient in supply of logs.

De las Alas expressed fears that the NEC's decision was influenced by the depletion of forest reserves. The NEC, he said, must have been under the impression that disallowing the barter of sawlogs would discourage cutting of timber.

He noted that it is unfair for legitimate lumber producers to be made to suffer the consequences of forest depletition caused by *kaingineros.*

De las Alas proposed the following to help forest restoration without having to penalize lumber producers for the acts of kaingineros.

1. Only log producers with concession areas duly licensed in their name be allowed to barter their sawlogs to meet break even costs of production.

2. Such producers be allowed only 25 per cent of their direct production for barter to be taken out of the non-exportable grade comprised in their total output.

The proposals, De las Alas said, would give lumber producers the much needed convenience to continue with their operations without at the same time disregarding the basic considerations that led the NEC to decide a total exclusion of sawlogs from barter privileges.—*Manila Times, Sept.* 16, 1959

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REVAMPING TWO OFFICES

The Presidential Committee on Administration Performance Efficiency (PCAPE) has recommended the reorganization of two government offices—the public service commission and the bureau of forestry. Both offices are so undermanned, and unable to cope with the rising volume of work and the widening scope of their respective responsibilities, that they have confined their activities to the discharge of mostly routine work instead of long-range planning and new imaginative programs.

The PCAPE is the authority for the statement that the records for some 434 cases are missing from officials files. From July 1949 to the end of the last fiscal year, the public service commission was unable to collect almost half a million pesos in fines which the commission imposed on operators who violated PSC rules and regulations. More than 15,000 cases for the same 10-year period have not been calendared for hearings "for unknown reasons," while at least 11,000 have been heard but haven't been decided. In the PCAPE report to the President these have been cited as instances of "laxity," a charge which understates the situation at the PSC.

The bureau of forestry is right now under fire because it has failed to formulate a practical forest conservation program, let alone carry out one. The future of the lumber industry is anything but bright, largely because of the failure of officials to investigate the claims of concession applicants. Eight out of ten forest concessions are reportedly run by dummies financed by alien interests who in turn control the industry. Existing forests are not being conserved or developed on a long-range basis, but are rapidly being destroyed by indiscriminate logging, illegal raids, and the channelling of funds for reforestation to other projects. This neglect has not only imperilled the country's forests but exposed developed farmlands and urban areas to erosion and floods.

The PSC is obviously unable to cope with the volume of work and the scope of its responsibilities because of undermanning. The bureau of forestry has failed because of the failure on the part of officials to appreciate the value of forest conservation and its relation to economic development. If a reorganization must take place, we hope it brings in technically trained men instead of political protegees.—*Editorial, Manila Times, Sept.* 21, 1959

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LUMBERMEN VOW PCAPE SUPPORT

The forces of the Philippine Lumber Producers Association was thrown yesterday behind the drive of the presidential committee on administrative performance and efficiency (PCAPE) in the drive against alien dummies.

Antonio de las Alas, president of the organization, said the PLPA is ready to help and cooperate in enforcing the laws and regulations on forest resources of the country.

De las Alas reacted to a PCAPE report to President Garcia that 80 percent of the Philippine forest concessions are operated by alien-sponsored dummies.

He assured that members of his organization are directly operating their own concessions.

"The members," he said, "have been in business for many years and they have always endeavored to follow strictly the laws and regulations promulgated by the bureau of forestry.

De las Alas' pledge was the second made in so many days by businessmen in the lumber industry.

Previously Gaudencio E. Antonino, president of the Producers and Exporters Association of the Philippines had also pledged his organizations resources to the PCAPE drive. — *Manila Times, Sept.* 27, 1959

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TWO PCAPE MEN

The front page story of the Manila Times issue last Sept.18 on the revamp of the bureau of forestry omitted two important names which are worth mentioning, because they were responsible in recommending the revamp when they unearthed the huge amount of unpaid forest charges and the presence of aliens operating our forest concession. These two PCAPE men are Tex P. Carrillo, chairman of the joint PCAPE-Forestry committee and Alejandro B. Grospe

also with the PCAPE.—TIRSO DE LOS REYES, Bureau of Forestry, Manila. — *Manila Times, Sept.* 26, 1959

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DRIVE STARTS ON LOGGERS

Navy Captain Santiago Nuval, PLEUSP chairman, has reported widespread deforestation in Mindanao during a conference with Defense Secretary Alejo S. Santos in Camp Murphy.

Santos immediately directed Nuval to supplement the PLEUSP campaign against kaingineros and unscrupulous loggers with an information drive to make the people aware of the dangers of indiscriminately denuding the forests.

Large patches of forest reserves have suffered depredation of kaingineros particularly in Agusan, according to Nuval.

A detailed survey is being made by PLEUSP of the actual extent of the deforestation on Mindanao, Nuval reported.

He also attributed the deforestation to bad habits both of the legitimate loggers and the people who do not care where the timber falls, whether it crushes young trees or not.

The people think that the forest reserves will never be exhausted, according to Nuval.

The people, he reported, have wasteful habits particularly making wooden articles and equipment and household appliances.

Nuval was accompanied to Camp Murphy by Capt. Florencio Domingo, executive secretary of the PLEUSP. — *Manila Times, Aug.* 9, 1959

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ANTI-DUMMY DRIVE SET

President Garcia has mobilized the personnel of at least three departments, in addition to the PCAPE, in an all-out drive to crack down on dummies and delinquent forest concessionaires.

He instructed Justice Secretary Alejo Mabanag to submit all reports available in the department on current investigations into rampant practice of aliens of employing Filipino dummies, particularly in the forest concessions and in logging and lumber industry.

The department of agriculture and natural resources was directed to submit a list on forest concessionaires and their holdings to determine, besides delinquency in payment of forest charges, the allegations that many of them have violated the conditions and terms in the grant of concessions.

Destructive soil erosion due to wanton logging will also be looked into.

The department of finance was likewise asked to check on records of logging and lumber operators, to ascertain if their books are in order, their taxes paid, and if it is true, as reported by the PCAPE, that "aliens are operating machineries and supervising Filipino workers in logging operations," and that during pay days, "Filipino laborers receive their pay direct from aliens."

As the President turned his attention to infractions in the forest concessions and lumber industry, Secretary Mariano R. Logarta, in a radio commentary over DZXL the other day, said that the Nacionalista administration was taking "unprecedented "steps to weed out venality in the government.

Mabanag, as secretary of justice, is chairman of the anti-dummy board.

The case of delinquent forest concession holders and dummies had been brought to the attention of the Prseident by Justice Buenaventura Ocampo, chairman of the Presidential Committee on Administration Performance Efficiency.

According to Ocampo, five concessionaires alone owed the government a total of ₱349,398.95 representing unpaid forest chrages, in spite of repeated demands for payment by the director of forestry. — *Manila Times, Sept.* 28, 1959

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DRIVE ON DELINQUENT LUMBERMEN PRESSED

Cancellation of licenses issued to delinquent forest concessionaires and immediate prosecution of dummies of aliens in the lumber industry, are among the measures being studied now by President Garcia and the cabinet.

The measures were recommended yesterday by Justice Buenaventura Ocampo, chairman of the PCAPE, following a two-hour meeting of representatives of the department of justice, department of agriculture and natural resources, the general auditing office, bureau of internal revenue, and bureau of forestry, on the problem of unpaid forest charges and widespread employment of dummies.

As soon as forest concessions are cancelled due to the refusal of the licensees to pay their back dues and failing to comply with other terms of their holdings, the forest or lumber areas will be declared open for new applicants.

Malacañang and cabinet circles believe that this will be the most effective way of curbing abuses in the forest holdings and spur the development of the lumber industry.

A review of the findings made by PCAPE agents during their three-month investigation of forest concession anomalies and irregularities showed that ₱7,138,453.23 in forest charges remained uncollected.

The unpaid fees as previously reported totalled ₱5.6 million, but these excluded surcharges.

Other measures considered by President Garcia in the fight against violators of the forest concession laws and regulations are:

1. Strict screening of applicants for concessions to determine their financial capacity and their industrial facilities to develop the concessions.

2. Systematic recording of paid and unpaid charges.

3. More coordination of the work of the forest rangers, bureau of internal revenue representatives, and other agencies concerned. —*Manila Times, Oct.* 8, 1959

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BIR SCORES FORESTRY ON UNREMITTED ₱6.6 M IN FEES

Revenue Commissioner Melecio R. Domingo yesterday asked the bureau of forestry to turn over ₱6 million in forestry revenues paid by licensees and concessionaires since 1946.

Domingo was prompted to issue the directive following the findings of a BIR team that the amount which had remained outstanding in the forestry bureau books has not been accounted.

The commissioner received a report that the unremitted revenues are ₱4,547,676 for forest charges and another ₱1,163,106 in reforestation funds.

The BIR team informed Domingo that the huge debt was brought about due to the illegal practice of forestry personnel who collect the fees and the failure of the forestry bureau to supervise the collections by municipal treasurers.

Under the tax code it is only the BIR or its deputized agents, in this case, municipal treasurers who may collect forestry revenues.

Domingo said he will order a formal investigation of the matter and asked Auditor General Pedro M. Gimenez to require the forestry bureau to remit the ₱6 million fees accruing to the national coffers.

The BIR chief said the non-remittance of the amount was discovered when many concessionaires presented to the BIR certificates that they had deposited the forestry charges and fees with the forestry bureau.

In a conference with BIR Deputy Commissioner Misael P. Vera, Domingo directed the latter to study the possibility of suspending the issuance of BIR certificates to these concessionaires who want to export logs, until the forestry bureau could satisfactorily explain what happened to the ₱6 million forestry fees.

Vera disclosed that before a concessionaire is allowed to export he is required to get a certificate from the BIR showing that he has paid forest charges and that his income tax are in order. — *Manila Times, Oct.* 1, 1959

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ANTONINO URGES SUSPENSION OF ERRING LOGGERS' LICENSES

Gaudencio Antonino, Central Bank monetary board member, yesterday strongly urged the immediate suspension of the licenses of forest concessioners against whom there is *prima facie* evidence that they are alien-sponsored dummies.

This was his reaction to the report of the presidential committee on administrative performance and efficiency (PCAPE) to President Garcia revealing that 80 per cent of the forest concessions in the country are operated by alien-sponsored dummies.

Antonino lauded the presidental committee for "its boldness in exposing the illegal exploitation of our timber resources by aliens through influential Filipino dummies."

The charge, he noted, is so serious that inaction on the part of the government may lead to the suspicion that influntial public officials are in connivance with the guilty parties.

Antonino offered his services to the PCAPE in gathering all evidences necessary to prosecute these dummies.

As president of the Producers and Exporters Association of the Philippines Antonino pointed out that many of the members of the organization are loggers who may be open to suspicion if the government does not take concrete action.

Antonino said the following steps should be taken in the face of the committee report:

1. Immediate suspension of licenses of forest concessioners proven alien dummies;

2. Filing of formal charges against them;

3. More teeth given to the anti-dummy law.

Commenting on the PCAPE report that forest concessionaires have unpaid taxes amounting to ₱5.6-million, Antonino said: It is hardly believable unless ranking forestry officials themselves are in connivance with the tax evaders. —*Manila Times, Sept.* 23, 1959

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CG ADVISED ALIENS RULE TIMBER TRADE

Malacañang yesterday cracked down on forest concessionaires by readying charges against dummies of aliens and those who are delinquent in payment of their forest concession fees and taxes.

A report of Justice Buenaventura Ocampo, PCAPE chairman, to President Garcia yesterday revealed that about "80 per cent of forest con-

cessions all over the country are operated by alien-sponsored dummies."

It was indicated that certain powerful politicians are involved in dummy cases. President Garcia is expected to name names at the press conference this afternoon.

The report also stated that concessionaires have not paid fees and taxes for lumbering and logging rights amounting to ₱5.6 million.

President Garcia has proofs of aliens "operating machineries and supervising workers in logging operations, and that during pay days Fipino laborers receive their pay direct from such aliens."

The dossier on forest concession graft and corruption was gathered in quiet, secret investigation stretching through several months, by Lt. Mauro Duatin and Mariano Umali of the PCAPE (presidential committee on administration performance efficiency).

Duatin and Umali said that "five concessionaires alone" owe the government a total of ₱349,398.95 representing unpaid forest charges."

The report emphasized that in certain instances, concessionairies showed defiance of constituted authority by repeatedly ignoring the demands of the bureau of forestry for payment of concession charges and taxes in the logging and lumber industry.

The logging and lumber industry is one of the most lucrative industries in the Philippines, and during the last three years it has attained the status of bonanza because lumber products were allowed in barter transactions. Many in the lumber industry and trade have become "over night millionaires."

Justice Ocampo invited the commissioner of internal revenue, the budget commissioner, the director of forestry and a representative of the department of justice to a conference to draw up "a smashing follow-up" of President Garcia's order to go after the erring concessionaires and Filipino dummies.—*Manila Times, Sept.* 18, 1959

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PI WOOD PRODUCTS EXPORTS UP

Last year exportation of Philippine wood products reached a new high with a total value of ₱17,180,813, according to the figures released by the census and statistics bureau. Philippine plywood, veneer and our relatively new Lawanit made good showing.

Plywood with 113,872,557 square feet valued at ₱13,046,909 composed a big chunk of our sale abroad. Veneer followed with ₱4,011,731 worth of 72,191,378 square feet. Other unclassified wood manufactures placed third with the over-all total value of ₱40,857 followed behind by Lawanit with 242,886 square feet worth ₱36,014. The other wood products sold abroad were doors and windows valued at ₱26,260 and furniture worth ₱19,042.

The United States, as usual, was the leading market for four of the Philippine wood manufactures. Guam, however, took top place in the Lawanit buy and was the only country of destination of our manufactured doors and windows. —*Manila Times, Aug.* 14, 1959

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EXPORT BAN ON WOODCRAFT NOT KILN-DRIED PROPOSED

A move to disallow the exportation of woodcraft articles not kiln-dried was seriously considered at a conference between Commerce Undersecretary Perfecto E. Laguio and dealers in woodcarving products held recently in Baguio.

The undersecretary told the woodcraft dealers that during his visit to Hawaii and the U. S. mainland he observed that the prestige of their products had gone down, because they crack in extreme temperatures, especially during winter.

The dealers, Laguio said, were "very receptive" to the idea of securing the technical Institute of Science and Technology, International Cooperation Administration, Industrial Development Corporation and the bureau of public schools.

If the primitive way of kiln-drying the woodcraft items in crudely constructed ovens would not be adequate to bring the woodcrafts to the desired standards, Laguio said the dealers were eager to form themselves into a cooperative and purchase the necessary machinery or obtain it from the reparations.

The undersecretary stated that if the woodcarving industry would not be assisted in solving its problems, the export of woodcrafts from the Philippines may fall far behind those coming from other countries.

One big problem of the industry he said, is the difficulty in carving kiln-dried wood. It becomes too hard to be carved into various figures so the woodcarvers wanted to explore the possibility of kiln-drying the finished articles, the undersecretary added.

As a first step, Laguio has made arrangements with the National Institute of Science and Technology to have an expert sent to the Mountain Province to determine the sufficiency of the primitive method of kiln-drying. For this purpose, Martin Jugo, assistant director of the industrial research center of the institute was sent to the Mountain Province. He will report his findings to Laguio. — *Manila Times, Oct.* 10, 1959

PLYWOOD

The manufacture of plywood and veneer on a mass production basis in the Philippines is one of the newest postwar industries that has surprisingly grown into a consistent as well as considerable dollar earner and dollar saver for the country.

Because its raw materials come from the forests, the industry is singularly unique because it provides employment opportunities to people living in the rural areas. It can be righly said that the benefits provided by the industry pervade the whole national economy.

The other day a number of the industry's representatives appeared before the monetary board to plead for a recurrent dollar quota with which to buy operational supplies, ranging from spare parts to formaldehyde. While a majority of the monetary board members sympathize with the plight of the industry, they nevertheless believe that the request for foreign exchange to buy "glue" and "resins" is uncalled for.

The reason for this opinion lies in the full awareness that both of these raw materials — now being produced in the islands by two manufacturing concerns—should be procured locally. Otherwise the investment in dollars in these two companies would be allowed to go to the gutter unless the government gives them some sort of protectino. — *Manila Times, Sept.* 19, 1959

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PI PLYWOOD DISPLACED

Philippine mahogany plywood produced in Taiwan has beaten the Philippines in invading the Canadian market Vicente M. Correa, commercial attache at the Philippine consulate in Vancouver, reported yesterday to the department of commerce and industry.

The trade official pointed out that he reported last February of the fast growing market of Philippine mahogany plywood in Canada. But, he said, the country has not exported a square foot of this product to Canada.

Correa stated, however, that the Taiwan-made plywood was inferrior in quality to those imported from Japan. Although the quality was poor, it filled the need created by the voluntary clamping by Japan of its plywood quota export to Canada.

He urged local plywood producers to avail themselves of the opportunity of developing the Canadian market on account of Japan's cutbacks on its plywood exports.

Correa also reported that he had secured assurances from Canadian importers to switch their purchases from Taiwan to the Philippines if the latter's offer would be attractive.

For the first quarter of this year, the trade official stated that Canada imported $1,503,960 worth of hardwood plywood. He reported that the 10 top suppliers were in the following order: Japan, West Germany, United Kingdom, Taiwan, French Africa, United States, Netherlands, Israel, Hongkong and Communist China. — *Manila Times, Aug.* 11, 1959

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JAPANESE 'TACTICS' PRICING PI OUT OF PLYWOOD MARKET

The multi-million peso plywood industry in the Philippines may be priced out of its biggest market through "unfair competition," the Plywood Manufacturers Association of the Philippines, Inc. warned yesterday.

Plywood exporters from Japan, the organization charged, have been sureptitiously making use of third party countries as source of origin of their exports that are in excess of their present quota in the United States.

This practice, it was said, has caused apprehension among US buyers who pointed out Japan has overflooded the US plywood market resulting in an unprecendented decline in prices.

Unless immediate remedial measures are taken by the Philippine government, the PMAP warned, Philippine plywood will eventually be priced out of the U.S. market resulting in cancellation of pendings orders.

In addition to this tactics, the PMAP said, there are some foreign buyers who have succeeded in closing contracts with local firms to import raw materials (veneers) of highest grade or quality at a price fit only for the lowest grade thereby disrupting market conditions both in the Philippines and abroad, particularly with respect to price.

Unless action is taken the Philippine plywood industry may, the PMAP warned, experience difficulties in the future which could force it to cease operations and lay off thousands of workers resulting in dollar losses for the country.

It was pointed out that 22 operating plants at present have a total investment of ₱70-million employ 35,700 employes.

Exports last year amounted to 119.9 million square feet and amounted to no less than ₱5-million monthly during the first semester of 1959.—*Manila Times, Sept.* 10, 1959

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INDUSTRY SEEKS QUOTA

The Philippine plywood industry shuns government subsidy in the solution of its plight and threatened position in US and other world markets. This stand was elicited at a conference with

Commerce Undersecretary Perfecto E. Laguio at the Elks Club the other day.

Nick N. Kosloff, executive vice president of the Woodworks, Inc., president of the Plywood Manufacturers Association, stated that the most effective solution to the present problems of the plywood industry would be the granting of adequate foreign exchange for the importation of the needed machinery, spare parts and raw materials.

The grant of sufficient dollar allocations, Kosloff said, is the key to all the problem of the plywood industry. He claimed that the industry does not get more than 15 per cent of its total dollar export proceeds for the importation of the needed equipment.

The plywood executive further claimed that if the industry were only allowed to accept the offers of its consumers abroad in the form of spare parts, like sanding belts, putties and rotary knives, the industry could stand on its own against any competition in the world markets.

He pointed out the continuing threat to the plywood industry in the United States market on account of the yearly increasing customs duties on Philippine exports entering that country. — *Manila Times, Sept.* 13, 1959

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LOG EXPORTS ANOMALY TOLD

A new anomaly involving the illegal exportation of logs which caused a loss of millions of pesos in taxes to the government annually has been uncovered by Defense Secretary Alejo S. Santos.

The anomaly consist of the misscaling, underclassification and underdeclaration of logs taken from Mindanao forests and shipped to foreign countries.

Santos was briefed on the modus operandi by Navy Capt. Vicente Nuval, chairman of the Presidential Law Enforcement Unit in the Southern Philippines (PLEUSP), during this inspection visit here last Sunday.

Santos told the *PNS* that he will look into confidential reports that some government officials in the provincial auditor office and the bureau of forestry are involved in the illegal exportation of logs.

Santos was informed that some 300,000,000 board feet of lumber had been illegally exported from Agusan alone since the PLEUSP was assigned in the south a few months ago.

During the briefing, Santos was also informed that the PLEUSP had almost stopped the smuggling into the country of narcotics, gold bullions, cigarettes, playing cards and currencies through the south. The unit had also stopped the illegal exportation of copra to Borneo.

During his week-long tour of the south, the secretary visited the locust-infested areas in Cotabato and ordered Lt. Col. Horacio Reyes, Philippine Air Force coordinator in "Operation Locstar," to plan an effective campaign in eradicating the pests.

Five "L-5" PAF planes equipped with sprayers were flying around the province spraying plants infested by locusts. —*Manila Times, Aug.* 27, 1959

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CIVIC GROUPS BOOST I. NORTE UNDERTAKING

The Laoag Rotary club's "Operation Reforestation" has gained momentum as all the other major civic organizations here as well as the provincial and municipal governments joined hands to make the drive a "concern for all and everyone" in the province.

The intense enthusiasm on the project was sparked last week by Defense Secretary Alejo Santos, who planted the first forest tree "seedling" on the occasion of the club's reforestation kick-off at the southern approach of the Laoag Bridge.

Gov. Toribio L. Peralta, who is also president of Ilocos Norte Lions club and grand knight of the local Knights of Columbus, has advised provincial employees to support the project.

Local District Highway Engineer and Ilocos Norte YMCA board president Julio A. Reyes has also promised the assistance of his office, saying that it would not be much for "my men to devote some of their off hours to caring trees."

Dr. Pablo J. Raval, local Rotary president, said he will invite all barrio lieutenants in the province to a luncheon meeting here sometime next week to explain the movement and to seek their cooperation. — *Manila Times, Aug.* 23, 1959

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LAOAG TREE DRIVE BOOSTED

The World Neighborhood, Philippines, of barrio San Mateo, this town, received recently 2000 forest tree seedlings as the local Rotary club's reforestation drive.

Gov. Toribio L. Peralta, who is also president of the local Lions club and Knights of Columbus, praised the Rotary Club project "which deserves greatest cooperation for our provincemates."

He pledged anew the cooperation of his organization and the use of government facilities such as tools and vehicles in pushing through the drive.

Dr. Pablo J. Raval, local Rotary club president, expressed the club's gratitude for the prov-

ince-wide response to its project, while Marcelino Arucan, head of the local chapter of World Neighborhood, Philippines, promised continued support to the project. — *Manila Times, Oct.* 1, 1959

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FEAR SHORTAGE OF YULE TREES

Small Benguet pine trees will be in great demand for Christmas trees, but forestry authorities here fear there will be a shortage of saplings to meet the traditional need for Yule decorations.

Although Christmas is still more than a month away, several inquiries have already been received at the local office of the forestry bureau as to how Christmas trees may be procured either for commercial or personal purposes.

District Forester Rafael L. Quidilla said that the ban on the cutting of Christmas trees in public forest, which was instituted some six years ago as a measure of saving the young stands of pine trees from depredation during Christmas season, still stands.

Therefore, the main source of whatever available Christmas trees this coming season would come from private woodlands stocked with Christmas trees, either by natural reproduction or by planting seedlings to convert the said private lots into Christmas tree plantations.

Establishment of Christmas tree plantations was a pilot project of the forestry bureau started some 10 years ago along the Naguilian road, four kilometers from the center of the city. The project was a success and private lot owners here also started planting their vacant lots, which are now the sources of Christmas trees.

However, cutting of Christmas trees in private lots is under supervision by representatives of the forestry office to be sure that the trees cut really came from the private lots and not from the public forest nearby. Normally, it would take from three to four years for a pine-seedling to be ready for harvest as Christmas tree.

Some of these Christmas tree plantations are located in Irisan, Baguio, and other places in Benguet, Mt. Province. A Christmas tree farmer who pioneered in Christmas tree plantation here is Timoteo Lagasca, whose farm in Irisan with more than 500 saplings are ready for Christmas tree harvest this season.

Quidilla enjoined private lot owners, whose lands are stocked with Christmas trees, to have their property registered with the forestry bureau under private woodland registration for their convenience when they cut down Christmas trees.

Unless such private lots are duly registered the government will collect forest charges from Christmas trees so cut, at the rate of ₱.40 per lineal meter, plus surcharges if the saplings were cut without supervision by forestry representatives.—*Manila Times, Nov.* 15, 1959

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AFRICA PREFERS PI RATTAN

A new demand for high grade Philippine rattan products have been received recently from Liberia and Ghana, West Africa, it was learned.

Offers to distribute top quality rattan furniture and similar products have been sent by the West African republics to Baughman's Furniture Factory, Inc., local manufacturers and world-wide distributors of rattan furniture since 1946.

At the same time, similar offers or inquiries came in from a number of furniture dealers in Madrid, Spain, and in Panama.

Baughman's products, which have won international recognition during its 13 years in business, have established outlets in North, Central, and South America. The West African markets are presently being considered in earnest with the firms expansion program

Baughman's, local makers of rattan-craft, uses 99 per cent raw materials produced and purchased locally.—*Manila Times, Sept.* 12, 1959

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CACAO WORLD DEMAND UP

The world markets could take at least 200,000 tons more cacao beans, according to Dr. D. H. Urquhart, visiting cacao expert and consultant of Cadbury Brothers, Ltd., a chocolate manufacturing firm in England. The former director of the department of agriculture of Ghana, the world's leading cacao producer, estimated that the world production during the current crop year is about 800,000 tons of beans.

Urquhart was guest speaker at a luncheon-conference of coffee and cacao growers and manufacturers held recently under the sponsorship of the Coffee and Cacao Institute of the Philippines and Philippine Food Industries, Inc. He is in the course of his travel to observe cacao production in Southeast Asia and "to extend any technical assistance where it is needed." He will visit the present and potential cacao producing areas all over the country in company with COFCA and government agriculturists.

The noted experts emphasized that there is no fear for an overproduction of cacao. "I have visited most of the cacao producing countries of the world and it is my view that there will be no enormous sudden development of cacao planting which will depress the price of raw cacao to a level where it would be unprofitable to producers," he said.

Urquhart cited the fact that in the season 1956-57, there was a bumper crop of just under 900,000 tons of cacao beans and there was a certain amount of concern in producing countries as they were afraid that the price to the producer be unduly depressed Prices and the price for raw cacao beans remained at a highly profitable level for the producers," he continued.

The expert went on to say that the producers in the Philippines are at an advantage because this country consumes more cacao than what it can produce. He cited the possibility and the benefits to the national economy of being able to intensify the development of the local casao industry to produce a surplus for export. —*Manila Times, Sept.* 13, 1959

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CANTON, PACOL SOURCES OF PULP FOR PAPER

There has been increased interest in the manufacture of paper locally during the last few years. Do these interested parties know that canton and pacol are promising sources of pulp for the manufacture of kraft paper and newsprint? Both plants abound in the Bicol region and in other parts of the country.

What are these plants? Both are members of the genus Musa, the banana family. Under ordinary field conditions, these plants grow rapidly with very little care and cultivation. They have the ability to adapt themselves to soils and climate where abaca does not thrive well. They have the power to kill or outgrow pernicious weeds. What is important is that they are both free from serious diseases and injurious insects pests which commonly attack abaca and banana.

Canton and pacol are easily propagated by suckers or division of the corns. They are drought resistant. They grow well on the loose, moist, and well -drained soils of the College Agriculture at Los Baños, with practically no care and cultivation. Grown side by side with abaca, both canton and pacol grow faster and more vigorously.

As sources of fiber for cordage manufacture, canton and pacol are of little value because their fibers are very much inferior to the abaca fiber. Both canton and pacol fibers are, however, sometimes used for adulterating abaca fiber. These plants are important as sources of cellulose and pulp material, either for export or for the manufacture in the country of kraft paper and newsprint. For this reason, farmers should pay a serious consideration to their production. — *Manila Times, Sept.* 13, 1959

SCIENTIST STUDIES AUSSIE PLYWOOD

A forestry scientist from the Philippines, L. A. Ynalves, is studying methods used by Australiam scientists in developing waterproof glue for plywood from tannin extracts.

Ynalvez is spending a year in Australia under the Colombo Plan with the Forest Products Division of the Australian Commonwealth Sicentific and Industrial Research Organisation at Melbourne, Victoria.

The division's scientists, after several years of research, have produced an efficient waterproof glue, using tanim formaldehyde.

This by-product of wood is potentially a cheap substitute for phenol formaldehyde, at present the main adhesive used in the production of waterproof plywood.

Ynalvez, a chemist, is a specialist in wallboard processing at the Forest Products Research Institute, Laguna.

"We have a particular interest in these Australian experiments because the Philippines, like many other South-East Asian countries, has no phenol resources and must import its supplies,"

"If we could develop waterproof glue from our indigenous tannins, it would not only save money but give us a strategic advantage.

"We would not be handicapped if our phenol supplies from overseas were cut off in a time of emergency," he said.

Ynalvez is studying the structure of tannin adhesives and methods used for testing them. Later, he hopes to make a more detailed investigation of the chemistry of tannins.

He had also planned to study commercial methods of the extraction of tannins from wood. but at present no tannin is produced commercially in Australia. However a private organisation is planning to set up an extraction planti in the State of New South Wales.

The adhesive experiments in Melbourne have advanced to the stage where a commercial trial may soon be carried out to test manufacturing methods.

The new tannin glue will have great importance to the Australian timber industry. The manufacture of waterproof plywood for buildings, boats, caravans and other purposes is a growing activity.—*Sunday Times, Oct.* 11, 1959

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IPIL-IPIL MAKES POOR SOIL USEFUL

By Dr. F. M. FRONDA

Ipil-ipil (*Leucaena glauca*) is one of the most important aids in tropical agriculture. Being a legume, it renders poor and barren soils agriculturally useful. It is an excellent source of fire-

(*Continued on page* 103)

FPRI Highlights

by ULPIANO DE LEON

For FY-1960 the WPRI included 118 projects in its research program. FPRI Director Eugenio de la Cruz reported that 96 of these projects were handled during the first quarter and much progress was made in most of the projects that were worked on.

We are featuring in this column some of the more important projects that made good progress.

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DIFFERENTIATION OF SIMILAR WOODS

A project entitled, "Differentiation of Similar Woods", was partly completed recently. This part of a long continuing project dwelt on tangile and red lauan from Camarines Norte. Three methods of identification, namely, simple chemical test, splinter test, and microscopic investigation, were used. By microscopic investigation, in which each species was represented by 12 specimens, it was found that oxalic crystals can be considered as a diagnostic feature to differentiate tangile from red lauan. Among other things, the results of this investigation indicate that these crystals, appearing in diamond shape, are present in tangile but not in red lauan.

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TYLOSIS INVESTIGATION

Progress was made also in the investigation of the occurrence of tyloses in Philippine woods. With the exception of the subalpinus, all species of the apitong group were investigated. In the 10 species studied, two types of tyloses were found present. These are tyloses buds and full grown thin-walled tyloses.

Tyloses are outgrowths from an adjacent ray or axial parenchyma cell through a pit cavity in a vessel wall, partially or completely blocking the vessel lumen. It is well established that the occurrence of these tyloses in appreciable quantities in wood affects its treatability with chemical preservatives.

* * *

FORESTRY LEXICON OF PHILIPPINE TREES

The preparation of the manuscript of a book entitled, "Forestry Lexicon of Philippine Trees," is about to be completed. Principally a list of the names of around 3,700 species of small to large trees, this lexicon is divided into two major parts. The first part gives their official common names in alphabetical order followed by their corresponding scientific names. In the second part the scientific names are the ones arranged alphabetically followed by their official common names.

Dr. Felipe M. Salvosa, the author of the lexicon, said that in the preparation of the manuscript he referred to at least 12 volumes of books and different forms of publications, besides actual survey work.

He mentioned that the lexicon classifies the trees into three sizes, namely; large, medium, and small. Out of the total number of trees listed in the book, Dr. Salvosa also mentioned, around 8 per cent are classified as large, 20 percent, medium, and 72 per cent are small.

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FIBER IDENTIFICATION

A project which is expected to be of economic importance to the country's infant pulp and paper industry has been introduced to our research program. This is the identification of wood and other plant ifbers. One of the objects is to distinguish fibers of different species from one another. It will involve not only the investigation of fibers of authenticated wood samples in our collection but also the various other fibers from which pulp and paper made by our chemical investigation division are derived. The information gathered in this investigation will enable us to determine the species of wood from which pulps and paper are derived.

* * * *

TIMBER TESTING

One of the more important projects of the Institute that made much progress during the last few months is the investigation to determine the strength and related properties of Philippine woods. A progress report covering the results of the tests made on 175 trees representing 76 species was submitted. Among the more valuable

information presented in the report are the data on the static bending strength, compression parallel and perpendicular to the grain, hardness, shear parallel to the grain, toughness, shrinkage, and specific gravity of the species investigated. These are the most important strength properties of wood that engineers, contractors, builders, and designers need. The data on these properties will provide a basis for determining the allowable working stresses of different species of timber and therefore enhance the efficient and economical designing of structural members in buildings and for similar purposes.

The progress report was revised somewhat to suit the style standard of the LUMBERMAN and was published in the September issue of that magazine. Arrangements for the reprinting of 1000 copies of the paper have been made with the management of that publication.

* * * *

KILN-DRYING STUDIES

A long continuing project aimed at establishing suitable kiln-drying schedules for Philippine commercial species was started recently. Chief Rosario T. Cortes of the Wood Preservation Division, under whose supervision this project is being conducted, reported that a suitable drying schedule for 1-inch thick dagang boards has been developed. In this study, Cortes said, the initial temperature used was 150°F and a relative humidity of 82 percent. The final was 180°F and a relative humidity of 35 percent.

Cortes remarked that dagang is difficult to dry and requires much caution to obtain least drying defects. He also said that this species is about as refractory as tangile.

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PULP AND PAPER

The study on pulp and paper making from native raw materials has continued to be one of the most prominent projects of the FPRI. During the first quarter of the current fiscal year, two phases of the project were featured. These are on standard sulphate pulping and cold soda pulping of Philippine woods and bamboos.

Pablo M. Nicolas, Assistant Chief of the Chemical Investigation Division said that the results of the study on standard sulfate pulping indicate that by means of this pulping process, bleachable pulps of good strength properties can be produced from the 11 species studied. He also stated that broadleaved woods are more responsive to the standardized cold-soda pulping process than coniferous woods or bamboos.

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WOOD PRESERVATION

Much progress was made in the investigation of the treatability of woods by pressure method. A progress report presenting the results of a part of the project that was completed recently was submitted by Justino B. Seguerra, Jr., in charge of the project.

Seguerra investigated the relative treatability of 12 native commercial species by the pressure method. He reported that the species he found easily treated are round-leaf apitong, panau, lanutan-bagyo, apitong (grandiflorus) and white lauan. He classifies dangkalan, mayapis, almaciga, and bagtikan as difficult to treat, while daling-dingan, manggachapui, and dagang are very difficult to treat.

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REVAMP OF ORGANIATION

Effective July 1 this fiscal year, the Physical Properties Section of the Wood Preservation Division aid the Mechanical Properties Section of the Industrial Investigations Division were merged to form a new division, the Timber Physics and Engineering Division. The Veneer, Plywood and Gluing Section was transferred from the Division of Wood Technology to the Industrial Investigation Division. This reorganization was effected with the view of putting together closely related work under one division to minimize overlapping of work in two or more divisions. All indications are that the reorganization will prove beneficial.

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BI-WEEKLY SEMINARS

The holding of seminars of individual sections in our research divisions, which was started in the last months of the previous fiscal year, seems to have proved moderately successful recently. These seminars promote the discussion of topics related to the work of individual sections and provide occasions for each individual section member to present to the meetings such problems as he encounters in the course of his research work. Discussions of subjects brought up in these meetings may promote suggestions for better approaches to attack problems on hand. Above all, these seminars will increase the competence of the researchers, not only in the performance of experimental work but also in th presentation of results.

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TECHNICAL NOTES

Early in December this year, hundreds of forest products industries will receive a Christmas gift from the Forest Products Research Institute in the form of technical notes of valuable information on the diffeernt phases of forest products properties and utilization. This was learned from FPRI Director Eugenio de la Cruz.

The publication of technical information which

(*Continued on page* 103)

Here and There

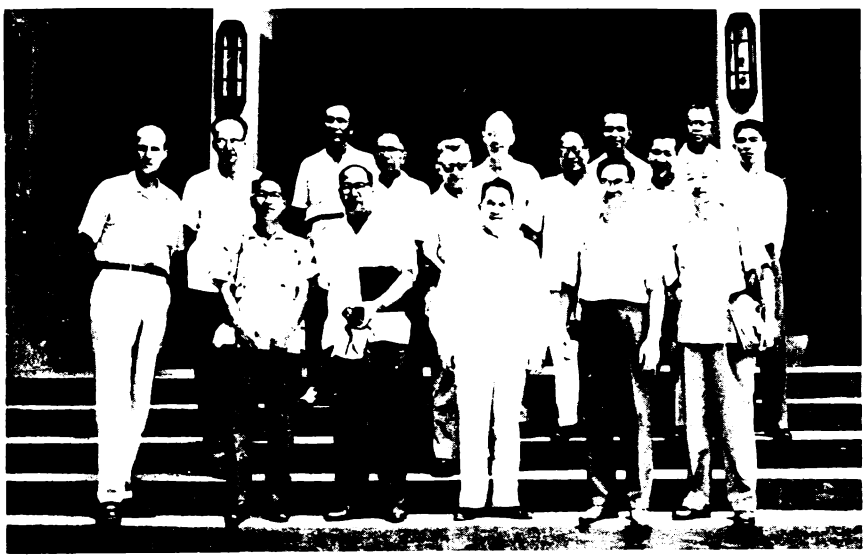
UNDERSECRETARY DALISAY PLANTING HIS TREE

Undersecretary for Natural Resources Amando M.Dalisay plants a rambutan tree at the Bago Oshiro Experimental Station, Davao City on the occasion of his visit to Davao last July, 1959 to induct the 1959 Davao Danrea Officers.

UNDERSECRETARY DALISAY INDUCTS 1959 DAVAO DANREA OFFICERS

Undersecretary for Natural Resources Amando M. Dalisay inducting the 1959 officers of the Davao Danrea at the guest house of the Bago Oshiro Experimental Station, BPI. From left to right — Undersecretary Amando M. Dalisay, Mr. Juan Mariano, Regional Director, Bureau of Soils, Auditor; Mrs. Nennette C. Calansiñgin, Clerk-Stenographer of the BPI, Treasurer; Dra. Zita Niño, Dentist of the BPI, Treasurer; Mr. Demetrio Hechanova, Asst. to the Provincial In-Charge, BPI, Executive Secretary (re-elected); District Forester Emmanuel Elayda, President (reelected); Atty. Uldarico Aquino, Legal Officer, Regional Office of the Bureau of Lands, Vice-President (reelected); Atty. Bienvenido Sambrano, Legal Officer, Regional Office, B. L., Public Relations Officer; Mr. Ambrosio Dar, District Fishery Officer, Sgt.-at-Arms and Mr. Ramon Verzosa, Horticulturist, BPI, Sgt.-at-Arms.

Dean Zamuco explaining to U.S. Senator Hiram Fong of Hawaii (with lei) and Director Paul Summers (middle) of the U.S. Mission the importance of ICA-NEC assistance to the development of the UP College of Forestry.



The Korean forestry officials posed with the ICA, FPRI, Bureau of Forestry officials and Faculty members of the UP College of Forestry. Front row, from left to right: Dr. C. Larson, Visiting Professor at the College of Forestry; Mr. Shin Chai Song, Chief of Kyunggi-Do Forest Experiment Station; Mr. Lee Heup, Chief, Reforestation sub-section; Dean Zamuco, UP College of Forestry; Mr. Lee Chong Woo, Technician, Planning Sub-Section, Policy Section; Mr. Yun Jai Bak, Chief, General Reforestation sub-section, Reforestation Section. (Second row, same order): Dr. E. L. Stone, Jr., Visiting Professor at the College of Forestry; Forester Fontanilla, Bureau of Forestry; Director E. dela Cruz, Forest Products Research Institute; Mr. Paul Zenhgraff, ICA Forestry Adviser for the Philippines; Dr. C. de Zeeuw, Visiting Professor at the College of Forestry; Forester F. Assiddao, Chief, Research Division, Bureau of Forestry; Forester J. Daproza, Chief of the Los Baños Experiment Station, Bureau of Forestry; For. N. P. Lansigan, National Economic Council; For. C. Cunanan, Regional Reforestation Supervisor for Central and Southern Luzon; and Prof. D. Lantican, College of Forestry.

Members of the Venezuelan Engineers who went around the world posed with Visiting Professors of the UP College of Forestry. From left to right: Dr. C. de Zeeuw; Mr. Resurreccion, Deputy Commissioner of Tourism; Miss T. Cordido, Caracas, Venezuela; Miss H. Noriel, Caracas, Venezuela; Dr. E. L. Stone, Jr., UP College of Forestry; Forester & Engineer Manuel Gonzales Vale, Caracas, Venezuela; and Dr. C. Larson, UP College of Forestry.

Prominent Taiwan foresters signing the guest book at the UP College of Forestry. From left to right: Dean Zamuco, UP College of Forestry; Director Y. T. Tao, Taiwan Forest Administration; Prof. T .T. Wang, Head of the Forestry Department, College of Agriculture, National Taiwan University; Engineer C. Chu, Senior Specialist of CUSA; and Dr. W. F. Lin, Director, Forest Research Institute.

Prof. C. J. Kraebel, Forestry Adviser, ICA/JCRR, Taipei, Taiwan exchanging pleasantries with Dr. G. M. Hunt, FAO Consultant to the Forest Products Research Institute and Visiting Professors E. L. Stone, Jr. and C. H. de Zeeuw of the UP College of Forestry (reading from left to right).

Taiwan forestry officials being shown different important trees in the forestry plantation like Mahogany, Almaciga, Kalantas, molave, and others as seen from the roof garden of the UP College of Forestry.

Dean Zamuco inviting the attention of the visiting Taiwan officials to articles in the FORESTRY LEAVES regarding the UP College of Forestry. From left to right: Prof. Wang, Dr. Lin, Engineer Chu, and Director Tao.

DAVAO FOREST DISTRICT PERSONNEL

Some of the personnel stationed in the Office of the District Forester, Davao City — Left to right, sitting: Forester Rosauro R. Santos, TMA; Mrs. Esmeralda Orozco, Laborer-helper; Forester Lorenzo T. Viado; District Forester Emmanuel Elayda; Forestry Supervisor Cayetano Macaraeg; Asst. District Forester Felipe R. Reyes; Forest Station Warden Lorenzo Logan; Miss Teodora Afurong, Clerk; Forester Modesto O. Canave. Standing — Helper Silvestre Alcoberes; Forest Guard Felicisimo B. Nabua; Forest Guard Simplicio Rosales; Equipment Operator Filemon Falmarin; Concession Guard Mariano Velasco; Forest Guard Perfecto Digal; Clerk-Stenographer Alfredo Castro and Forest Guard Cornelio Llapitan.

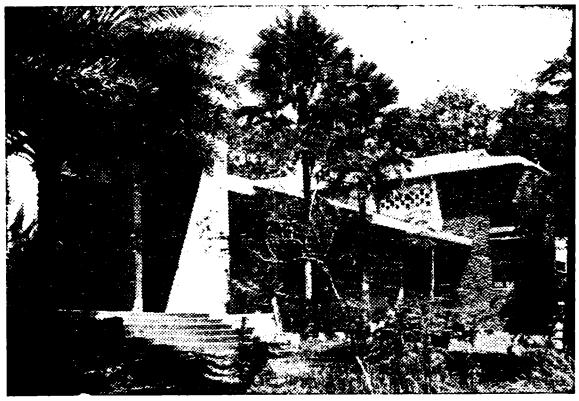
FORESTRY PERSONNEL, DISTRICT NO. 7 — BAYOMBONG, NUEVA VIZCAYA

Seated, front row — left to right — T. G. Soledad (Spl. Disbursing Officer); E. Ypear (O.C., Dupax Ref. Proj.); C. Marquez (O.C., Salinas Ref. Proj.); D. P. Ramel (Ass't District Forester); J. Makil (District Forester); R. Valera (Forester-in-charge, Magat Experiment Station); C. Abergas (O.C., Magat Ref. Proj.); P. Milan (O.C., Consuelo Ref. Proj.); U. Gonzales (O.C., Timber Management, Nueva Vizcaya).

A group of senior forestry students who went to observe the methods of thinning the pine plantations in Baguio.

Senior forestry students of the UP College of Forestry take notes as a Bureau of Forestry personnel lectures on the methods of thinning even-aged pine stand in Baguio.

• Campus Notes •



NOVEMBER GRADUATES

Twelve out of the 18 candidates for graduation at the end of the first semester obtained their BSF diploma and Ranger's Certificate.

The office of the Secretary with the approval of the faculty members of the College of Forestry released the names of the following students with their corresponding degree or certificate.

FOR THE BSF DIPLOMA:

Sansern Charernsri, Dinh Vinh Xuan, Elpidio Fabian, Narong Grittanugulya, Elias Orantia, Tragarn Supmanee, and Tran Dinh Trung.

FOR THE RANGER'S CERTIFICATE

Simeon Espiritu, Domingo Furigay, Alexander Requina, Florencio Tuazon Jr., and Pio Estepa.

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SILVICULTURE TRIP TO BAGUIO CITY

The Silviculture class under Prof. Delizo went on a pre-final exams jaunt to the City of the Pines last Sept. 20-22. The class went to observe the joint Bureau of Forestry and College of Forestry pine-thinning project. The group left the campus at 5:00 A.M. on an L.T.B. bus on the 20th and returned on the 22nd at 7:30 P.M.

Started three years ago the thinning project located at the outskirts of the city along the Naguilian road, covers four 50 x 50 meter plots.

Other important places visited by the group were Fort del Pilar, home of the Philippine Military Academy, and Trinidad Valley.

The class was entertained by the Bureau of Forestry personnel from the city and district offices headed by district and city Forester Quidilla.

Incidental to the visit to the pine thinning projects, the Silvics class formed a basketball team to pass the time and to make the College of Forestry known in the City. The team did that.

In its maiden performance, the team powered by Rola, Tandoc and Unite, mainstays of the college team, with the able assistance of Cadeliña, Cortes, Caguioa, Bulacan, Buenaflor and Decena, trounced the P.M.A. Cadets in an exciting tussle. Left behind by eight points, at lemon time, the team rallied at the start of the half and emerged victorious with an 8-point lead. Unite's rebound work and magnificent long toms made the Cadets look like novices at the game. The final score was 88-80.

The next night, playing in the full packed St. Louis College Gym the forestry team with only seven men, tried its best against a fast breaking team, the erstwhile champion of the Baguio Cage circuit. Our boys fought point-for-point until gun bark.

The players were Caguioa, Cortes, Rola, Tandoc and Unite reinforced by Antonio and Buenaflor. Of the 35 allowable personal fouls for the whole team, the boys used up 30 in a foul-for-possession scheme that broke the backbone of the St. Louis team. Timely inside incursions by Rola and Tandoc and deadly outside shooting by Cortes and Unite wrapped up the game for the boys. Antonio, having fouled out earlier in the second half, Rola followed him with less than two minutes to go. All the players left had four personals apiece. The game ended in a sweet 88-82 tune.

In its farewell performance the team exhausted with previous engagements lost to the Baguio Colleges. The forestry team rallied from a ten point deficit to tie the score at 68-all with three minutes to go. In a series of unguarded fastbreaks, the opposing team managed to eke out 14-point lead. Final score: 86-72.

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FOREST SOILS AND PHYSIOGRAPHY CLASSES TRIP TO "ONE HUNDRED ISLANDS"

The Forest Soils and Watershed Conservation and the Forest Physiography classes under Dr. Earl Stone Jr. and Prof. Teodoro Delizo respectively, went on an educational trip to the world's "Eleventh Wonder" — 100 Island, last August.

Dr. Stone and some members of his class met an accident on the National highway, ten kilometers from Los Angeles, Pampanga, when Dr. Stone's

car collided with a carretela. Although no one was hurt, both automobile and carretela were partly destroyed

The Physiography class this year enjoyed its short stay in the Hundred Islands, observing cave, coral, rock formations and marine life. They visited the School of Fisheries the well equipped laboratory of the Oceanographic Research Institute.

Mr. Guillermo Ablan, the Director of the school guided the group.

The first affair held upon the excurtionists' arrival was an acquaintance dance at which Prof. Delizo expressed thanks for the hospitality accorded the forestry group. Director Ablan in response said that the Forestry Personnel and students of Los Baños were always welcome at Lucap, where all possible comfort and enjoyment would be extended to them. The second dance was held on the eve of their departure.

Although the College Basketball Team was not with the group, Toti Blando, a member of the College Squad and some Sophomores played and won over the Fishery Team.

The group left Lucap Aug. 30 at 8 A.M. and heard two lectures while on their way home. The first was at Sual where Dr. Stone showed them the traces and veins of remaining rocks, protruding on the earth surface, specifically along the Highway. The other was at Bamban, Tarlac-Pampanga Border, where the students were briefed on and shown grains of varying sizes. Dr. Stone explained that they apparently were volcanic materials which were washed down from the mountains sorted by streams and deposited in shallow water.

The excurtionists arrived on the campus about 8 P. M. tired but still talking about the most enjoyable, lively interesting, memorable and educational experience they ever had as students.

* * * *

PHILIPPINE INSTITUTIONS AND ENGLISH CLASSES

The joint Philippine Institutions and English 3 classes under Professor Jose B. Blando and Miss Zenaida Portacio respectively had an educational excursion to Manila recently visiting the National Museum, big industrial establishment and Manila Times plant.

The objective of the trip was to acquaint the students with actual conditions in the process of manufacturing the well-known commercial products. Among the business firms visited were the Philippine Manufacturing Company, the San Miguel Brewery, the V-Milk Dairy Products and the Pepsi-Cola Bottling Company.

In the afternoon before the students left Manila, they went to the Paco Catholic cemetery to visit the tomb of Dr. Jose Rizal and the Rizal Shrine and the works of the National Hero in Fort Santiago.

A number of the faculty members went with the group. — *Del Rosario*

* * * *

DELINQUENCY

Delinquency rates showed another high in the last semester's showing. It seems to be the unbroken tradition since 1945, for forestry students to keep the delinquency flag flying.

Of the 355 enrolled students last semester, only 198 are of good standing; 68 students are in the warning list, 46 under probation; 22 dismissed and 17 permanently disqualified.

* * * *

PUBLIC SPEAKING FINALS

This year's class in public speaking under Miss Portacio held its finals last October 11 at the Forestry Mess Hall. The night was enlivened by well-prepared after-dinner speeches as well as some impromptu ones. The topics covered ranged from "nothing" to "everything under the sun".

The most talked about subject, however, was about women since her creation in the Garden of Eden till her latest anatomous energy. Intermission numbers were furnished by the students who preferred to sing rather than to talk.

The affair started with dinner at 6:00 P.M. sharp and ended at 11:30 P.M.

Alfredo Cañete, Insular Lumber Co. Scholarship holder was the able moderator at the post prandial pow-wow.

* * * *

FORESTRY VOLLEYBALL TEAM COPS PENNANT

The Forestry volleyball team, powered by team captain Gerry Turgo, Pepe Muñez and Doming del Rosario humbled the seniors in three straight sets. Turgo's atomic "kills" and del Rosario's placements accounted for the victory.

Able assistance was offered by Muñez, Durutin, Buen, Zapatero, Zabala, Florentino, Bucsit, Ulita, and Macaraeg. Our congratulations to Mr. Enriquito de Guzman, this year's upcoming coach.

* * * *

FOOTBALL TEAM PLACES THIRD

The Forestry football team copped third place in this year's league.

The top bracket Aggie teams, the Seniors and the Juniors powered by experienced Indonesian students ran roughshod over our boys in one-sided matches.

But *kudos* for Pepe Muñez, Dinh Xuan, Cesar Arroyo, Many Cortes, S. Charernsri and the

(Continued on page 103)

The Dean
U.P. College of Forestry
College, Laguna

August 13, 1959

Sir:

Attn.: *Third Country Training Coordinator*

We are very pleased to share with you the message of appreciation we received from USOM/Philippines regarding the growing excellence of the NEC/ICA Regional Training Program. To quote: "The programs... with few exceptions have been excellent and the proof of this excellence is to be found in the evaluations of the participants' progress". It seems that we are "winning new respect in Asia for the quality of Philippine training".

Since it is you who implement the training program we say thank you for your whole-hearted cooperation. Let us all endeavor not only to maintain the present level of performance of the NEC/ICA Regional Training Program but also to effect all possible improvements in its planning, programming, and implementation.

Very truly yours,
CORNELIO V. CRUCILLO
Director of Foreign Aid Coordination

* * * *

Tagbilaran, Bohol
November 13, 1959

Mr. Jose B. Blando
College, Laguna
My dear Mr. Blando:

In reply to your letter, dated October 13, 1959, please find herewith, enclosed a postal money order No. 195-143307 in the amount of ₱118.85, representing the advertisements of the persons or firms listed below. Please see the back side of the enclosed stubs for the firms to be advertised. Kindly group these firms in one page of the Forestry Leaves. Please furnish each Advertiser with a copy of the "Forestry Leaves."

1. Caring Business Enterprises	₱ 20.00
2. Cia Lim Lumber	₱ 20.00
3. R. R. C. Lumber	₱ 20.00
4. Tagbilaran Investment Corporation	₱ 20.00
5. Antonio Tan Lumber	₱ 20.00
6. People's Lumber	₱ 20.00
T o t a l	₱120.00
Less:	
M. O. fee ₱0.65	
Postage ₱0.50	₱ 1.15
Net amount	₱118.85

Here is hoping for the success of the Forestry Day issue of the Forestry Leaves and regards to all our co-workers of our beloved Bureau of Forestry.

Very sincerely yours,
EUSTACIO S. VELASCO
District Forester

* * * *

BUREAU OF FORESTRY
Tacloban City

D—33, Publication November 14, 1959

Professor Jose B. Blando
U.P. College of Forestry
College, Laguna
Dear Professor Blando:

Herewith is enclosed Postal Money Order in the sum of ₱69.25 payable to the Business Manager, "Forestry Leaves" for the following Ads in the Forestry Day Issue, 1959 of the "Leaves":

1. Eureka Sawmills Co., Inc.	
One Eighth page	₱30.00
2. Serafica Sawmill — Minimum	20.00
3. Patoc Timber Co. — "	20.00
Total	₱10.00
Less M.O. fees & stamps	.75
Net total	₱69.25

In this connection, it is informed that I expect to mail by Monday some more Ads as soon as the licensees in Abuyog, Leyte could remit the amount in this Office. The Officer in Charge has not turned in yet the money.

Herewith is also enclosed my article entitled "One Way to Prevent Kaingin in Public Forest" for publication as my humble contribution for the Forestry Day Issue of the "Leaves" in case you find it worthwhile publishing it. It is a duplicate copy of my article for publication of the proposed "1959 Forestry Yearbook" to be published by General Information Service.

I hope this small amount may go a long way for the success of this worthwhile undertaking, the publication of the FORESTRY LEAVES.

Very truly yuors,
FRANCISCO ABIJAY

Republic of the Philippines
Department of Agriculture and Natural Resources
BUREAU OF FORESTRY
Office of the District Forester
San Jose, Antique

November 12, 1959

Dear Prof. Blando:

As requested in your letter of October 13, 1959 and that of Dean Zamuco in his letter dated October 14, 1959:

I am enclosing Postal Money Order No. 107-69217 for ₱15.00, drawn in favor of the Business Manager, Forestry Leaves to catch up with November 15th, deadline. Small as the amount is, I believe, it could somehow add a bit to the needed funds for the publication of the Forestry Leaves.

We are trying our best to do our part in soliciting ads. But as I said in my previous letters, Antique is a dry ground to work on. Of the people I appealed for ads, none so far had responded. The amount we are sending you today represents petty cash, but wholeheartedly contributed by some of our personnel and outside sympathizers. Our drive is still on and you can expect another sum on or about the end of this month.

Our regards to you, Dean Zamuco, the College Staff; Director de la Cruz and his official family.

Very sincerely yours,
VICENTE AGALOOS

* * * *

October 7, 1959

Mr. Felix Jucaban
Office of the District Forester
Sta. Cruz, Laguna
Dear Mr. Jucaban:

This will acknowledge receipt of your letter dated October 2, 1959 and regret to note that you have misunderstood a strict standing policy of our auditors to this company.

However, we are taking the request as an exceptional and herewith forwarding to you a check in the amount of One Hundred Pesos (₱100.00) to cover our full-page advertisement in the "Forestry Leaves". Also please find enclosed our sample advertisement.

Hoping this will clarify everything and thank you for calling our attention on this matter.

Very truly yours,
INTERNATIONAL HARDWOOD & VENEER CO. OF THE PHILIPPINES
EDUARDO COJUANGCO, JR.
General Manager

Republic of the Philippines
Department of Agriculture and Natural Resources
Office of the Secretary
MANILA

August 11, 1959

Mr. Emmanuel Elayda
District Forester
Davao City
Dear Sir:

Kindly extend to our colleagues my sincere appreciation for their kindness and hospitality during my last visit on the occasion of the induction of DANREA officers on July 29, 1959.

I profited immensely from the discussions during the DANREA conference and the very fine luncheon which followed it

I have reported to Secretary Rodriguez about the fine work you are doing in Davao and the development of the DANREA Davao chapter as an effective service arm of this Department.

With warmest regards,

Sincerely yours,
(Sgd.) AMANDO M. DALISAY
Undersecretary for Natural Resources

D-46, Cooperation
(Forestry Leaves (Advertisements)

November 9, 1959

* * * *

c/o Bureau of Forestry, Manila
November 2, 1959

The Editor, Forestry Leaves
College of Forestry
College, Laguna
S i r :

Referring to the "Atop the Pedestal" carried under Students Section of the *Forestry Leaves*, Arbor Week Issue, 1959 issue, please allow me to comment on the column.

The feature deviates the reader's attention from all the other write-ups by technical intellectuals, thus contributes to variety of topics, making the publication more interesting. From all the other tree-talks, this column allows the reader to take a breather, or perhaps a little while to snooze.

However, this column, if I were to suggest a little change, could have been nicer if given another name. The "Atop the Pedestal" does not seem to go well with a "woodpecker". A pedestal usually is meant for fixed ornamental objects or sentimentally valued things adored from beneath by onlookers. This is not meant for a nosy body whose aim is to get a good sentry-view of things around him. The "woodpecker" is a very appro-

priate pseudonym, from the point of forestry people. It will have been more interesting if the article were titled "From My Favorite Bough", or "Atop my ——— tree (may be lauan, narra, or what have you). That should click, taking into consideration what a nice view one would see from that place.

Moreover, if the purpose of the publication, partly, is to attract prospective forestry students, it should state all advantageous things and not present the griping about of inadequacies. Maybe, to those who are planning to enroll, after reading the column, may welcome a second thought and abandon the original idea of a forestry career.

The foregoing comment is given not to discourage the writer. I, for one like such write-ups. Such columns serve as the spice to the main dish, the garnish for each serving.

Very sincerly yours,
(Mrs.) DELIA H. IBARRA

(The Woodpecker is asking and is welcoming more comments and suggestions of this sort.— Ed).

* * * *

August 20, 1959

Dr. Amando M. Dalisay
Undersecretary for Natural Resources
Department of Agriculture & Natural Resources
M a n i l a
Dear Nanding:

I received your letter of August 11, 1959 and this will be read before the officers and members of the Davao DANREA during its next regular monthly meeting. Thank you for the good word you have about the DANREA.

In this connection, I wish to inform you that after you left Davao for Manila, I convened the Danrea to a special meeting last August 3, 1959 purposely to discuss how to coordinate the activities of the Danrea in combating the rising tide of locust infestation in Cotabato which you have personnally inspected last July 30. It was decided that the Davao Danrea should organize a task force and call it Operations Bumper Crop, Danrea, Davao Chapter. We named it bumper crop because the campaign to speed up the extermination of locust infestation is to insure a bumper crop this year. The kick-off drive started last August 8 to coincide with the arrival of Secretary Rodriguez and party. Our efforts paid off because the task force was doing its duty of spraying the locust hoppers in Tacurong when Secretary Rodriguez and party arrived and saw the Davao Danrea in action, a real service arm of the DANR that went out of its way and beat the Cotabato Danrea in the draw so to speak. We will have another drive next August 22, 1959, this time at Makilala, Cotabato.

I am sending you a copy of our program given in honor of Secretary Rodriguez and party last August 11. Reports were made on the actual situation of our rice and corn production in Davao and Cotabato and the campaign against locust infestation. The official photographer of the Department took pictures of the different activities during the program and if they are nice, please request him to send us several copies.

Sincerely yours,
EMMANUEL ELAYDA
Chairman
Danrea, Davao Chapter
(District Forester)

* * * *

PHILIPPINES IRON MINES, INC.
Larap, Jose Panganiban, Camarines Norte
Office of the General Manager
Atlantic Gulf & Pacific Co. of Manila
P. O. Box 626, Manila

June 6, 1959

Mr. Jorge Miranda
District Forester
Daet, Camarines Norte
Dear Mr. Miranda:

We are deeply grateful for the unqualified support from you and your office which has made possible the intensification of our community beautification program.

The shade tree seedlings from your Bahi Nursery, numbering close to 300 arrived here in perfect condition. We have started planting them throughout the mine compound and we expect to finish the job in a few days.

Allow us to thank you again and extend to you and your men our sincere appreciation and regards.

Very truly yours,
(SGD.) H. R. CAMBELL
Office Manager

* * * *

November 9, 1959

Dean Gregorio Zamuco
UP College of Forestry
College, Laguna
Dear Dean Zamuco:

I am pleased to invite you to attend the Special National Court of Honor in recognition of your meritorious services rendered in connection with the recently — concluded 10th World Jamboree, on Thursday, November 26, 1959, starting promptly at 5:30 p.m. at Malacañang Social Hall.

For the appropriate action of the National Court of Honor I wish to inform you that you will be the recipient of one of the highest Jamboree awards. President Garcia is scheduled to present the awards during the ceremony.

Please send in the enclosed return card immediately upon receipt of this letter to enable us to prepare and arrange for the presentation of your award.

Sincerely yours,
JOSE E. ROMERO
Secretary of Education and
National Scout Commissioner

* * * *

Mr. Jose Blando
College of Forestry, U.P.
College, Laguna
S i r :

In response to your letter-appeal, dated October 23, 1959:

Please find herewith enclosed P.M.O. Nos. 21-698849 and 21-698850 in the amount of ₱200.00 and ₱90.00, respectively or a total of ₱290.00 and PNB Check No. 918802 (1) of the L.S. Sarmiento & Co., Inc. for ₱150.00 payable to the Business Manager, "Forestry Leaves" and to the "Forestry Leaves", respectively covering cost of advertisements to the Forestry Day Issue (November, 1959) of the "Forestry Leaves" of the persons and/or firms hereunder listed:

1. L. S. Sarmiento & Co., Inc. & the Sarbro & Co., Inc.
2. C. Alcantara & Sons
3. Valderrama Lumber Mftrs. Co., Inc.
4. Davao Lumber Company
5. Gotamco Lumber Co., Inc.
6. Mindanao Sawmill Company
7. Mrs. Concordia Sison
8. Maguindanao Lumber Enterprises
9. Aguinaldo Development Corporation
10. Philippine Woodcraft and Veneer Corporation

The following have made pledges for advertisements and promised to remit the amount before November 30, 1959:

1. Davao Eastcoast Development Enterprises — Quarter Page — ₱50.00
2. Victor Erickson — Quarter Page — ₱50.00
3. Angala Enterprises — Quarter Page — ₱50.00

The advertisement forms of the above mentioned persons and firms including those that made pledges are herewith attached.

Please acknowledge the receipt of the check and money orders including those that will be paid directly to the Business Manager by the Aguinaldo Development Corporation and the Philippine Woodcraft and Veneer Corporation.

It is requested that the advertisers listed above be furnished one copy of the forthcoming F o r e s t r y Day Issue of the Forestry Leaves wherein their respective advertisements will be published.

Enclosed are copies of various correspondence and pictures regarding some of the important activities in this district with the request that the same be included in the Mail bag and B.F. Notes Section of your Forestry Day Issue.

Very sincerely,
EMMANUEL ELAYDA
District Forester

* * * *

Republic of the Philippines
Department of Agriculture and
Natural Resources
PARKS AND WILDLIFE OFFICE
College, Laguna

November 19, 1959

Supervision
Makiling National Park
Mr. Carlos Cunanan
Forestry Supervisor I
Makiling Reforestation Project
College, Laguna:
S i r :

This has reference to your letter of November 17, 1959 about the affidavit of Scaler ISABELO ATIENZA:

The action taken about the squatters in question are as follows:

1. Letters of demand for their immediate evacuation from the area squatted were sent, and is now being prepared for injunction proceedings by the Office of the Solicitor General, and our legal office.

2. During the last week of August and early September, the undersigned conducted daily patrol at the Maitim block and at all times accompanied by P.C. men. We verbally warned the squatters — to keep out from government projects.

3. The surveyor for the squatters was formally advised to cease his surveying activities for pain of court litigation.

4. I demolished squatter's huts and new improvements on their squatted areas.

Further action to be taken:

1. To catch and photograph in "Flagrante delecte" a squatter actually pulling our tree seedlings;

2. To sue criminally in court the would be perpetrator of the act above;

(*Continued on page* 103)

FROM THE . . .

(*Continued from page* 102)

3. To follow-up and expedite for speedy trial in court the injunction proceedings forwarded to the legal office and the Solicitor General's Office;

4. To keep on escorting scaler, ISABELO ATIENZA and his planters, whenever they go planting.

Very truly yours.
(SGD.) CEFERINO P. DATUIN
Oficer in Charge

* * * *

FORESTRY IN THE . . .

(*Continued from page* 93)

world's "Eleventh Wonder" — 100 Islands", last in livestock and poultry rations. As a fodder for livestock and poultry, ipil-ipil leaves compare favorably, if not better than alfalfa, a product that used to be imported into the country in big quantities.

Both cattle and pigs enjoy eating the green leaves of ipil-pil. The leaves may be given to poultry as fresh leaves, may be dried and ground into a meal and incorporated in the mash rations for chicks and for layers. The leaves are an important source of protein and carotene, the percursor of vitamin A.

When ipil-ipil leaf meal (the dried and ground ipil-ipil leaves) is used in poultry rations, it may be used to as much as 5.0 per cent of the rations, although it has been used profitably in some countries to as much as 7.5 per cent. Too much of it will produce an unfavorable effect upon the growth of the chicks and upon the rate of egg production of the layers.

It has been shown by recent experiments that the toxic substance in ipil-ipil leaves and pods may be washed out with water. When the fresh leaves of ipil-ipil were soaked in water overnight and then dried and ground into a meal, as much as 10 per cent of it could be incorporated in the growing ration without deleterious effects. The wash-water, on the other hand, when used in wetting the mash retarded the growth of the chicks and increased their mortality.

Very few farmers take advantage of this valuable plant. There is now an excellent market for properly dried ipil-ipil leaves. Manufacturers of livestock and poultry feeds in Manila will buy any amount of it. More ipil-ipil trees should be grown around our homes to supply firewood and forage for livestock and poultry.—*Manila Times, Aug.* 9, 1959

FPRI HIGHLIGHTS . . .

(*Continued from page* 96)

is one of the main objects of the FPRI information program, got a fair start with its maiden number which was issued late in November. Patterned after the U. S. Forest Products Laboratory Technical Notes, these are brief summaries of accumulated world knowledge as well as of the information gathered by the Insttiute in its research activities on wood and other forest products.

As one of the more effective media of disseminating information to the public, these notes will continue to be issued occassionally, as the need arises or as the material becomes available.

Director Eugenio de la Cruz said that FPRI Technical Note No. 1 dwells on the moisture content of wood and its relation to air humidity. He said around a thousand copies were printed for free distribution to wood-using industries and all interested parties.

* * * *

CAMPUS NOTES . . .

(*Continued from page* 98)

other members of forestry team for their fighting spirit.

* * * *

FORESTRY DAY

Come November 29-30 and the College of Forestry will once again celebrate its traditional annual Forestry Day.

The two-day festivities will start with a field mass on the morning of Sunday, November 29, followed by a series of cage fests between the Forestry Fives and other teams invited to play for the occasion. In the evening will be a Literary-Musical program which will be highlighted by the Makiling Literary Club Thespians' presentation of the play, *"A Ranger Takes a Wife"*.

Activities for the next day will begin with the students in their working clothes sweating it out in the campus as they go about the back-straining job of cleaning the campus. Immediately following will be the laying of the wreath at the cenotaph and the convocation at the College of Forestry Auditorium. Mr. Jose G. Sanvictores, president of the Aras-asan Timber Co., is this year's Forestry Day speaker. Luncheon, picnic style, will be served at the Forestry Swimming Pool after the convocation.

The grand finale will be the evening barn dance at the swimming pool. Bartolome's "Hi-fi Orchestra" will provide the music.

• Sunshine Corner •

Compiled by: EDDIE Z. CAJUCOM

Friend— "Ah, professor, I hear your wife has had twins. Boys or girls?"

Prof (absent-minded)— "Well, I believe one is a girl, and one a boy, but it maybe the other way round."

* * * *

Mother— "Come, Lonnie, don't be a little savage; kiss the lady."

Lonnie— "No, she's a naughty lady. If I kiss her she may give me a slap just as she did Papa."

* * * *

Teacher— "What pine has the longest and sharpest needles?"

Hary— "A porcupine."

* * * *

"Dad, gime a dime."

"Son, don't you think you're getting too big to be forever begging for dimes?"

"I guess you're right, Dad. Gimme a dollar, willya?"

* * * *

Grandpa— "Who's the most popular boy in your school?"

Jack— "Last term young Jones was. He gave us all the measles."

* * * *

Mother— "Patrick, you behave yourself now."

Patrick (coaxing)— "I'll be good for a nickel, Ma."

Mother— "Why don't you model yourself after your father? I don't give him a nickel to be good."

Patrick— "Aw, he's good for nothing."

* * * *

Little Tommy— "Sister May must be able to see in the dark."

His mother— "Why do you think so?"

Tommy— "Because last night when she was sitting with Mr. Steady in the living room, I heard her say, 'Why, Rufus, you haven't shaved!' "

* * * *

Mother— "Paul, here are some nice toys your mother is not using any longer, and they are as good as new."

Paul (a bit tired of his brother's hand-me-downs) — "Ma, will I have to marry his widow when he dies?"

* * * *

Inebriate was leaning on the bar with his hands clasped together. Frequently he would peek in between his thumbs, first with one eye, then with the other.

"Watcha got there?" demanded his friend.

"Guess!" said the drunk with a knowing smile.

"Butterfly?"

"Nope" — this after another cautious peek.

"Humming bird?"

Another look into his fist— "Nope."

"Well, I dunno —an elephant, maybe?"

The drunk took another look and demanded: "What color?"

* * * *

Patient (at lunatic asylum)— "We like you better than the last doctor."

New doctor (flattered)— "How is that?"

Patient— "You seem more like one of us."

* * * *

Minister (at baptism of baby)— "His name, please."

Mother— "Randolph Morgan Montgomery Alfred Van Christopher McGoof."

Minister (to assistant)— "A little more water."

* * * *

"And what," someone asked the candidate, "will you do if you are elected?"

"Good heavens," exclaimed the candidate, "what will I do if I'm not?"

* * * *

"And how do you account for your recent defeat at the polls Senator Glumly?"

"I was a victim."

"A victim of what?"

"Of accurate counting."

* * * *

Stenographer: "Here is a whole box of useless memoranda, sir. Shall I burn them?"

Chief of Clerks: "Yes , but make copies of them first."

* * * *

"How'd you make out with your wife in that fight the other night?"

"Aw, she came crawling to me on her knees."

"Yeah, what did she say?"

"Come out from under that bed, you coward."

* * * *

Private: "Sarge, one of the MP's just hanged himself."

Sergeant: "Heavens! Did you cut him down?"

Private: "No, he ain't dead yet."

Editorials

THE DUST BOWL THREAT AND THE TREE RAIDERS

Legal action instituted against certain erring timber concessionaires is long overdue, and should be pressed with all the facilities at the hands of the government.

The charge in this specific instance is taking timber from restricted areas, namely a US naval reservation and a national park. The loss to the government is estimated at ₱60 million from these two areas alone.

It would seem that the law is not stringent enough as it concerns cutting of timber throughout the nation, and not in areas specifically designated as "reserved."

Some day it may come to the consciousness of our legislators that the forests of the nation constitute not only a source of wealth, stemming directly from judicious and controlled use of forest products, but as a safeguard for agricultural producers.

The expression "dust bowl" forced itself into the American language in the 30s, when the effect of the denudation of forests in the middle west, to satisfy the greed of lumber exploiters. Millions of acres of forest were ruthlessly chopped down, with the inevitable result. What were once rich wheat lands, nourished and protected by neighboring forests, dried out and turned to dust — but literally!

America awoke too late to the depredation of robber barons of the timberlands. The Philippines is now being awakened, by the indefatigable efforts of the NBI. There is still time to act — to save for the nation the wealth that unscrupulous, g r e e d y men many of them aliens, would steal.

— Manila Times, Nov. 16, 1959

Forestry Leaves

Organ of the Student Body and Alumni of the College of Forestry, College, Laguna

FORTUNATO S. ARCANGEL
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Managing Editor

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JOSE B. BLANDO
Adviser

IMPROVING THE QUALITY OF THE COLLEGE PRODUCT

Very recently at the meeting of the U.P. faculty council we heard that one of the items in the agenda which provoked questions from faculty members of the other units of the University was the Forestry College Faculty Resolution, that beginning with this year, the weighted average for candidates for the Rangers' certificate should be 3.15 and that for the B.S.F. Diploma 3 flat. By coincidence, in the same meeting of the council, the general average grade required of College of Agriculture candidates for the B.S.A. degree was recommended to the Council by the C.A. faculty for abolition.

While it has been the perennial concern of the College of Forestry Administration as well as the faculty to improve the quality of the graduates of the college by adopting several measures, the last device seems impractical in the face of realities.

The screening of applicant by entrance examination and personal interviews, if judged by the still continuing high rate of mortality, goes to prove that there is no close co-relation between the entrance examination results and the scholastic achievements of the students.

And a well known educator, George William in his book, "Some of my Best Friends are Professors" says "The chief weakness of testing systems is that they cannot measure either a student's motivation or his ability to withstand the ordinary pressures, shocks and temptations of life. It is simply impossible for any testing device to predict with certainty whether a bright youth of 18 is going to mature into a brighter individual or remains mainly a bright youth of 18 all his life".

In appraising the causes of the failure of the student in his scholastic work, one is apt to forget that there are other factors which affect a student's achievements in college. One of these is the quality of his teachers and their grading systems.

It has been said that the river cannot rise higher than its source. It is not to be expected therefore that a poor teacher can produce a good pupil and no amount of collegiate degrees the teacher may have or number and quality of apparatuses and equipment the college or school may have can make up for poor teaching.

The same can be said about the grading system and as George William said, "When generations of young people come to university professors asking to be shown how to have a life worth living, and are turned away because the professors are willing accessories to the formalism of examinations-grades-credits systems, or because the professor thinks that upholding the standards of the university by giving bad grades is more virtuous than good teaching, or insists that learning be unpleasant, or are selfishly busy or negligent or indifferent, or are dominated by certain character traits that are harmful to young people but that can be altered, these professors are being immoral. The only way they could be more immoral, would be to commit murder."

It stands to reason, therefore, that no rules in scholarship on graduation requirements can improve the quality of the products of this college unless one takes into consideration first that the students be provided with the best teachers available in the course or courses they are taking, and that there should be a uniformity of grading. Unless the College "Terrors" change their ideas about grading, they will always have students with grades of 3 who under other professors might get a grade of 2 or better, and those marked with 5, might have passed the course, in a more favorable climate.

While we are trying our best by brochures and press releases to attract young men to our college, we are committing a sad mistake, of trying to tighten the scholas-

tic rules which in the long run will scare the wits of prospective students just as it did in the College of Agriculture.

The unexpected decrease of enrollment of the Freshman Class in the College of Agriculture pointed out to the College officials the fact that stringent scholastic rules for graduation were the cause of the decrease. Naturally, even before the year was up, the faculty saw it fit to have it abolished.

While we cannot predict the effects of our new scholastic requirements for candidates for the Rangers' certificate and B.S.F. Diploma and make hasty conclusion that it would meet the same fate as that of the College of Agriculture, something must be done to improve the teaching methods of some of our faculty members and to adopt a more systematic and uniform grading system. This may sound far-fetched, but it is worth trying. Why not? — L.M.E.

FORESTRY DAY

Ever since the institution of this traditional celebration in 1935 by Class '37, Forestry Day has always been celebrated in grand style which is marked with great solemnity and lots of merrymaking.

On this day the students and their mentors, together with their brothers who are already in the service, take time out to participate in the day's festivities which include such activities as athletic games, dancing, simple picnic luncheon and a moment of silent prayer for the forestry dead at the cenotaph, at the same time to retrospect over the significance of the day. This is one day for them to re-dedicate themselves to the all-important task ahead of "conserving our forests by wise use."

Therefore, on this our Twentieth Forestry Day, aside from being merry and joining in the fun of the day, let us dedicate ourselves anew to the herculean task we are in so that the trust which has been placed under our care will be perpetuated for generations to come. — fsa—

INCIDENTALLY...

We wish to announce with great pride that our Dean of the College of Forestry, Prof. Gregorio Zamuco, was one of the recipients of the Presidential 10th World Boy Scout Jamboree Award, in recognition for meritorious services rendered during the recently concluded ten-day camping at Mt. Makiling by the boy scouts from all over the world. The award, a bronze plaque, was presented to him last November 26, 1959 at the Malacañang Social Hall by the Hon. Jorge B. Vargas, President and Chief Scout, B.S.P.

Aside from Dean Zamuco, the following also received their respective awards: Regent Florencio Tamesis, Dean L. B. Uichanco, Dr. S. Cendaña, Mayor G. Catalan, Tomas Flores, Leonor Hedreyda, Johnny Uy, and the local Parks and Wildlife office. Except for Regent Tamesis of the Phil. Wallboard Corporation, Mayor Catalan of Los Baños, L. Hedreyda who is the Principal of the Los Baños Elem. School, and the local Parks and Wildlife office representative, all the other awardees are from the College of Agriculture.

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Forestry Day!

Once again, this beautiful tradition which has been perpetuated through all these years after it was first celebrated in 1935, is here with us. There will be lots of activities and merrymakings. Everybody will have his or her share of the fun.

Amidst all these festivities, however, let us not forget for a single moment the significance of the day, otherwise the purpose for which this celebration had been instituted will be defeated. Let us not forget that in every group undertaking such as this, its success or failure will depend upon the willingness of the individual to cooperate. Let us not forget our forestry dead who had dedicated themselves to their profession. Let us not, on this day, forget the great task we have ahead of us, the perpetuation of our priceless heritage — our forests. Let us not forget to rededicate ourselves to this responsibility we have on our shoulders so that the generations to come will not say we have failed them by not conserving the trust reposed on us.

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During the early part of the last semester we were very optimistic that we would be having the electric water cooler ready for use come this Forestry Day. However, because of some transportation difficulties in shipping the equipment from the U.S. to this part of the globe, we regret very much to say that we will not be having a taste of that cool, refreshing drink until some time in December when the shipment is expected to arrive. So until that day comes we will just have to content ourselves with what we have around here.

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Before, we used to ask ourselves what makes the College of Forestry different from the other units of the University, because whereas they have a car or two, and maybe even more, for the use of the officials connected with the said units or departments, the College of Forestry didn't have any. As a result we used to see our Dean chasing jeeps and buses while on official mission to Manila or to some other places. And this usually made our blood pressures rise a bit — to see him reduced to the level of a common passenger.

This time, however, with the acquisition of a black sedan for his official use, the situation has changed. Even if the recently acquired Plymouth hard top is of the '49 vintage, still it will serve its purpose — that is, we hope ! ! !

To bolster the faculty's capabilities for teaching and other services, three professors were recently appointed to the University of the Philippines college of forestry staff at Los Baños. They are Mr. Domingo Jacalne, assistant professor of silviculture, Mr. Agustin Pascua, associate professor of lumbering and logging, and Engineer Rodolfo C. Yaptengco, assistant professor in forest products.

Until his appointment, Professor Jacalne, who comes from Natividad, Pangasinan, was with the bureau of forestry where he was chief of the pests and diseases section of that bureau's research division. Teaching in the college for six years, his connection was terminated in 1957 when sole responsibility for the college, then a joint obligation of the forestry bureau and the University, was transferred to the U.P. He graduated from the college in 1950 and topped the assistant forester's civil service examination the following year.

Professor Pascua, who was up to his appointment a field manager of the Western Mindanao Lumber Company at Zamboanga city, had been active in the lumber and logging industries since 1947. He has also served the government in various capacities having been a municipal school teacher, ranger of the bureau of forestry, assistant logging engineer and acting provincial forester for Zamboanga and Sulu provinces. A native of Bangui, Ilocos Norte, he received his bachelor of science in forestry degree from the college in 1940.

Engr. Yaptengco, on the other hand, started as an assistant instructor in the college of agriculture, U.P., immediately after his passing the board exams for junior mechanical engineers in 1955. He held that position up to 1958 when he was promoted to the post of a research instructor in the same college. As an assistant professor in forest products in the college of forestry he will handle courses in quality control, wood machining and other courses where his training as an engineer is most useful.—A.B.

And this comes from Nick* at the NEC:

"It has become routinary for some in many an office to 'go out' with people having business with the government. Going out may mean coffee, lunch, a drink, a day club, or what have you. And incidents like coming back to office technicolored and tipsy have become common indeed.

"We had hoped that our own Bureau of Forestry would be spared all rumors of the practice having crept in its system. For if we recall aright, time was when it was thought highly indiscreet for forestry people to "fraternize" too intimately with those who have business with the Bureau. Caesar's wife must be above suspicion, this was the creed. But has this become *passe* these days?

"We see nothing wrong *per se* in fraternization. There is such a thing as good public relations. In fact, we in the government are enjoined to maintain the most cordial relationships with the public and the people we serve. But public relations has its limits and bounds. Carried too far fraternization could be mistaken for something else.

"We call attention to this before the situation gets out of hand. And we still have high hopes that our SFF Council Member and Acting Director would crack the whip and make everyone toe the line."

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From the Dean and the "Leaves" Staffers comes this note of thanks to express their heartfelt gratitude to our contributors for the articles they contributed, to our Advertisers for the kind help they gave us and to the District Foresters and Officers in Charge of Stations, most especially Forester Emmanuel Elayda of Davao City, Forester Pedro Salvador of Butuan City, Foresters Claveria, Abijay, Jucaban, Makil, Velasco, and others, for the ads they sent from their respective offices.

*Nicolas P. Lansigan, Forestry Specialist, National Economic Council.

The Dean and the Forestry Leaves Staff wish to express their heartfelt thanks to all Advertisers and District Foresters for their invaluable help.