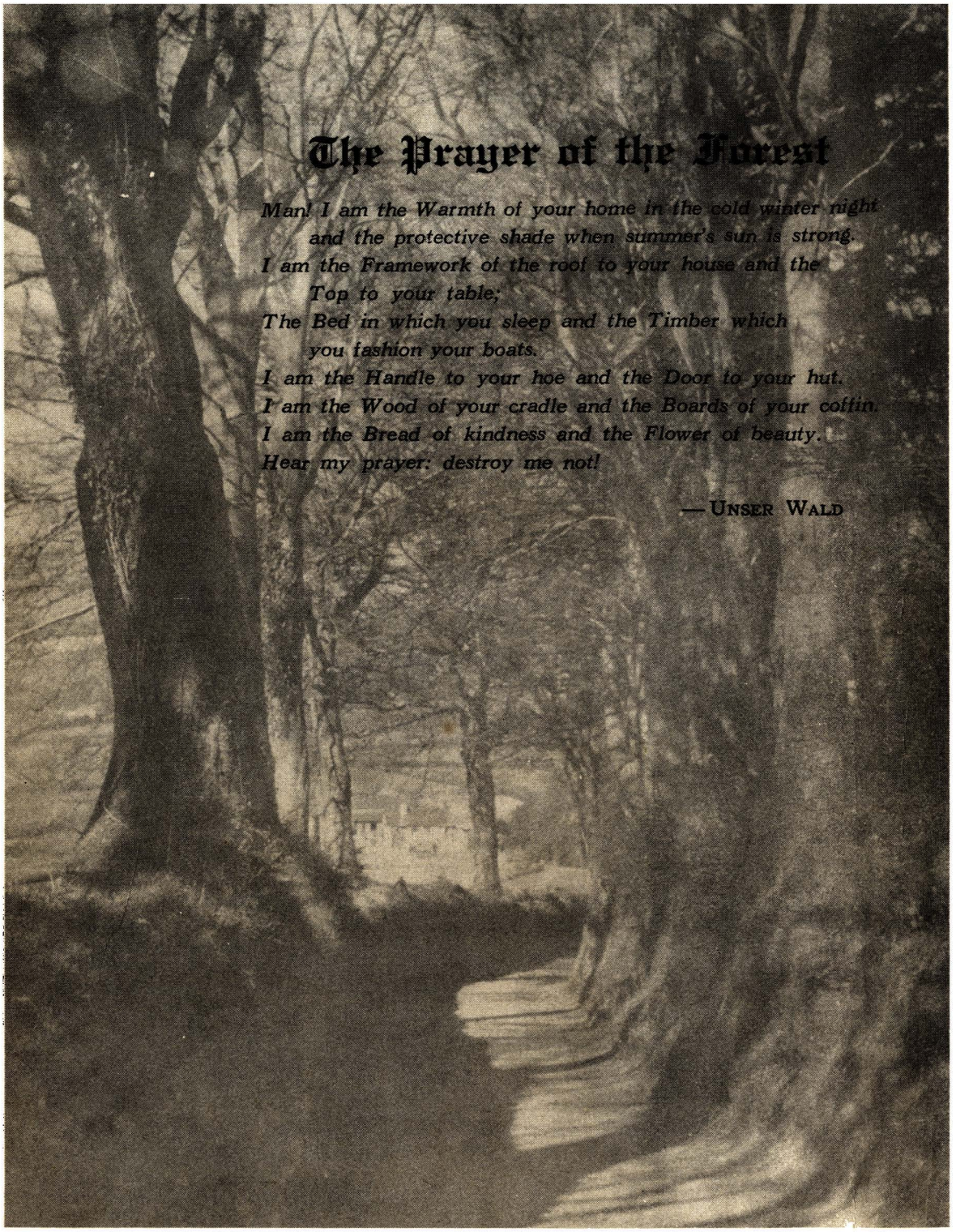
VOLUME IX NUMBER 1

FORESTRY leaves

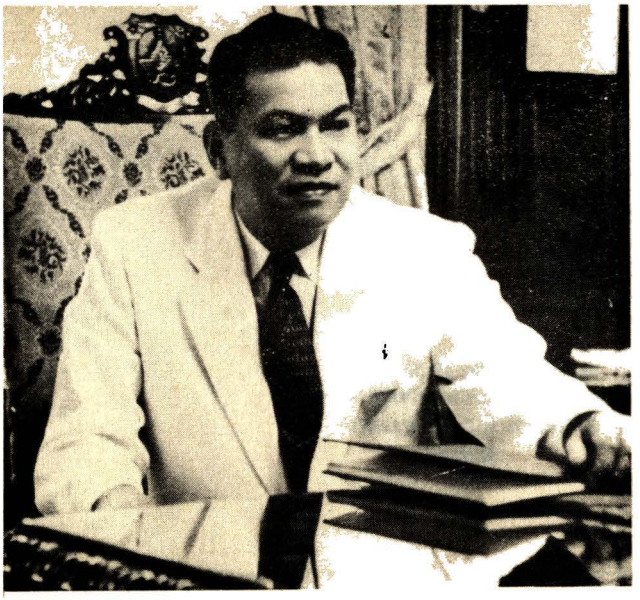
STUDENT BODY AND ALUMNI ORGAN, COLLEGE OF FORESTRY, U.P.



The Prayer of the Forest

Man! I am the Warmth of your home in the cold winter night
and the protective shade when summer's sun is strong.
I am the Framework of the roof to your house and the
Top to your table;
The Bed in which you sleep and the Timber which
you fashion your boats.
I am the Handle to your hoe and the Door to your hut.
I am the Wood of your cradle and the Boards of your coffin.
I am the Bread of kindness and the Flower of beauty.
Hear my prayer: destroy me not!

— UNSER WALD



MALACAÑANG
MANILA

M E S S A G E

I am pleased to note that this issue of FORESTRY LEAVES fittingly marks the celebration of Arbor Week.

A tree is said to be one of the finest creations of God. We have only to look around us to wonder at its beauty and to appreciate its many uses in the hands of man. In its various forms, we find it indispensable in the building of our homes and the beautification of our surroundings. And even in our hunger as well as in time of sickness, we realize that trees have yields that can fulfill our needs.

Such blessings are rarely found in a single gift of God and we owe it to Him at least to celebrate Arbor Week with thanksgiving and humility that we may be more worthy of the bounties we receive.

President of the Philippines

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

M E S S A G E

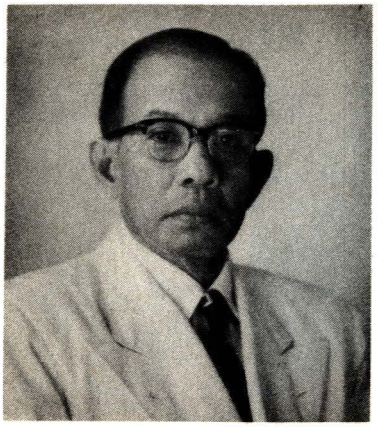
The annual observance of Arbor Week finds in Forestry Leaves one of its staunch advocates, for this magazine, in devoting itself to the promotion of forestry service, is at the same time awakening greater public interest in the propagation and conservation of trees.

This special issue, in particular, presents timely, informative and stimulating articles which emphasize the role that trees play in our daily life - yielding products to satisfy some of our vital economic needs as well as giving farmers invaluable assistance in the form of protection against soil erosion and providing a sanctuary for wildlife which is their valuable ally in the fight against plant pests and diseases. No less important is the fact that trees render our surroundings pleasant and healthful with their cool shade and beauty.

A public consciousness rooted in the understanding and appreciation of such role would surely encourage active citizen participation not only in planting trees but in giving them the necessary care and attention, not for a week but throughout the year. It is thus when we can expect Arbor Week to attain lasting results.

For doing their share in this year's Arbor Week, let me extend my congratulations to the staff of the Forestry Leaves, in particular, and to the College of Forestry, U.P., as a whole.

JUAN DE G. RODRIGUEZ
Secretary



In Reply, Address
DIRECTOR OF FORESTRY
Manila, Philippines

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES
BUREAU OF FORESTRY
MANILA

M E S S A G E

On this Arbor Week, let us focus our attention to the importance of trees, be they timber, fruit, shade or ornamental. May more of our countrymen be tree-conscious such that there will be more trees saved and planted in the right places, tended and protected.

"A TREE SAVED IS A TREE GROWN". I am launching this slogan in support of our selective timber management program. Let this slogan ring from top governmental and lumber executives to the loggers in the woods. An undamaged thrifty young tree saved is a potential value conserved. Its value can be fully appreciated by considering the fact that it has survived rigid competition among hundreds or thousands of seedlings which were gradually decimated through stages of growth and development. In a short time, it will be ready for the ax. When we depend on new reproduction, our dipterocarps do not seed every year; we have one in a hundred or in a thousand chance of survival for one tree; and a hundred or more years to wait until it will be ready to cut. Hence, the more young trees we save now from destruction or injuries, the greater the volume for the next harvest and the earlier we can return to cut in the same place. Continuity of the lumber business is thus assured. It means permanent jobs, better homes and better living.

And no less important in saving more young trees is conservation of soil and water thru maintenance of the forest cover vitally necessary for the life and well-being of the people.

PHILIP E. ICO
Director of Forestry

My Favorite Tree

By
EULOGIO BALAO
Secretary, Department of National Defense

Trees have always fascinated me as far back as I can remember. Among my fondest recollections of my boyhood days are those of happy moments spent atop the guava, the santol, the tamarind and other fruit trees in quest of their delicious fruit. Hunting and camping out in the woods always give me a feeling of peace and contentment—of communion with nature.

One tree, however, impresses me more than any other and that is the stately narra. Time was when the only use I could associate with the narra was for house building and furniture and cabinet making. Woodwork in narra always commends itself even to the most discriminating not only because of its fine grain that admits of a high gloss when polished but also for its durable nature. This makes the wood very popular and expensive. Even foreigners are not unfamiliar with narra.

But since that time when I held the value of the narra tree in purely economic perspective I have had occasion to become more familiar with it. From my earlier utilitarian conception of the narra I have learned to appreciate its aesthetic attributes. Impressive and symmetrical in appearance, fast growing, and beautiful when in bloom, these indeed make it a very popular prop for contemporary landscape architects. It has left its habitat in the wilderness and invaded even the cities for ornamental purposes. Joyce Kilmer must have had the narra or a tree of a similar nature in mind when he composed those immortal lines: "I think that I shall never see a poem as lovely as a tree . . . . ."

I wonder if we can encourage the planting of more narra trees in our countrysides, in the barrios, towns and cities, symbolic as they should be of tropical Philippines, just as pine, oak and popular trees are so symbolic of cold cuntries and palms and cacti of desert regions of the world.

Forestry Activity in the United Nations

LATIN AMERICA:

Program in the region:

In this region, the great extent and value of the forest resources make all the more imperative their use to good advantage. The most significant move in that direction was the setting up of the regional FAO Forestry Commission mentioned on page 28. This commission resulted from the Teresopolis Conference mentioned on page 22 which laid the ground for such an organization.

One of the foremost needs in all Latin American countries is for a great deal of research and investigation to get more facts about the real extent of the forest resources of the region, the species of trees, the uses to which the timber can best be put. This kind of investigation lends itself to a regional approach. So does the training and education of forestry people and the building up of the knowledge and skill essential to good modern forestry practice.

To accomplish these ends, the commission decided to establish a Latin American Forest Research and Training Institute and six subregional research centers, for Mexico and Central America, for the Carribean, for the tropical Andes, for the Southern Andes, for the Parana-Plata-Paraguay area, and for the Amazon area. Final proposals for establishing and financing the institute would be presented at the last meeting of the regional commission in Venezuela in March, 1955.

At the 1954 session of the Latin American Forestry Commission, many countries reported that a good deal of progress has been made in forestry work and the development of national forest policies. For example, Venezuela has a school of forestry; Chile is starting one with FAO help; forestry training courses are being given in schools of agriculture in Argentina, Brazil, Cuba, Costa Rica, and Peru; research is underway in Argentina, Chile, Puerto Rico, Surinam, and Trinidad; several countries are keenly interested in expanding forest industries or starting new ones.

This ferment of activity is significant not only for Latin America but also for other parts of the world. For in relation to population and rising standards of living, the world's forest resources — and specially those of north temperate zone — have been dwindling. As they grow smaller, the great and under-used resources of the tropical regions assume an increasing importance for all who live outside the tropics.

The region is rich in tropical and subtropical tree species, about many of which very little is known. Certain kinds of trees that grow in these forests, like mahogany, have great value. But these trees are rare and widely scattered, and are expensive to obtain. For the sake of the forests, it would be better not to concentrate on the rare and valuable species, but to take timber of all kinds in accordance with the requirements of sustained yield. But if there are vast quantities of unutilized timber in Latin America, there are also areas where land that should have the protection of trees have been stripped bare and open to serious damage.

A fourth of the world's forests are in Latin America and trees are one of the great resources of the region. Not quite half of the area is woodland, much of it unused in many places but in some scourged by fire or destroyed by shifting cultivation.

Accomplishments with individual countries:

Brazil.—This is a land of many trees and few people. Its immense forests have been tapped only to skim off the cream — the more expensive hardwoods, mainly mahogany. Half the trees of South America grow in this country. The most extensive forests are in the hot, humid Amazon Valley, which covers nearly half of Brazil's area.

The most important work in Brazil so far undertaken by FAO has been to provide help in the early stages of assessing and shaping the potentially vast Amazon program. Three experts, on wood industries, timber marketing, and logging, spent a year making a thorough study of the valley and of possible markets in Brazil, and in other countries that might use Amazon timber.

The experts concluded —

> that the development of the Amazon forests presents no insuperable technical difficulties. The problem is mainly one of organization, plus capital, equipment and skills. At present it is not possible to insure a sufficient supply of timber even for the small capacity of existing sawmills;
>
> that as a short-term objective Brazil could treble its timber production from these forests within 10 years through simple improvements and modernization without radical change in the structure of the timber industry; and
>
> that though this achievement would not require much extension of operations, it does involve establishing a forest policy, legislation, and administration for well-rounded and rational development of the Amazon forests.

This country is taking deep interest in the systematic development of this fabulous, almost uninhabited tropical region. Under a new law, three per cent of the national revenue and of the revenue of the states and municipalities in the area is to be devoted to Amazon Valley development. Since this area provides only one per cent of the national income, it must more than treble production to meet expenses. An Amazon Commission has been set up to plan development and land use.

The future development of a region of this great extent can only proceed on the basis of a forest inventory and the work is presently going on. FAO continuing assistance is being given by experts advising on forest policy, sawmilling and logging. FAO program is now on the first stage of implementation.

In the southern part of Brazil are extensive areas of Parana pine, a fast growing species especially good for pulpwood. An FAO expert surveyed the Parana pine area and estimated that at the present rate of exploitation the trees will all be gone in about 40 years. He suggested methods of cutting, regenerating forest stands, and planting new forests that would maintain the timber supply while continuing to meet the needs of the industry. He also outlined additional research needed to find answers for some of the Parana pine problems. Brazilians have been worried about the permanence of the present stands.

Chile.—One of the important developments carried out with FAO aid in forestry has been the establishment of a forestry school at the University of Chile, in Santiago, with a curriculum based on the experience of the best schools in Europe and the United States. This school should be of great value regionally as well as nationally. A forestry center has been set aside where modern methods of forest management would be demonstrated, and where university students and others could receive part of the training needed for careers in forestry and in wood-using industries. This center plays a vital part in showing the possibilities of a sound forest policy.

The FAO forestry group of eight experts

has also worked on drafting forest legislation, making a forest inventory, drawing up plans for an integrated forest industry. In fact, no important aspect of the development of the forest resources of Chile has been neglected.

Ecuador.—In this country, FAO mission made field work to study prospects of expanding and decentralizing pulp and paper production. The government requested a forestry expert to advise on the conservation and utilization of the country's extensive forest resources.

Uruguay.—Government has so far asked for little direct technical co-operation from FAO. The main work there has so far been participation in a survey mission with the International Bank in 1950 which included nine specialists in fields related to agriculture and forestry.

Paraguay.—This country has had direct technical assistance from FAO only in connection with forestry developments. Some 60% of Paraguay is forested and it is considered that the country's forest resources should be further developed as a source of industrial and commercial raw materials for internal and external markets.

Two forestry experts have advised the Government on forest policy and silviculture. Under the auspices of the FAO experts, a lumberman's association was developed to enable forest industries to maintain direct contacts with government and banking officials.

The mission is also concerned with the development and modernization of existing forest industries, and has advised the Government on modern methos of exploitation and utilization of wood, to provide an increase in output and quality of the products and to prevent the destruction of forests by indiscriminate cutting. The project is being continued by a further team of experts, who advises on the creation of new industries, the introduction of sound techniques of management and explore the possibilities of wider foreign markets for forest products.

Peru.—Peru has so far requested very little technical cooperation from FAO. An FAO mission made field work to study prospects of expanding and decentralizing pulp and paper production.

Bolivia.—In forestry the work has so far been the participation of forestry technicians in a survey mission of the International Bank.

Colombia.—An FAO expert in forestry did a good deal of work and recommended enlarging and improving the forest service, a reforestation project, conducting an intensive campaign against the burning of forests, and the establishment of a forestry school. A forestry industry expert is advising on possibilities for establishing forest industries, especially relating to the increased output of pulp and paper. A further expert is advising on forest policy and on reforestation in line with the recommendation of the joint FAO/International Bank mission.

Venezuela.—In forestry the work has so far been a field work to study the prospects of expanding and decentralizing pulp and paper production.

Mexico.—FAO has an office in Mexico City which services Mexico, Central America, and the Carribean. The Government has taken an active part in FAO's regional work, and this includes forestry.

In forestry field, cooperation between the government and FAO has been excellent, and a promising long-term program is now well under way. The FAO forestry group in Mexico has been drawn from seven different countries.

A team of six forestry experts has assisted the Government's forestry administration and the technical and economic services of the Banco de Mexico in forest conservation and management, and in the organization of forest industries. Mexico's 1948 forest law is unique; in line with the provisions of the 1917 constitution on land ownership, it provides for a mixture of communal, private, and state-owned forests, and it authorizes state control and regulation

in the public interest, even in private forests. This works favorably for private industries using forest products because the state must guarantee that they will have a sustained supply of timber to meet their needs; but the industries, in turn, may be required to provide certain technical forest services to insure proper management of timber lands. The undertaking is new and the government is understandably anxious to make an outstanding success of forest management.

The experts have assisted and have carried out training of local personnel in drawing up forest inventories both in the pine forests of the north and in the tropical forests of Yucatan. In both temperate and tropical regions advice has been given on management and reforestation, and an expert has assisted in the protection of forests against insect infestation.

For the development of forest industries in the northern pine forests the experts organized *unidades forestales* in which rational exploitation is carried out with the maximum conservation of resources. Demonstration of equipment has been carried out for these organizations, and the basis for considerable extension of forest industries has been laid down, especially for the development of production of pulp and paper in both regions.

Inventories for both pine forests of the north and the southern tropical forests are being completed, and further assistance is being given in the establishment of forest industries and in marketing of forest products. To assist in the establishment of a large pulp and paper factory in the Michoacan forests, an aerial survey has been carried out and on this an FAO expert has based a plan for development and the construction of forest roads. He is being assisted by a pulp and paper expert, who will carry out work on cellulose research.

Honduras.—The forests of Honduras consist of tropical hardwoods in the lower areas and pine occupying the higher ground. The problem of uncontrolled burning of forests has become increasingly acute, and the Government, considering that a forest service and a sound forest policy will offer the most effective means of conserving this important national resource, requested an FAO forest officer in 1951 to outline the necessary measures for setting up a forest service and for the enforcing of protective measures.

The expert at present assigned has advised on conservation measures and has assisted in establishing a demonstration area for new methods of resin tapping which will increase production and protect trees from damage. A draft of forest law has been prepared.

Guatemala.—FAO forestry experts helped the government to work out a broad program of forest development and forestry training. Entomology drew considerable attention due to infestation of large areas of valuable pine forests by insects, particularly a local species of bark beetle. The results of entomology work are useful to all Central American countries.

Nicaragua.—Before the days of the expanded technical assistance program, FAO sent a mission to Nicaragua in 1949 to survey agriculture and forestry. Proposals given high priority included better forest management.

Costa Rica.—An FAO expert carried out a survey of the possibilites of developing a pulp and paper industry within the country. Except in connection with regional projects, FAO has so far been called on to do comparatively little work in Costa Rica.

Haiti.—In 1954 an FAO expert has completed his assignment begun in 1951 during which he assisted in the reorganization of the forest service, the development of a forest policy, and supervised reforestation and water-shed control measures being carried out by the government. The reforestation of water-sheds, particularly of the Artibonite River, which drains one third of the country, is being carried out at the rate of 1,200

hectares per annum. The control program worked out by the expert is already being extensively implemented. FAO's co-operation is desired in the reorganization of forest industries in the pine forests of the southeast to insure conservation of the resources.

British Guiana.—The country possesses many varieties of commercially valuable timber, and it is felt that improvements in the operation of sawmills would help the government to develop a timber export industry. An FAO sawmill expert undertook a survey of existing sawmills and advised the industry on producing better quality and increased quantities of saw lumber for domestic and export requirements. He also advised on the organization and maintenance of sawmills and on methods of initiating a training system for sawmill operators.

Surinam (Dutch Guiana).—FAO and the International Bank worked here together, as in British Guiana, on economic surveys designed to strengthen the development programs of these two countries. The mission recommended expansion of logging operation and wood-products manufacture to treble the value of timber products from the Surinam forests within ten years.

ASIA AND THE FAR EAST:

Program in the region:

One of the pressing problems confronting almost all countries of the region is the better use of tropical land. To thresh out this problem, FAO convened a conference in 1951 at Nuwara Eliya, Ceylon, mentioned on page 25, on the utilization of land in the tropical areas of Asia and the Far East. The Ceylon conference gave special attention to shifting cultivation.

Shifting cultivation is a practice of burning off the trees and brush; planting a crop for a year or two, or until the heavy tropical rains have washed the plant nutrients out of the upper layers of the exposed soil, greatly reducing its fertility, and sprouting brush has made cultivation difficult; then moving on to another location, leaving the clearing abandoned for 10 or 15 years or longer.

This practice results in great loss of timber, floods, silting of streams, serious erosion in the hills; and it damages settled farmers who carry on a permanent agriculture in the valleys by eventually cutting down their water supply.

Shifting cultivation has been widely condemned, yet there is a growing recognition that it has a legitimate place in certain tropical rain-forest areas where almost no other kind of crop production is possible. The problem, for which some countries are working out interesting solutions, is to develop methods that eliminate or greatly reduce the damage involved.

Partly as a result of the Nuwara Eliya meeting, consultants and working parties are collecting detailed information about shifting cultivation from countries in the Far East and Africa with a view to recommending possible changes and remedies.

Regional projects are planned by the Forestry and Forest Products Commission for Asia and the Pacific mentioned on page 29. The commission sponsored the FAO Timber Grading School at Kepong, Malaya, in 1951, following recommendation of the Dalat meeting, mentioned on page 24, where seven countries in the region participated. Another commission-sponsored training course on mechanical logging was held in the Philippines in 1952-1953, with eleven countries participating.

Accomplishments with individual countries:

Burma.—The future prosperity of the country depends greatly on the exploitation of its extensive forests, and the establishment of new forest industries to utilize other woods, for which there is very little export demand, and waste products of sawmilling. An FAO expert examined the possibilities of combining extraction, all kinds of forest industry and marketing, into an integrated plan. By this means, a considerable reduction in costs will be obtained, timber sup-

plies will be completely utilized with an increase in quality and variety of the products. Woods, other than teak, as well as bamboo of which Burma has extensive supplies, will form the raw material for pulp and paper industries, while waste products will be used for chemical industries and for fuel.

Work has been continued on the forestry project which was begun in 1951 by a forest officer who, having advised the government on the introduction of modern mechanical logging methods to enable Burma's valuable teak resources to be conserved and rationally exploited, afterwards turned his attention to the utilization of other tropical timbers which make up a large part of the Burmese forests and which previously have been ignored. Making use of this timber would result in economies in the much more valuable teak, which is now over-exploited. The expert arranged for samples of Burmese tropical woods to be sent to Germany to be tested for their suitability for chipboard production. As a result of this work a wide range of chipboards were produced, and two pre-fabricated houses have been constructed which are at present under test in Burma.

The pilot plant supplied by FAO for wood seasoning and impregnation has been operated since January, 1954 with excellent results under the supervision of an FAO expert. Testing has continued of sample house built from chipboards. The government has now adopted a national plan for the development of its forest resources based on extensive recommendations for the integration of forest industries made by an FAO expert. Progress is being made in the mechanized extraction of timber under the supervision of an FAO expert, the government having acquired the necessary logging machinery and equipment.

Ceylon.—Sixty per cent of Ceylon's timber requirements are at present imported, but it is considered that by making available timber from inaccessible regions with modern mechanical equipment, by the utilization of large number of species, and by large-scale reforestation, the country could become self-supporting in timber.

Demonstrations were carried out by an FAO logging expert, using equipment supplied by FAO, and has instructed forest service personnel in their logging operations and the construction of forest roads. An expert on mechanized reforestation has planned and supervised the establishment of plantations and nurseries in various parts of the country. He trained local staff in the operation of mechanical plant equipment supplied by FAO. A large nursery for teak has been established.

An expert on woodworking machinery has installed equipment supplied by FAO in a demonstration workshop and has supervised the construction of a model sawmill. Crews are being trained in the operation of this equipment and additional woodworking machines are being supplied under the Colombo Plan.

India.—The Government of India is anxious to conserve and develop its forest resources in view of the comparative scarcity of timber in proportion to its population. FAO has provided some co-operation in working out ways to carry on logging operations in the Himalayan Mountains, in the northwest, on a year-round basis.

Large quantities of spruce and other conifers exist in inaccessible areas in the Himalayas. An FAO forester examined these high mountains and found that modern logging and transportation equipment were lacking and that all work stopped with the first snowfall. The fact that at present all wood is transported in summer by porters leads to considerable wastage, almost as high as 50 per cent. The expert recommended the introduction of portable sawmills, modern logging and transportation equipment and sleighs to enable logging operations to be carried on both in summer and winter. Two skyline cranes are being supplied for de-

monstration purposes, one by FAO, and a timber extraction expert has undertaken demonstration in the Himalayas.

A plywood expert has given advice on the selection of timber, its seasoning and processing and on improved layout of plywood factories. India has fairly large-scale plywood industries, but the present Indian plywood, used particularly in the manufacture of tea chests, is inferior to foreign products.

A sawmill technician worked with the sawmills of the Andaman Islands, advised on their re-organization and lay-out, and on the improved treatment of sawblades, so that the output from these forests, which have been worked commercially since 1883, may be substantially increased.

The wood technologist advised on such problems as the utilization of bamboo for paper and fiberboards, on laminated woods and on wood preservation and seasoning. A pulp and paper expert has examined the possibilities of increased production in India, and has given advice to industrial undertaking. The control of advancing sand dunes of the Rajasthan Desert is to be undertaken mainly by reforestation with the assistance of an FAO expert and other interested authorities.

The forest research institute at Dehra Dun is one of the best equipped research institutes in the Far East. Its facilities have recently been expanded to undertake training of studens from countries in Southeast Asia. FAO has, however, provided a timber engineer to assist in organizing the timber engineering section of the research institute as it has not yet been fully developed.

Indonesia.—This country's 70 million hectares of productive forests, include valuable stands of teak in eastern Java. Outdated methods of logging and transportation have prevented the establishment of forest industries. FAO has provided an expert in mechanical logging to prepare a plan for mechanized extraction in three typical areas.

Considerable expenditure has been undertaken by the Government in the development of improved forest extraction methods and for the establishment of forest industries. Using a loan from the Export/Import Bank, 3,200 kilometers of forest railways have been constructed in Java mainly for the extraction of teak, and a quantity of tractors and other heavy equipment have been purchased. An FAO expert carried out practical demonstrations of extraction operations, on the site training personnel in the use and maintenance of this equipment. Advice was also given on the organization and management of sawmills and further assistance will be given by an expert in forest industries.

Korea.—A sizeable FAO unit is working with a mission sent by the United Nations Korean Relief Administration. This unit has been concerned, among other FAO activities, with forestry. The United Nations Korean Relief Administration is responsible for reporting on the work.

Nepal.—Nepal is a slice of Himalaya Mountains, sandwiched between India and Tibet. The extensive forest resources of Nepal have never been surveyed thoroughly, but considerable over-exploitation has led to shortage of timber in some areas, and serious soil erosion. An FAO forestry expert carried a general survey of the resources and advised the government on sound forest policy, conservation and management.

Pakistan.—Pakistan has few forests and the areas scheduled for reforestation in West Pakistan will be primarily required for soil conservation purposes and can not make any significant contribution to the country's need for forest products. The chief source of supply is the natural forests of the Chittagong Hills in East Pakistan where there are two areas of reserve forests totalling 1,000 square miles, and 2,000 square miles of "unclassified" forest land. These timber areas are inaccessible and their proper development requires the building of a road sys-

tem. This would serve also to develop the agricultural possibilities of the hill tribe reserve where shifting cultivation is at present practiced.

An FAO expert has carried out a survey of the potentialities of this area, which at present yields only 3,000 tons of timber a year. He found great forest wealth among the tropical evergreen forests of Chittagong, but since there are at present no forest industries in this area, no extraction of secondary species is carried out. Many of these appear suitable as raw materials for such products as plywood, matches and fiberboards, all at present imported at high cost.

Since breakdowns are frequent in all tropical logging areas the expert did not recommend any considerable increase in mechanical logging until a proper organization for repair and maintenance had been built up. The installation of a road system is the first step towards utilizing the secondary hardwoods, thus probably doubling the potential output of the forest. Such utilization is aided by an FAO expert on sawmilling who advised on the organization and management of a sawmill in the Chittagong areas, and by a forest industry expert who advised the government on the integration of forest industries and the production of pulp and fiberboard.

A range management expert is advising on range improvement in Baluchistan. This assignment follows the preliminary study of range and pasture undertaken by joint mission between FAO and the United Nations Technical Assistance Administration to the Kalat States.

Philippines.—Following the Far Eastern Mechanical Logging Training Center which was held from October, 1952 to March, 1953, the expert who assisted in its organization has continued to advise the government on reforestation and on carrying out a forest inventory in the pine region. He is continuing to advise on forest policy and legislation.

A forest research expert is assisting in the installation of equipment provided for a forest products laboratory provided by the US Foreign Operations Administration and is training forestry personnel in its use. A joint FAO/UNTAA pulp and paper mission has drawn up a plan for the development of this industry.

Thailand.—Teakwood is Thailand's third major export. Some 63% of the land area of the country is under forest, the most important commercial species being teak. These important resources are seriously threatened owing to unrestricted exploitation and shifting cultivation. Three FAO experts have completed their assignment, during which they assisted the government in preparing an inventory of forests and in drawing up a program of management and reforestation, while a fourth expert is advising on the modernization of the state-owned sawmills.

A pulp engineer advised on increased output of pulp and paper for which Thailand's daily requirement is 40 tons; the expert also examined the possible establishment of a new mill to supply newsprint, and augment the present production of writing and wrapping paper which amounts to about six tons daily. The expert also examined the relative suitability of bamboo and various kinds of native softwoods for pulp manufacture.

It will take time for all this work to show large-scale results.

NEAR EAST AND AFRICA:

Program in the region:

In this region, neighboring countries have been working together through FAO —

to improve great stretches of range and pasture lands for the better nourishment of herds and flocks;

to stimulate reforestation and better management of forests and woodlands.

Grass and trees are the great conservers of water and soil. In 1951 the Organization for European Economic Cooperation and

FAO sent out a team of grassland specialists to survey grazing and fodder resources in a number of Mediterranean countries. This undertaking is young; the problems are difficult and will require long persistent effort.

The Near East has the most serious and difficult forest problems, and it has also been the last to come around to a cooperative regional approach. Regional forestry commissions had been set up in Europe, Latin America, and Asia and the Pacific for some time when FAO held the first Near East forestry conference in Amman, Jordan, in December, 1952, as mentioned on page 26.

Forest plantings are being made, however, and in many places there are vigorous efforts to improve management and increase production. Though rehabilitation of forest areas will be slow, farm planting of fast-growing species of trees can provide wood rather quickly, and the cash value of tree crops in this region compares favorably with that of the best agricultural crops.

It will not be easy to arouse the public interest required to create vanished forests. The Amman conference was the first step in bringing countries together to develop forest policies in concert. It recommended that a regional commission, mentioned on page 29, be established which would hasten progress and assure continued cooperation. On the part of FAO, the meeting resulted in stationing a forestry officer in the Near East to serve governments in every way possible.

Accomplishments with individual countries:

Cyprus.—The problems of range management and forest conservation encountered in Cyprus are typical of most countries in the Mediterranean area. Cyprus is one of the few remaining areas in the Mediterranean still possessing natural forest, and the government has successfully carried out protection measures to control village felling for firewood and the destruction of grazing of goats. Marginal land occupies one third of the island and consists of unfenced foothill grazing lands between the cultivated plains and the forested mountains. An FAO range management expert has been provided and has carried out surveys and experimental work.

Ethiopia.—Ethiopia represents a potential source of timber for the tree-less countries of the Near East, but at the present the lack of roads and transport facilities make the cost and operation of extraction prohibitive. In spite of serious depletion, considerable areas of natural forest remain containing much timber of high commercial value, but these have hitherto been subject to no control, and much damage has been done by burning and shifting cultivation.

An FAO forestry expert has drawn up a plan for the conservation and reforestation of forest areas, and for the introduction of new species. On the basis of his plan, an Imperial Proclamation has been issued to protect the forests from further spoliation, and he assisted in forming a nucleus of a forestry service using personnel trained under FAO Fellowships.

The expert is continuing to assist in the establishment of forest nurseries, where he has carried out demonstrations of modern nursery techniques, introducing seeds of forty timber species and sixty species adapted to dry country, mainly from Australia. Addis Ababa depends entirely for its timber supplies on forests of eucalyptus established some years ago in the neighborhood, and many other fast-growing Australian species have shown themselves highly suitable under Ethiopian conditions.

The development of export trade depends on rational exploitation and protection, but requires also a main highway and feeder roads by which timber can be transported to a Red Sea port. In the development of such a transportation system many obstacles have still to be overcome.

Iran.—FAO has provided forestry experts over the past years to assist the government in setting up a forest service and in intro-

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supervising reforestation operations and sand dune fixation. Under his supervision the government has planted a large number of trees, and demonstration plots for nurseries and dune fixation have been set up. The expert is also planning and supervising terracing in the Gebel area of Tripolitania as a soil and water conservation measure, where trees and other crops will later be introduced.

Forest legislation adapted to the different regions of Libya has been drafted by the expert and adopted by the Government. He has been concerned also with the conservation of esparto grass supplies, which are one of Libya's largest single natural reosurces. He has carried out preliminary forest inventories.

Syria.—Syria's forests have been reduced during the past few decades by indiscriminate felling during times of acute scarcity of fuel, and by grazing, especially by goats which have prevented natural regeneration. Two per cent, or 422,000 hectares of the land area of the country is classified as forest, but, except for 10,000 hectares in the Latakia region which carries fairly dense pine forests, the stands are of poor quality and are constantly damaged by over-grazing and by fires. The government has requested three FAO forestry experts to advise on the management of the forests; on reforestation in conjunction with programs of soil conservation and range management; and on plantations of poplar, eucalyptus and casuarina outside the forests, in the form of shelter-belts and wind-breaks.

Forest legislation exists, but the lack of definite boundaries for the state forest areas has hindered its enforcement. Since natural regeneration occurs fairly rapidly, protection and management of the forest areas will produce good results over a period of time. The FAO expert is assisting the government on the demarcation of areas to be reserved for forestry purposes. On the expert's recommendation, the Director of Forests has passed decrees for the protection of the Latakia forest area, and plans for roads and fire posts are expected to be carried out within five years.

STUDY TOURS AND TRAINING CENTERS:

Forest Fire Study Tour in the United States:

In response to requests from many countries concerned at the damage caused by forest fires, FAO, in cooperation with the US Forest Service and ECA, organized demonstrations in the United States in the prevention and control of forest fires. The tour which began in September 1951, was attended by 23 officials from Argentina, Australia, Brazil, Canada, Chile, Guatemala, Honduras, India, Mexico, New Zealand, Pakistan, Philippines, Thailand and Venezuela, sponsored by FAO, and 12 officials from France, Germany, Greece, Italy, the Netherlands, Norway, Turkey, and the United Kingdom sponsored by ECA.

Eucalyptus Study Tour:

Eucalyptus is of particular importance to areas suffering from timber shortage since it can be cultivated on a short (8-10 years) rotation, system, as a multi-purpose timber providing pulp and paper, matches, fuel and sleepers. In cooperation with the Commonwealth of Australia, FAO organized a two-month study tour of Australia. Thirty-four qualified foresters from twenty-four countries (Argentina, Belgium, Belgian Congo, Brazil, Burma, Cambodia, Chile, France, Indonesia, Israel, Italy, Jordan, Kenya, Laos, Libya, Malaya, the Netherlands, New Zealand, Nigeria, Spain, Thailand, Turkey, the USA and Venezuela) took part in the tour during September and October 1952.

Far Eastern Mechanical Logging Training Center:

As the result of a number of requests by Far Eastern countries for the services of experts to advise on mechanized extraction of timber, the Training Center was held from October 3, 1952 to March 23, 1953. Forty trainees, consisting of senior forest officers and selected persons from firms engaged in

logging and lumbering, from 11 countries in Southeast Asia, (Burma, Taiwan, India, Indonesia, Laos, Malaya, North Borneo, Pakistan, Philippines, Thailand, and Viet Nam), attended the course of training. The trainees were based on the College of Forestry, Laguna, near Manila, for approximately two months of the period, which were spent in theoretical instruction, discussions and visits to nearby forest products plants. The remaining four months were spent in the field at centers based on four of the largest logging operations in the Philippines.

Far Eastern Forest Research and Training Center:

Under a special agreement between FAO and the Government of India, a Forest Research and Training Center has been organized at the Forest Research Institute at Dehra Dun. This will serve Far Eastern countries in accordance with the proposals approved by the Forestry and Forest Products Commission for Asia and the Pacific. The Center is being organized and conducted by the government and provides instruction at the Superior Service Forest College for non-Indian trainees for one year.

Far Eastern Training Center on Lumber Grading:

In accordance with the proposal of the Dalat conference and indorsed by the Asia and Pacific Forestry Commission, FAO concluded an agreement with the Government of the United Kingdom for the operation of a Timber Grading Training Center in Malaya for the benefit of Far Eastern countries. The course, which began on January 7, 1952, provided six weeks training on the theory and practice of grading tropical hardwoods for some 25 trainees from the countries of the region; their expenses were provided by FAO. FAO provided two instructors in log grading and teak grading. The course was aimed at securing an international standard of grading for tropical hardwoods.

Pasture and Range Management Course:

In late 1953 FAO collaborated with the Office of American States and the Government of Argentine in the Pasture and Range Management Course which had as its object the teaching of techniques, whose efficiency have been proved by application in other circumstances for studying and managing natural pastures. Thirty-four participants from five countries attended the course.

Pulp and Paper Survey and Training Center:

Following the conference held in Mexico in 1951 FAO has collaborated with the Economic Commission for Latin America (ECLA) in carrying out a survey of plup and paper in Latin America, the report of which was presented at the ECLA conference held in Rio de Janeiro in May 1953. A training center was held in September 1954 sponsored by FAO and the Government of Argentine to study pulping techniques, national and local plans for the development of pulp and paper production and relative production costs.

FELLOWSHIPS:

FAO's Fellowship Program forms the second line of Technical Assistance, being a direct result of the experts' assignments. Its object is to give to these countries the opportunity of continuing along the lines of work recommended by an expert, by means of their own people.

Fellowships are granted for periods up to one year for advanced study in technically advanced countries to enable the holder to carry on the work begun by the FAO expert in his own country. The number of fellows corresponds for the most part to the number of experts at work in any country.

As of March 1952, FAO awarded 22 fellows in the general field of forestry, consisting of two fellows studying on improvement of government services, 17 on forest conservation and management, and three on development of forest industries. As of this date FAO made a total fellowship awards of 90, 22 being in the field of forestry, 35 in

agriculture, 8 in economics, 21 on nutrition, and 4 on fisheries.

During the fiscal year 1952-1953, there was a total of 267 fellows awarded by FAO but no mention is made of the breakdown as to projects. The total includes Fellows from 1951 who were still studying in 1952, and those who have been appointed but had not yet started to study before June 30, 1953. There were 61 Fellows for Asia and the Far East; 105 for Near East and Africa; 37 for Europe; and 64 for Latin America; 227 were on the 1952 budget while 40 were on the 1953 budget.

There were awarded by FAO 140 Fellows in fiscal year 1953-54, out of which 22 were in the field of forest development, management and industries. Other fields were animal disease control, agricultural institutions and services and rural welfare, farm machinery shop and field services, crop production, animal production, agricultural statistics, etc.

FORESTRY DEVELOPMENTS IN FAO

FAO Conference:

One of the sources from which to draw an evaluation of the development of forestry in FAO is the proceedings of the periodic sessions of the FAO Conference. The first session of the FAO Conference at Quebec in 1945, aside from being organizational as a whole, was the recipient of numerous recommendations from the different technical committees, one being the technical committee on forestry and primary forest products. These recommendations, after their priorities having been determined, were the bases upon which to work out a program of activities to be followed commensurate with funds and personnel available.

The second session of FAO Conference at Copenhagen in 1946 appears to have merely re-stated the recognized fact that the shortage of woods was serious resulting from basic causes of deforestation, inadequate forest management, failure to develop mature forests, incomplete utilization, and insufficient technical personnel. The Conference recognized that the rehabilitation of the world's forests is a huge task and will take time; and calls for teamwork on an international scale.

In previous sessions of FAO Conference, different questions were referred to committees of experts but this had serious disadvantages — recommendations of the experts hardly gained any attention from the principal delegates of the Conference and still less from their Governments and remained for the most part a dead letter. At the Geneva session of the third FAO Conference in 1947, the Commissions dealt with the items on their agendas in plenary sessions instead of committees to carry out the bulk of the work. In this way the discussion took place in the presence of the principal delegates (who were not specialists) and of the public and the press who were thus obliged to give their attention to problems which they were not used to consider and to appreciate their imporance for the world-economy and well-being of the peoples. FAO at this time emerged from the stage of making programs to that of putting them into effect. This Conference paved the way to the calling of regional conferences to study forestry problems in Latin America, Asia and the Far East; and the sending of experts to Mediterranean Area and the Near East.

The fourth session of FAO Conference at Washington, D.C. in 1948 recognized that regional activities constitute the best means of developing regional forest policy by coordination of r e g i o n a l programs. This cleared the way to the establishment of FAO regional offices and the formation of regional forestry and forest products commissions.

The 1949 fifth session of FAO Conference laid out programs for forestry and forest products —

development of national forestry programs

reduction of loss and waste

increased yields from existing forests

increased supplies from new forests

promotion of regional forest policies

Europe

Latin America

Asia and the Far East

basic services

statistics

publications

technical consultations

commodity problems

A review of developments in forestry as important steps in the direction of FAO's objectives came out of the special session of FAO Conference in 1950 — efforts of first five years —

forest policy — FAO has sought to have each country apply rational principles to its forest management, development and utilization, and to base its activities on a national forest policy founded on law and soundly administered;

forestry development in Europe;

forestry development in other regions — Latin America and Asia established commissions;

Montreal pulp conference — sponsored by FAO;

forestry mission for Austria;

improved forestry and forest products statistics;

basic forestry studies;

technical consultations on forestry and forest products; and

rational utilization of wood.

Cognizant of the world shortage of paper, the sixth session of FAO Conference in 1951 considered lending assistance in long term efforts to overcome this world deficiency. FAO through its technical assistance program was ready to assist governments towards increased production of pulp and paper. One of the Conference documents set out the Forestry Division's field of responsibility —

forest policy and conservation — the formulation of sound conservation policies governing the development and wise use of lands for the production of wood and other forest products; watersheds; grazing; etc.;

research and technology — improvement of forest yields and improved utilization;

forest economics — stimulation of wood production and consumption, with special attention to inventory of forest resources; appraisal of social and economic aspects of forest management; analysis of national development programs; national and international action to bring about levels of consumption of forest products representing adequate housing and general living standards.

The seventh session of FAO Conference in 1953 reviewed forestry activities and programs —

the conference was of the opinion that the activities of the Organization in the very broad field of forestry showed an admirable pattern of useful and positive actions throughout the world. A measure of the stimulus given to world forestry by the Organization was provided by the results achieved in recent years by member countries acting concertedly on the international plane and by the marked progress apparent also in many countries. The degree of international collaboration enlisted by the Organization was commendable.

The eighth session of the Conference of FAO will be held in late 1955.

Technical assistance and co-operation:

FAO acquired valuable experience in technical assistance work before the Expanded Technical Assistance Program (ETAP) of the United Nations and the specialized agencies was launched in mid 1950. As early as 1947 FAO fell heir to

the work then carried on by the United Nations Relief and Rehabilitation Administration (UNRRA) in the field of agriculture in Austria, China, Czechoslovakia, Ethiopia, Greece, Hungary, Italy, Poland, and Yugoslavia. In the China mainland, the planting of millions of seedlings and cuttings was well underway when FAO teams had to withdraw in 1948. In Italy a range management specialist worked on the improvement of mountain pastures and other work done on forestry. A great deal of work was one on forestry in Poland which later withdrew from membership.

FAO undertook three other technical missions in 1947 and 1948, in addition to work financed by UNRRA funds, in Thailand, Venezuela and Poland. Forestry work was done in Thailand only.

When FAO embarked on the expanded technical assistance program it was in a position to move quickly since the proposals on technical assistance were an extension of the work it was already doing. What were done and accomplished are contained in the preceding discussions.

On the other hand, FAO did have problems in the performance of its work. It was difficult to recruit experts of the highest qualifications as they were needed also in their respective countries and FAO had to "borrow" specialists in early years to man the different technical branches of the Organization. This difficulty somewhat eased up when the question of finances came up in later years of the program. Quoting from the official report of FAO's ETAP (1954)—

> "In 1954 the Technical Assistance Program entered on its fourth full year. Although in 1953 more countries contributed to the Technical Assistance Fund, the amount available for FAO fell from $6,355,000 in 1952 to $6,049,000 in 1953 and to $5,536,000 in 1954. The financial uncertainty from which the Program has suffered since its inception has caused the Technical Assistance Board (TAB) to take certain measures to ensure a more secure basis for the continuance of projects and in accordance with the decisions of the Technical Assistance Committee (TAC) and the Economic and Social Council (ECOSOC) the TAB has therefore undertaken to increase the existing Capital Working and Reserve Fund of $3,000,000 to $12,000,000 over the next three years. The immediate effect of increasing the reserve has, of course, been a cutback in the amount actually available for projects, amounting in the case of FAO to nearly $600,000. x x x"
>
> . . . . . .
>
> "The Technical Assistance Program is not a pre-determined operation approved in advance and continuing unmodified throughout the year. It is constantly changing. Because of the limited resources available, adjustments may have to be made in one section of the Program to provide for expansions elsewhere. Moreover, changes in world conditions will frequently lead to a change of emphasis in particular programs. These considerations, and the continuing financial uncertainty, while not involving the Program in any fundamental reorientation have caused certain projects originally planned for implementation in 1953 and 1954 to be reduced in scope or postponed to later years. x x x"

Finally quoting the Director-General of FAO, P. V. Cardon, in his Progress Report for 1953/54 —

> "The additional resources of the Technical Assistance program greatly increased the useful service FAO can render. As it expired during the past year, however, these funds were less than had earlier been expected, and upon which the program was planned. The resulting necessary postponements and cutbacks in projects were of course, disappointing.
>
> "All of these are operating difficulties which must be encountered in any program. The Member Governments of the FAO Conference, and the members of the Council, have dealt with them as has the staff. They have not prevented a substantial amount of progress in 1953/54 in every division. x x x"

Outlook:

Quoting from the official report of FAO's ETAP (1954)—

> "Looking forward to 1955, it can be said that FAO is continuing its part in the world-wide operation of development being undertaken by many governments and agencies. FAO's contribution is necessarily a limited one, and there is room for every kind of developmental assistance. Nevertheless, international technical assistance should provide the best vehicle for related economic aid. It would also be a great advantage, if now the experimental period of the Program is coming to an end, it could be placed on a firmer and more continuing financial basis. Neither governments nor FAO can plan their development programs on the basis of uncertain annual allocations. The Technical Assistance Program has been widely appraised as one of the most useful activities of the UN and the Specialized Agencies, and one which in the long run may bring the greatest benefits to both receivers and contributors. The development of the Technical Assistance Program, and the continued interest and enthusiasm which it arouses, are in themselves a great achievement for it is only by the mutual energy and enthusiasm of both the major contributing and recipient countries that the aims embodied by the founders of the Program will be realized in the coming years."

The future may be judged by past accomplishments. Based on this assumption, it is quite safe to assert that FAO is facing a bright future barring of course serious world disturbance that would hamper or cut short the vigorous pursuit of the objectives of the Program.

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* * *

"Now, son," said the father, "tell me what I punished you for."

"That's fine," blubbered the kid," first you pound the daylight out of me and now you ask me why you did it."

*The Lumberman and the Laboratory**

By GEORGE M. HUNT

Efficient, profitable utilization of wood is the objective of both the Forest Products Laboratory and the lumber industry. Each can contribute greatly to the welfare of the other and to the Nation as it progresses towards its individual objectives. Here is an excellent example of the interdependence of industry, science, and the national well-being. Each can go its own way without the other, but not very far and not very successfully.

Under Communist rule we see the complete subordination of industry and science to the government and the result is repression, slavery and fear. In non-communist countries, under the free enterprise system, we can find examples of individuals and companies whose sole objective is to make money, without regard to the rights of others or the damage they cause to the resources or the welfare of the Nation as a whole. Scientific knowledge can also be used for evil purposes as well as for good. Neither industry, science, nor government is inherently good or inherently bad. Whether their results are good or bad depends largely upon their individual guiding principles and objectives and the skill and consideration with which their activities are conducted.

I need not detail to you how important a well conducted buiness is to the national welfare in supplying the jobs, the products and the income the Nation needs. Neither is it necessary to dwell on the benefits to the country that arise out of the efforts of well directed scientific and developmental research. No thinking person is unaware of these facts today. I believe, however, that we will find it profitable to spend a little time in thinking how these generalities apply specifically in our own field of work, and how our own interests can be served by giving thought to the interests of others.

The forests of the Philippines constitute an enormous source of national wealth and the prosperity of the country depends in large measure upon how this wealth is used. If it is used wastefully and without regard to the future, the wealth will diminish and ultimately cease to contribute to the national prosperity. The situation is comparable to an inherited fortune that can soon be dissipated through wasteful living.

We must all admit that wood utilization at present, for various reasons, is not very efficient. We leave too much wood in the forest from the logging operation because we have not found profitable ways to use it. We know that the wood left in the forest is good for many purposes. It can be made into pulp for paper or wallboard, into charcoal for industrial use, and into innumerable wood products for which lumber from good sawlogs is commonly employed. The same is true for the slabs, sawdust, trimmings and edgings that accumulate at the sawmill or at woodworking plants. We know that they can be made into useful products.

But this general knowledge is not sufficient. The problem of the individual or company is not "What can I make out of this neglected material?" The question to be answered is "What can I sell at a profit that I can make out of this material?" That is a much more complicated and difficult question to answer. In most individual cases it has not yet been answered satisfactorily

* Delivered before a meeting of the Philippine Lumber Producers' Association at the Forest Products Laboratory, March 11, 1956.

and the so-called waste necessarily continues, to the disadvantage of all concerned. This second question involves costs of plant, transportation, processing, and selling, as well as market studies, taxes, and other item.s Here we come face to face with specific details and the need for various kinds of technical knowledge, both in the fields of business and investment, and in the fields of science and technology.

The wood waste problem cannot be solved by generalization. Solution must come gradually through the successes of individual companies in finding and adopting methods of using profitably the unavoidable residues from their primary operations. These individual solutions will contribute to the national welfare to the extent that they provide jobs and income and reduce the percentage of wood that is not efficiently employed.

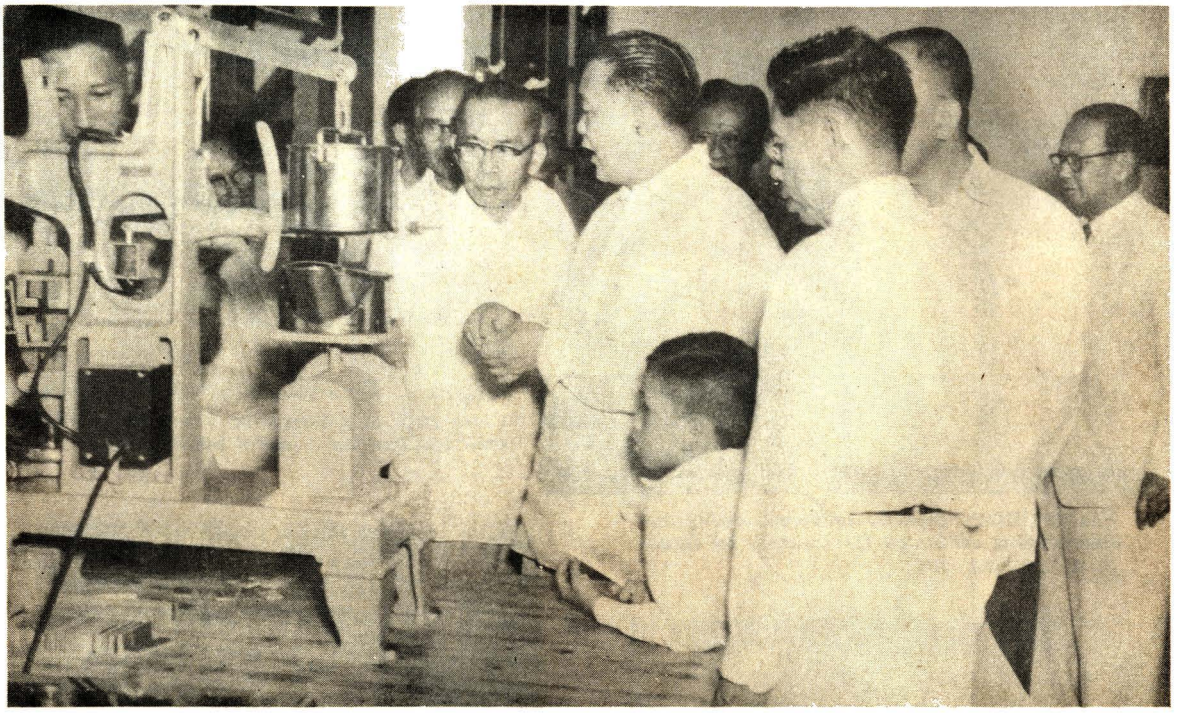
Scientific and industrial research in the field of wood utilization is a basic necessity in any intelligent search for improvements in wood products or processing, to lower costs, to improve serviceability, to reduce or avoid waste, and, in general, to aid wood in finding new markets or retaining the old ones. But research is costly, it requires much expensive equipment, much specialized knowledge, many skills, and long continued effort. Few companies in the forest products industries can finance a well equipped research laboratory and staff and fewer still are willing to do so on an adequate scale. On the other hand, no company can afford to remain long without the results of research and here is where the Philippine Forest Products Laboratory fits in.

The importance of wood utilization in the national economy and the need to get maximum values out of its forest inheritance are ample justification for the establishment of the Laboratory and spending substantial sums annually for its operation. The Laboratory is now an accomplished fact although it is still in the formative stage and not yet fully equipped or adequately staffed with trained people. Through the cooperation of the International Cooperation Administration much equipment has already been purchased and installed and more is on the way. Also through ICA, several members of our staff are already receiving specialized training in the United States. More are to be sent later under this and other technical assistance programs. The Laboratory is definitely on its way and I feel certain that it is headed toward great accomplishments if properly managed and supported.

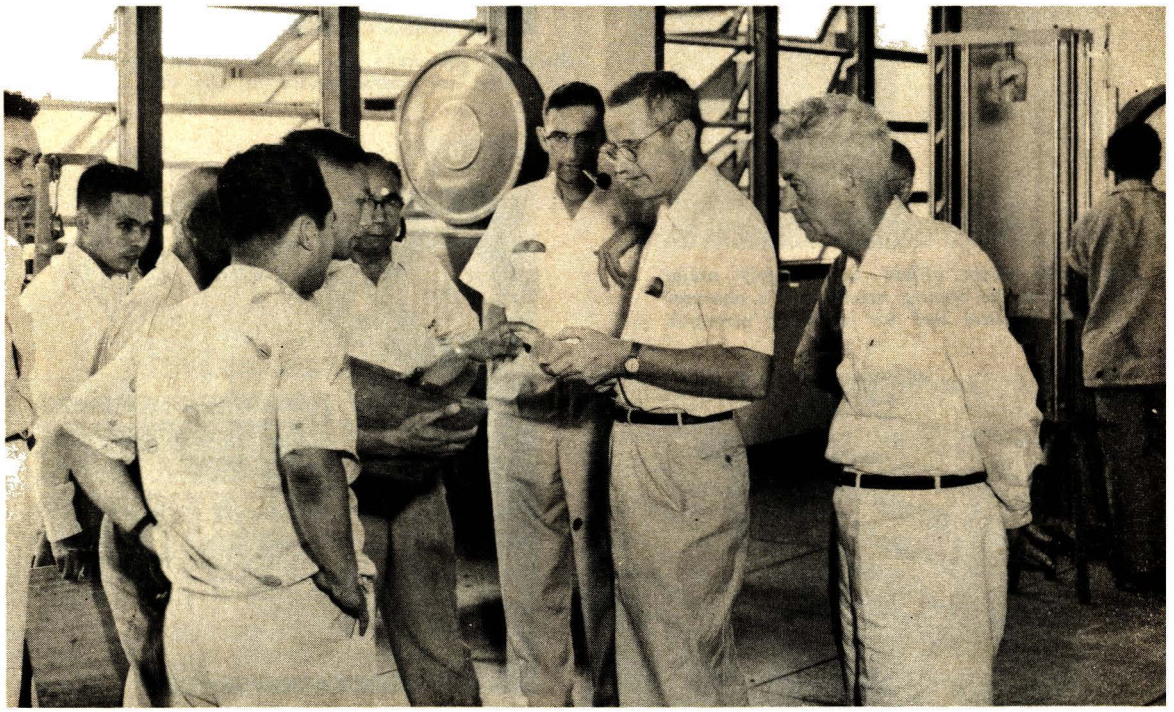
Research is no magic thing, however. It does not accomplish its valuable results through legerdemain or trickery, but through intelligent planning, hard work, and sound reasoning. To be successful, a research institution must be staffed by people with inquisitive minds who are trained for their respective tasks. It must have the proper equipment, adequate finances, wise leadership, and freedom to concentrate on its job with minimum interference and restrictions. The Forest Products Laboratory can become completely insignificant and of no value to the country if it is made subservient to politics and manned by political proteges or the friends and relatives of those in positions of influence. Its accomplishments will be limited and slow if it is too tightly bound up in the red tape of unnecessary restriction and regulation of its activities and program. The Laboratory, on the other hand, can become an outstanding scientific institution in which the country can take great pride if it is allowed to select and train its staff on the basis of merit and suitability for the work and is given the freedom of action required for the proper prosecution of scientific research.

One danger the Laboratory faces is the impatience of those who demand quick results and who do not appreciate the time-consuming nature of carefully conducted research. If the technical problems faced by the Laboratory were easy of solution, they

Recent F. P. L. Visitors

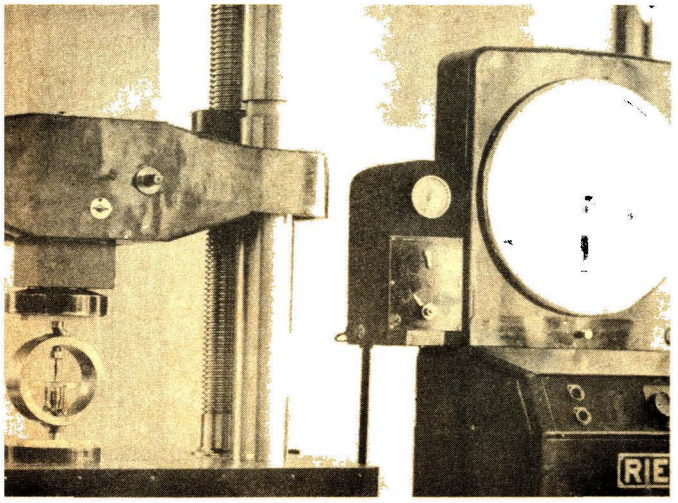


Congressman Gonzales watching the operation of one of the FOA (now ICA) machine in the Forest Products Laboratory. (l. to r.) Engineer Manuel, Prof. de la Cruz, Prof. C. Mabesa, Congressman Gonzales, Forester L. Aguilar. Partly hidden are Dean Amos and For. D. Soriano.

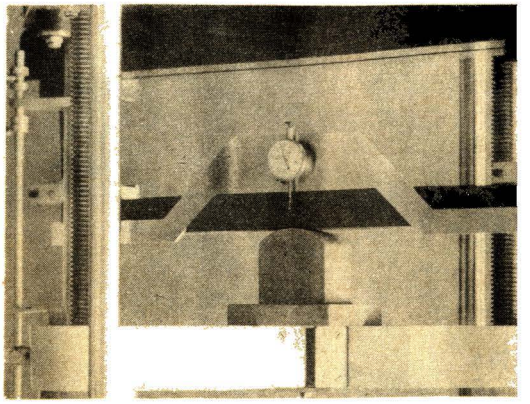


Mr. Francisco Manuel of the Forest Products Laboratory explaining a test to (from r. to l.) Mr. H. C. Pope and Mr. H. C. Thompson of the Insular Lumber Co. and Dr. Marvin G. Cline, exchange professor from Cornell University.

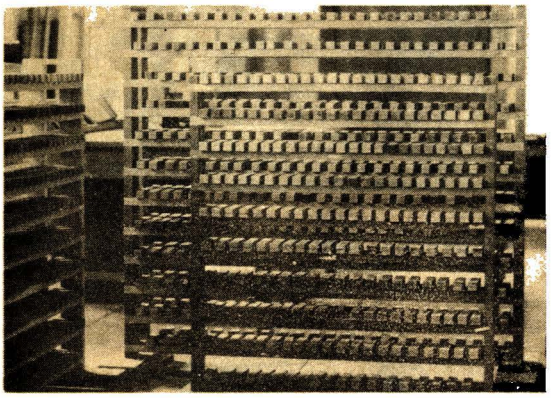
Some F. P. L. Equipment



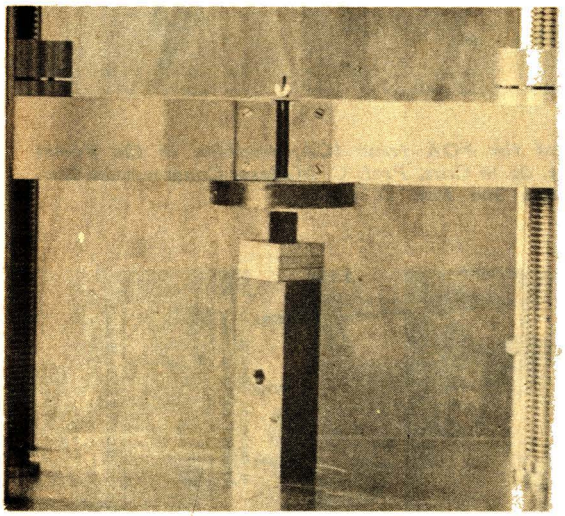
The 200,000-lb. capacity universal testing machines being calibrated for accuracy by means of a "proving ring".



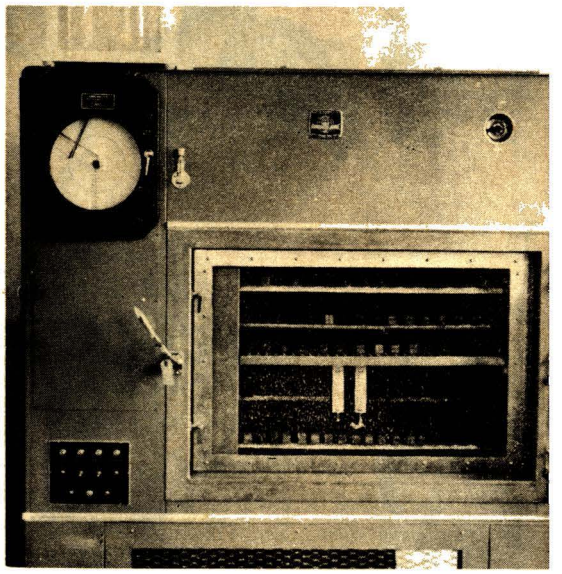
Close view of a 2-inch by 2-inch by 30-inch specimen in place for a static bending test.



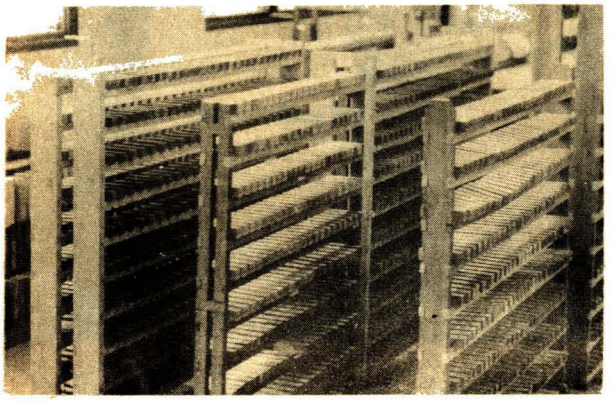
Racks of shrinkage test specimens air drying in preparation for measurement in the dry condition.



The small black object immediately under the head of the testing machine is a charcoal briquette waiting test for crushing strength.



Cabinet for automatic control of temperature and humidity. Used for bringing the moisture content of dry wood to 12 per cent, for measurement of shrinkage from the green con-



Racks of shrinkage test specimens air drying in prepara-

would have been solved long ago. Their very difficult nature is one of the chief reasons for the establishment of the Laboratory with its specialized equipment and training. It is very easy to ask a question that will take years to answer satisfactorily. For example, lignin constitutes about ¼ of the weight of wood. Enormous tonnages of lignin are being wasted everyday, especially in the pulp liquor from chemical pulp mills. Industry tells research, "Find a profitable use for lignin." A hundred chemists throughout the world have been trying to do this for the last 15 to 20 years but with very little success. They are still trying to solve the chemical mysteries of lignin and to find profitable uses for it.

Another important point to remember is that big problems are solved only by breaking them down into smaller ones and working on them one by one. Waste utilization is a big problem. In fact it may be called *the big problem* of the forest products field. But we cannot work on the whole problem at once. We must break it down into pieces small enough to handle. For example, we feel certain that pulp and paper can be made successfully out of Philippine woods waste and mill waste but there are a thousand details to work out about the pulping requirements for different species or the quality and yield of pulps that can be made from different species, or the mixtures of species that can be successfully pulped together.

Again, we know that charcoal can be made from woods waste and mill waste of mixed species but that kind of charcoal is not likely to prove acceptable to the chemical and metallurgical industries. Briquetting, however, should iron out the differences in quality of charcoal from different species. But we have a great deal to learn about the details of briquetting binders, pressures, drying and coking technique, kinds of equipment needed, and costs before we can make recommendations safely. These investigations will take much time, yet there is already a demand for results.

Much research must be done of a basic character for which the average man may see little use. This kind of research provides a general background of information rather than the specific information needed for the solution of some immediate industrial problem. Or it may be considered as supplying in advance the fundamental facts about individual species that we know will be needed in the future to assist in the solution of innumerable industrial problems. Included in this category are survey studies on specific gravity, shrinkage, mechanical properties, chemical composition, wood anatomy and others. The information will be tabulated as obtained and kept on file so that it can be consulted quickly, as needed. Even routine collections of basic survey data such as these require a great deal of time because of the large number of Philippine species and the necessity of testing several samples of each in order to get average results.

I mention these facts so that you may understand why immediate results and quick solutions to difficult problems should not be expected. On the other hand, there will be some questions or problems to which quick answers can be given, more and more so as we build up our backlog of basic information. I do not want you to believe that slowness and delay are intentional. We realize that unnecessary delay cannot be condoned and it will be the policy of the Laboratory to give service as quickly as the circumstances and the nature of the work permit. The Laboratory's main purpose is to give service in response to the country's needs. When we fail to do so we fail in our purpose.

As much as the forest products industries need the services of a research laboratory, so does the Forest Products Laboratory need the advice, the understanding, the interest and the active support and cooperation of the wood industries. Little that the

Laboratory does will be of value to the country unless the results are put to work by industry.

We need frequent contact with individuals in the forest products industries. Here, again, generalities are not sufficient. We need to know that you believe what we are trying to do is worthwhile, even if we do not always do it exactly as you may wish. We need to know you individually as understanding friends who are interested in the success of our efforts and who will try to make use of the information we obtain, insofar as it can be applied to your individual operations.

In addition to our contacts and friendships with individuals and their companies, we need the official interest and advice of your Association. If the Association should appoint from among its interested members a Committee on Forest Products Research, such a committee could be very helpful in maintaining contact and understanding between our two organizations. It would be our hope that the Committee would visit our Laboratory frequently and take time to study our research program in detail and observe the progress made. We would also want them to help us in planning for future projects so that the interests of your Association will be fully considered.

We are now facing the possibility of being reorganized into a semi-autonomous Forest Products Institute financed largely out of the inspection fees the lumber industry pays to the Government. The reorganization plan is included among a number of others that have been sent to Congress by the President and are now under consideration by a Congressional Committee. If the proposed reorganization receives final approval it will greatly facilitate our operations and give us more freedom for prompt and effective action. It will enable us to give greater service to the wood industries and the public.

You see us now as an infant institution, just learning to walk but with the help of friends and relatives like yourselves, and with good training, we can soon develop into a competent, skillful, member of the national family who contributes greatly to the national wealth through increasing the value and usefulness of one of its greatest natural resources.

Your industry also is facing the need for growth and development. The old days of skimming off the cream of the crop and discarding the rest have passed away. In order to remain in business and grow with the country, lumbermen must find more efficient methods of using their raw material, new products to make, new markets to supply. They must give more consideration to the integration of other processing with that of lumber manufacture in order to make profits out of what the sawmill cannot use. They must give more thought to the influence of their operations on the conservation of the nation's timber supply, the welfare of their employees and the national economy. You have already made progress along these lines and I am sure you are constantly working for further improvement. There is a great opportunity to expedite progress through mutual understanding between research and industry. Let us all help ourselves by helping each other.

* * *

The speaker used long and beautiful words, and the audience wasn't getting his message.

But the next speaker set every one straight by saying. "I'm sure that all of us agree with the message of the speaker we've first heard which boils down to this: "If we dont stop letting our outgo exceed our income, then our upkeep will be our downfall."

* * *

Two men met each other in a restaurant in front of the cloak room.

"If I'm not mistaken, we met here last year?" one said.

"Really?" the other said. "Do you recognize me?"

"To be truthful, it is not you I recognize, but your umbrella."

"Naturally, you did not. It was I who had it."

Restriction of Log Exports

By ANTONIO DE LAS ALAS
President, Philippine Lumber Producers Association

I have been requested to make a study of the proposed limitation on exports of Philippine logs to foreign countries. This is a subject which is indeed most important, and in view thereof, it has been the subject of repeated studies one of which was made by a Committee composed of Mr. Manuel Diaz, Mr. Gregorio Poblacion and Mr. Ralph W. Dempsey who submitted a report thereon to the Honorable, the Secretary of Agriculture and Natural Resources. I shall make reference to this report later. The matter is considered more serious in view of the fear that eventually the large volume of log exports may bring about an early depletion of our forest areas to the detriment of the nation and future generations. The problem is further aggravated by the charge that Philippine logs exported to Japan are processed in that country into sawn lumber or into plywood and lumber and plywood thus processed are exported to the United States where they undersell or compete with Philippine lumber or plywood directly shipped from the Philippines.

In the solution of this problem, two principles must be accepted, namely:

(a) That our forest reserves must be conserved to insure a steady adequate supply of lumber products in the future, and

(b) That exports of logs should be discouraged if not prohibited so that these logs may be processed in the Philippines into lumber plywood or any other manufactured product and thus create or increase industries in the Philippines which means greater opportunity for employment, and in order that our logs may not be the source of competition when processed to the United States where they compete with similar products coming directly from the Philippines.

There can be no controversy as to these two fundamental principles. They immediately raise two questions: First, is the prohibition or restriction of the exportation of logs the only remedy against depletion of our forest resources? Second, what will be the effect of the prohibition or radical restriction of log exports now or in the near future on the economy of the Philippines?

As regards the first question, the depletion of our forest areas cannot be attributed entirely to the volume of cuttings made by producers. If the purpose is to prevent the exhaustion of our forest resources the remedy is not necessarily prohibition or limitation of log exports. There are various ways of attaining effectively the same objective among which are the following:

(1) "Kaiñgin" must be completely stopped. It is well known that this has been the most destructive way of wiping out forest areas. If necessary, the Armed Forces of the Philippines, including the Constabulary and the Police, should be enlisted to eradicate this evil. The Bureau of Forestry should be given enough guards to enforce the law prohibiting and penalizing "kaiñgin."

(2) Selective logging should be enforced. The rules governing the size of

trees that can be cut must be strictly adhered to.

(3) Great care should be exercised in the matter of withdrawing areas from forest reserves and opening them for agricultural purposes. There are reports that areas which were forests before or should continue to be forests have been converted into agricultural lands. In this connection the plan to delimit the forest areas must be realized as soon as possible. Once land is declared forest areas it must be preserved as such permanently. I noticed that in Finland even private lands were divided into agricultural and forest areas and this division is maintained for ages.

(4) More vigorous and systematic reforestation should be adopted. In many countries in Europe and even in the United States, the original forests were destroyed or very badly depleted. Through a systematic active campaign of reforestation, you can not help but observe that much headway has been accomplished to restore forest areas.

(5) All care and precaution should be taken to protect and conserve our forests. All laws, regulations and measures intended to eliminate waste and improper or illegal destruction of our timber lands should be enforced effectively.

As I stated at the beginning, the matter of the prohibtion or restriction of log exportation has been the subject of various studies one of which was that of a Committee appointed by the Honorable, the Secretary of Agriculture and Natural Resources, which submitted a report to the Secretary. The recommendations of the Committee may be summarized as follows:

1. Restrict the exportation of logs to Japan on the 10%-90% formula for the first two years; i.e., the total volume of logs going to Japan should not exceed 10% in the Peeler and Veneer Nos. 1 & 2, and the rest 90% to be in Peeler and Veneer No. 3 and sawlogs.
2. After the first two years, the exportation of Peeler and Veneer Nos. 1 & 2 should be completely banned.
3. There is no restriction as to the quantity of lumber that Japan could import from the Philippines.
4. The 10%-90% formula should be applicable to every shipment, the details or implementation to be left to the Bureau of Forestry.

When this report was submitted to the Philippine Lumber Producers' Association, I was very much surprised that it did not receive any favorable reception. On the contrary the reaction of the members was clearly against it. Among the reasons advanced against the plan proposed in the report are the following:

(a) That the local sawmills and factories will not be able to absorb the increase in the lumber of higher grades which necessarily will result from the prohibition or restriction of the exportation of lumber of such higher grades.

(b) If Peeler and Veneer grades cannot readily be sold they may be left standing in the forests which would be tantamount to another form of selective logging. Logging operation under this condition will necessarily be costly.

(d) Small operators have very limited production and market and they cannot, under such restrictive arrangement, be expected to survive.

(e) Operators having concessions with timber stand of almost wholly white lauan species with hardly and red lauan species would be at a great disadvantage.

The second question is what will be the effect of the prohibition or restriction of the exportation of logs on the economy of the Philippines?

The exportation of logs is one of the principal dollar-earning trades of the Philippines. In 1950 the exporters of logs received from abroad a total of ₱3,435,049.00 for the logs they exported. Since then the amount received in this country from

abroad for the value of export logs increased annually. In -954, ₱57,824,123.00 or $28,912,061.50 were received in this country for the value of 570,797,977 board feet of logs exported during that year. Final figures for 1955 are not yet obtainable, but available information indicates that the income for the exportation of logs last year was even greater.

The taxes paid on account of logs exported amounted to ₱4,170,682.00 during the fiscal year 1954.

Aside from the big amount of money earned by the exporters and the large amount of taxes paid the government from the export of logs, our country received other economic benefits from the log export trade. There are about 14,400 men employed in logging alone. Considering the unemployment situation, the number of men thus employed is of some significance. Approximately ₱21,600,000.00 constituted the payroll of the logging operators during the fiscal year 1954. Other persons are benefited by the logging business like those whose trucks are hired to transport logs.

✓But since we have accepted the principle that the export of logs should be discouraged if not prohibited so that logs may be processed in the Philippines into lumber or plywood or any other manufactured product, notwithstanding the tangible immense help to our economy and an appreciable increment of the government's income, we must leave no stone unturned so that logs will be processed in the Philippines into lumber or plywood or any other manufactured product and exported in these forms, convinced that in the long run this will help much more the economy of our country.

What then should be done to achieve our desire of processing our logs into lumber or plywood or any other manufactured products so that our exports may be in such processed forms? In the study of this problem, it is pertinent and will be very helpful to find out the reasons why the Japanese are able to process our logs into lumber and plywood and export these products to the United States at prices competitive with similar products directly coming from the Philippines. The reasons for this situation favorable to the Japanese trade may be summarized as follows:

(a) Lower wages;
(b) Lower freight;
(c) Greater operation efficiency; and
(d) Higher utilization.

I do not care to discuss the matter of lower wages as the modification of the present Minimum Wage Law so as to lower the minimum wage seems to be most difficult if not impossible. In the past, the Philippine Lumber Producers Association strongly advocated the modification of the Minimum Wage Law so as to permit the reduction of the minimum wage in places where it is warranted by the circumstances, not because we do not believe in giving the laborers decent living income, but in order to assist the development and extension of the lumber industry.

The three other points above-mentioned will be referred to and discussed in the general discussion of the problem which follows:

To be able to reduce or prohibit completely the export of logs and encourage and increase the exportation of lumber, plywood and other manufactured product, the following measures are earnestly urged:

1. The establishment of more lumber mills and factories manufacturing plywood, core veneer, wallboard, furniture, pre-fabricated houses or parts thereof and other works utilizing wood, should be encouraged in a decided and positive way. For the purpose, ample financial credit facilities should be extended to companies or persons undertaking these projects. Adequate loans should be granted for whatever machineries, equipment and spare parts they may need and the necessary dollar allocation should also be provided for the pur-

pose. They should enjoy the required banking facilities for operation. In fact I would even go further. In view of the large unemployment (estimated to be a million and a half) which should be considered as an emergency situation as the unemployed are easy prey of communists engaged in subversive activities, I would adopt extraordinary or unsual measures. To entrepeneurs who are known to be honest and possess the necessary ability and know-how, I would provide them with the necessary capital. It is better than entrusting huge public funds to government corporations with managers of doubtful managerical competence. Some such radical departure is demanded by the situation.

Credit accommodation for the establishment of more lumber mills is especially urged. It is well known that many of the producers now exporting logs do not have any mill at all or that their mills are not adequate to take care of their production so that if the exportation of logs is immediately prohibited, many producers at the present time will have to go out of business.

2. Positive incentives should be given to the export of Philippine wood products. There is in the United States a very large market for Philippine mahogany. Because of the fact that during the war we could not export our products to the United States, and after the war, the exportation of lumber was prohibited absolutely, we lost that market completely. However, through the efforts of the American Philippine Mahogany Association and the Philippine Lumber Producers Association, we have been able to recapture the market, and today it constitutes the largest market for Philippine woods. But we continue to have a big problem there in the way of competition. Wood products from South America, Africa and Japan enter the United States and compete with our products. Even Borneo has started to produce lumber which is exported to the United States through Hongkong in order to take advantage of the lower freight rate from said port to the United States. We ought to be in a position to meet the competition and to attain that end, we have to reduce our cost of production. The producers have been adopting measures to reduce the cost of production, but there is one matter which entirely depends on the government and that is the elimination of reduction of the taxes now being borne by the lumber industry. Herewith is copy of a letter dated January 20, 1954, which was sent by the Philippine Lumber Producers Association, Inc. to the Secretary of Agriculture and Natural Resources which discusses these taxes in detail. All the taxes mentioned therein continue except the 17% exchange tax and the import license tax of 2% on machineries, equipment, spare parts, etc., imported for use in the industry.

In Japan we know positively that, not only they exempt their export industries from taxation, but they even do positive acts which are tantamount to subsidy of their export trade. This we have to do, especially in view of the fact that one of our most serious problems here is the conservation of our dollar reserve to a safe level. All industries which are highly dollar-producing such as the lumber industry is, should be protected, encouraged and assisted.

3. The freight on lumber and other wood products is unreasonably high. Something should be done in this connection. The high freight rate we are paying is enabling importers of wood products coming from countries other than the Philippines to compete with our Philippine mahogany in the American market. If the Associated Steamship Lines cannot be made to lower their freight rates the Government should acquire immediately freight ships or encourage and facilitate the acquisition of such ships by private corporations. One big advantage of Japan over us is the fact that

there they pay lower freight than in the Philippines. In this connection, a report was received from one of the members of the Philippine Lumber Producers' Association that freight rate from Hongkong to the United States is much lower than from the Philippines to the United States although Hongkong is farther. This is the reason why Borneo lumber shipped through Hongkong also compete with our lumber in the United States. Herewith is a copy of the answer of the Associated Steamship Lines, which explains the situation. Those causes of higher freight rate pointed out by the Associated Steamship Lines be eliminated.

4. As appears above, one of the reasons why Japan is able to process our logs and export the processed products to the United States in competition with similar products coming directly from the Philippines is their greater operation efficiency. This is a matter that should be given careful attention. There is need for able and experienced managers and operators as well as skilled laborers so that production may be conducted with efficiency and with the least waste and costs.

5. Finally, we must make every endeavor to have higher utilization of our forest products. In Japan, the logs we export to them are utilized in full or without any waste. Even sawdust is made to produce income. In the Scandinavian countries almost all the parts of a tree are utilized in some form or other in the manufacture of wood products. We must spare no effort so that the many industries that can be developed out of trees will be established in the Philippines.

The forest resources of the Philippines is indeed vast. It constitutes a great source of national wealth. A good portion of the land areas of the Philippines is covered by commercial forests some of which are still unexplored. Our forest area covers 11,045,020 hectares, representing 38% of the total land area of the Philippines and it could supply around 460 billion board feet of lumber. As a principal export of the Philippines, logs and lumber which occupied sixth place in importance among the principal exports of the Philippines in 1949, has risen to third place in rank and importance in 1954, and whereas the value of these exports was only ₱6,520,583.00 in 1949, the export in 1954 was worth ₱68,819,024.00. Last year the exportation continued going up. Notwithstanding these impressive figures there is absolutely no doubt that we have hardly scratched, so to speak, the lumber industry. Surely it can be developed to stupendous proportions and thus be made to contribute tremendously to the Philippine economy. It will not be an exaggeration to say that the lumber industry will solve to a great extent our unemployment problem and constitutes an effective means to stabilize our nation's economy. This is not a mere dream; it has happened in that small heroic nation—Finland. This country has forest resources of about the same size as ours but there are more species here than in Finland. In recent years, it had to engage in two unequal wars resulting in her having to pay large indemnities. All the indemnities she was able to discharge in full. She also enjoys the honor of being the only nation that paid all her war debts after the first world war. Finland today counts with a sound stable economy, and what is there in Finland? Mostly forests. This is her main source of livelihood and wealth. Sixty per cent of her industries depend upon her forest products and an equal percentage of her labor population is employed in industries depending upon her forests. If the forests has been able to give Finland a sound stable economy, with more reason our forests should be able to make the economy of the Philippines sound and stable.

The President, in his message to Congress, urged "Utilization of the country's natural resources in economic development."

In accordance therewith, Industries that

utilize forest products should be pushed vigorously.

The time to act is today; tomorrow might be too late. The menace of communism is real and it can easily be discerned at the present time. We cannot afford to procrastinate the development of this country to wipe out unemployment and the source of discontent. If we fail in achieving this objective, we may lose our very freedom and future generations may not care to have the forests which we have preserved for them at the sacrifice of our generation which is today waging a grim struggle for the liberty and free ways of life of present and future generations.

(SGD.) A. DE LAS ALAS
January 20, 1954

Dr. Salvador Araneta
Secretary of Agriculture
and Natural Resources
Manila

Dear Mr. Secretary:

I deeply appreciate your very kind invitation to the lumber producers through our association to discuss with you the problems of the lumber industry. Due to a scheduled meeting of the Monetary Board which coincides with our meeting with you and which I cannot possibly forego as my absence would make it impossible for said Board to constitute a quorum to transact business, I exceedingly regret my inability to be present at your conference. I feel though that the most urgent problem facing the industry at present is the heavy tax burden imposed upon it.

17% *Exchange Tax*—There was a time after the war when all lumber produced in the Philippines were actually needed for the country's rehabilitation. With reconstruction of destroyed and damaged buildings almost complete and construction projects having reverted to normalcy, it became necessary for the excess productions to be channelled to outside destinations, and it is now the view that the progress, if not the survival, of the lumber industry will depend largely on the stability of our foreign market.

The law in prescribing the 17% exchange tax on all remittances abroad with a few exceptions provided therein is intended to increase the nation's income, and prevent, if not discourage altogether, the flow of our currency abroad. The need for conserving our dollar reserve is a major objective of the law.

It is to be expected that production would increase and more lumber and logs can be produced out of our Philippine forest for export trade ,if sufficient encouragement is given to lumber producers. The best way to obtain this result would be to place at their disposal the means with which to replace or expand their facilities for production. The tendency of mechanizing logging operations thru the use of heavy equipments is an imperative necessity for the advancement of lumber production. This is required to improve efficiency in road building, road skidding and hauling and actually in processing logs into sawn lumber. These essential implements and machineries under the present arrangement cannot be made available to producers unless they pay for the purchase and acquisition thereof, the 17% exchange tax. There seems to be no reason why machineries for lumber production cannot be placed under the same privilege of exemption from the exchange tax as agricultural implements and machineries. The purpose of the latter exemption is to encourage agricultural production, and for the same reason the lumber industry should likewise be entitled to the same encouragement by affording it with the same privilege of exemption from this imposition.

Our lumber has to face the free competition with other species coming from other regions of the world. Prices are generally dictated by factors over which we in the Philippines have absolutely no control. To make our woods competitive in the world market, they must necessarily

be sold at competitive prices. It is impossible for outside consumers to absorb the 17% exchange tax, which necessarily must have to be shouldered by the producers, unlike those for local consumption where additional burdens may be passed along to the consumers. To burden unnecessarily the producers at the start would not only prevent effective replacement of machineries and appliances, but would also make impossible the expansion of the industry for wider areas. It will ultimately result in making exports of these commodities unremunerative to export-producers, considering that they cannot compete in the open market at prices which would not even allow them a nominal profit for their investments.

1. *Forest Charges*: Collection is made on the basis of ₱3.50 for 1st group, ₱2.00 for 2nd group, ₱1.25 for 3rd group and ₱0.60 for 4th group per cubic meter. One (1) cubic is equivalent to 424 board feet.

2. *Reforestation Charges*: ₱0.50 per cubic meter for 1st and 2nd group and ₱0.40 for the 3rd group and 4th groups (as provided under Republic Act No. 115).

3. *Application fee*: ₱5.00 for each application for timber license covering 500 hectares or fraction thereof.

4. *License fee*: ₱0.35 per cubic meter of timber, based on the amount of production to be granted, and kind and amount of forest products found in the area covered by the application as approved.

5. *Inspection fee*: ₱3.00 per thousand board feet for sawn lumber and ₱1.00 per thousand board for logs.

6. *Sawmill License fee*: This depends on the annual output ranging from an anuual fee of ₱100.00 on a production of 1 to 2,000 board fee daily output, to ₱1,000.00 if daily output exceeds 30,000 board feet daily. If the owner or operator owns two or more independent sawmills, separate application and license fee shall be filed and paid for each.

7. *Municipal License fee*: This depends on the charge imposed by the local municipal councils on producers and sawmill operators operating in their respective locality.

8. *Wharfage fee of ₱0.60 per cubic* meter of logs and flitches.

9. *Boiler Inspection fee*: For each boiler inspected depending upon the horse power of each, ranging from ₱40.00 to ₱148.50 (157 h.p.).

10. *Import license tax of 2% on the C.I.F. value of the machineries, equipment, spare parts, accessories, etc., imported for use in the industry; and 7% compensating tax based on the total of the C.I.F. Value of the items imported*: These taxes aggregating 9% on the value of all imported goods used by the lumber business, is equivalent to 3% of the cost production or approximately ₱4.50 per thousand board feet.

11. *Sales tax of 5% on local sales.*

12. *Income tax of 20% and 28% on net income.*

13. *Real property tax.*

The foregoing taxes represent ₱39.50 per thousand board feet or 33% of the price per thousand board feet of lumber in the local market. Together with the income tax payable by all corporations, the entire charges represent approximately 40% of the gross income of the lumber industry. It can thus be appreciated that the tremendous tax burdens now imposed on the industry have cause operations to be unremunerative and ,in many instances, have discouraged additional investments for its development.

I suggest that apart from the total elimination of the 17% exchange tax for the purchase of implements, machineries and and appliances required by the industry, the 2% import license tax and compensating tax of 7% should also be eliminated. There should be a 50% reduction in forest and reforestation charges, inspection and license fees. The wharfage fees of ₱0.60 per cubic meter of logs and flitches should not be charged if loading is not actually done in any government wharf. This last imposition is basically inequitable, not to say immoral, for while the intent of the law is the charge for the use of government wharves, such imposition has been ex-

(*Continued on page* 54)

Some Observations on Forestry Education in the United States

By TEODORO C. DELIZO

The writer had the good fortune of having been selected to go abroad as a participant in the Type A Technical Program of the United States under the joint sponsorship of the Foreign Operations Administration and the Philippine Council for United States Aid. The objective of the study and observation were as follows;

1. To study and observe the curricula, modern concepts of forestry education and teaching techniques which can be adapted to modernize and strengthen forestry education in the Philippines.
2. To learn the type and content of professional courses being offered at the leading schools, arrangement of curricula, educational policy, type, technique, and standards of instruction, integration of lecture work with laboratory and field work on the evaluation of candidates for professional degrees.
3. To gain experience that will enhance the participant's ability in teaching silviculture and watershed management in connection with seeding and planting in the College of Forestry, University of the Philippines.

One month before the opening of classes in the State College of Forestry at Syracuse, New York, I joined the Southern Trip in connection with Silviculture course No. 116 in which graduate students participated. The aims and purposes of the trip were: (1) To acquaint students with silvicultural conditions, methods and results in regions different from New York and Northeast; (2) To give students opportunity to discuss silviculture and forestry with experienced public and private foresters in different parts of the country; (3) To broaden the student's outlook by traveling through parts of the country different from New York and the Northeast. Forested areas that belong to the government as well as private industry in the states of Maryland, Virginia, North and South Carolina, Georgia, and Florida were visited. Problems confronting the forest in different states and regions visited were presented and solutions discussed by men who were fully informed of the subject matter. The services of men in public as well as in private industry were made available for demonstration and seminars on the various forestry problems.

It has been observed that the nations has embarked on an intensive program of studies and research to find means of solving many of the forestry problems as they occur today. Private industry, particularly those engaged in lumber, pulp and paper manufacture and naval stores are actively cooperating with the government in studies and research toward the attainment of sustained yield management, greater volume and growth production, and quality improvement. Of the overall picture of conditions obtaining in the different states that were visited, there were five distinct silvicultural management tendencies that were noted. The first is the improvement of the stand by the elimination of competition, regulation of density of stocking, proper spacing and selection of the species. In the control of hardwood competition, prescribed burning, scarification, applica-

tion of different tree poisons and mechanical methods had been demonstrated. The second is toward the even-aged form of forest management. This is particularly true of softwood for reason of greater simplicity of handling, and financial return. The price of softwood is on the upgrade and this will continue for many years to come.

The third is toward artificial regeneration. Preference of this method over that of the natural means is on its simplicity, greater assurance of the result, and the ease with which the young stand could be handled. In the Philippines, the same method is used in our reforestation projects on denuded areas where the original forest covers were gone. On residual stands, however, different methods are used. The fourth is the apparent consciousness on the part of both public and private owners toward the improvement of the forest crop through the modern methods of forest genetics. Experimental plots are located in various parts of the nation and scientific methods of tree improvement are being carried out. Many scientists are at present engaged in this particular phase of forest improvement. The fifth is a vigorous campaign and research on forest protection. Fire is so far the greatest protection problem, although insect and fungi add to the tremendous losses of forest products in some sections of the country. Fire-fighting equipment mounted on trucks and pumps that could be carried by men have been developed and improved. Studies are also being conducted on the control of some insect pest that threaten to destroy the Southern pine. Arteries of forest roads are being built dividing the forested areas into units of protection blocks. There is a research center at Coweeta, North Carolina where studies of the relationship of the forest to water and soil are being conducted.

COLLEGE CURRICULA

I enrolled in the State College of Forestry, Syracuse, New York, with the following objectives; (1) To learn the academic structure of the forestry school. (2) To enroll in classes that will increase the participant's ability to teach Silviculture, watershed management, seeding and planting. In connection with the above objectives, efforts were made to study the academic structure of the College of Forestry both in the undergraduate and graduate level with the end in view of determining which of the principal features could be adapted to strengthen forestry education in the Philippines.

Undegraduate studies. The students that may be admitted are selected from High School graduates of accredited High Schools or preparatory schools with sixteen units of preparatory work of High School grade. This requirement is very similar to that in the College of Forestry, U.P. In the undergraduate curriculum in the College of Forestry at Syracuse, there are six full four-year program and two optional programs grouped into; (1) Forest Areas, (2) Forest Products and, (3) Optional programs. Under the Forest Areas program, are general forestry which emphasizes the development and management of the forest to the highest growth, care and use; landscape and recreational management which emphasizes landscape architecture, the art of arranging land and the objects upon it for human use and enjoyment. Under the Forest Program, are Forest Utilization-conversion and distribution of lumber and related products; Forest Utilization-retail merchandinzing and light construction; Wood Technology which has to do with the anatomy and technical nature of wood; Pulp and Paper Technology which deals with the engineering and physical sciences essential to the technology of pulp, paper and related industries. The optional programs deal with arboriculture and landscape nursery; Plastic and Cellulose chemistry which emphasizes plastic technology and polymer chemistry.

In the implementation of the various programs, all freshmen are required to

take the same course. It is after the first year that a student enrolls for the spring camp and follows the program that he chooses to pursue. In other words, the branching out of the different programs occur after the first year. The curricula for the different programs of study are so adjusted as to give the maximum training to the student participant. It is believed that a similar system with modification could be followed for the College of Forestry, University of the Philippines. Under the present curriculum, it may be possible to stick to two general curricula, namely, Forest Areas and Forest Products. The former deals with general forestry and the latter should include Forest Utilization, Wood Preservation and Technology and may be Paper Manufacture. The branching for specialization may be effected during the last two years by selecting the subjects that must be taken up which are essential for the especialized field. Electives should be increased covering the subject matter of especialization. The list of subjects that are now followed should be reduced to only the very essential ones and more elective that bear on the especialized field should be taken up.

The number of units under the present curriculum is rather too heavy as compared with other universities. The number of units required for the degree of Bachelor of Science in Forestry in the School of Forestry at Berkeley, California is only 124, Michigan 136 and at Syracuse 142. In the University of the Philippines, College of Agriculture is 144, Veterinary Medicine 155, Engineering 142 and Public Administration 137 respectively. In the college of Forestry, U.P. the number of units required is 161. Before a student graduates, he has to take twosummer classes and must submit an approved thesis. It is believed that the present curriculum deserves a revision either to lengthen the course to five years, drop some of the subjects or reduce the number of units of some of the subjects presently taught.

Graduate studies. It cannot be denied that the science of forestry is never static and the college of Forestry cannot remain an institution granting only undergraduate degrees. It would seem that with the more than two hundred graduates with the degree of Bachelor of Science in Forestry and others from allied technical schools, the college is now ready to offer a graduate school leading to the degree of Master of Science in Forestry. Many of the graduates of this college have intimated their desire to continue if and when such a course if offered. Conditions in the college have changed much so that at present a Forest Products Laboratory is just a stone throw from the college building where facilities for research and studies are available. At present, however, there are no men to handle the courses prescribed outside of those offered at present but as soon as the three exchange professors from the United States will arrive, something could be done. Graduate study in this college should aim to train students on natural sciences underlying forest productivity and physical sciences which are fundamental to wood utilization technology and in the social sciences governing forest use. It should also aim at developing leaders in forestry by giving professional training in selected branches like research, teaching and in administration. They will be able to learn the techniques and methods of independent thinkers and constructive planners for an effective practice of forestry. Students that take up special courses in logging and lumbering may spend one summer in one of the big sawmills in Mindanao or Luzon.

RANGER SCHOOL

In the United States, except in one instance, all the Ranger schools operate as distinct units from the universities to which they are attached for administration purposes only. The primary objective of ran-

ger school training is to develop skilled workmen who are capable of doing the less technical work of the professional forester in handling of forest lands and act as directing hands to unskilled labor. A committee on the study of ranger schools in the United States had this to say, . . . "ranger schools should be established in each forest region, and the instruction should be of practical nature. It was felt that academic standards should be adjusted to the work that was to be done by the graduates. Ranger schools conducted at colleges or universities are not desirable. While such school may be included for purposes of administration in a university or college, it should have a separate plant, in the woods, if possible, among the forest and industrial conditions which it is the function of the school to serve. Its standards, its faculty, its atmosphere, its morale should be its own, rather than merge with those of a larger institution. Its instructors should if possible be professional foresters so that the students may acquire a sympathetic understanding and breadth of view as to its scope and aims." Presently the curriculum of the College of Forestry, U.P. combines the training of the professional forester and that of the ranger. Considering the size of the teaching staff and the number of students, the system is unwieldy. While the economic condition of the college may not permit the complete separation of the ranger and the professional forester curricula as at present, it is necessary to divorce the one from the other for a more effective forestry education in this country.

FACILITIES FOR INSTRUCTION

School forest. All of the ranger schools and forestry colleges visited in the United States own their school forests where the field exercises and studies are conducted. The forest property is an integral part of forestry schools for their laboratory and field exercises. The College of Forestry, U.P. owns no school forest. The Makiling National Park is at present used as field laboratory for the various forestry courses. At present the Commission of Parks and Wildlife has the full control of parks so that the college is just a squatter in the park and is not free to perform the different exercises and studies conducive to a thorough forestry education. It is necessary that a portion of the Makiling National Park be ceded or given to the College of Forestry if it is to render an effective forestry education for the nation.

Library. The libraries of the different colleges and schools of forestry in the United States are very well stocked with books and periodicals for references. In the College of Forestry, U.P., the number of books especially those used as references is very little. It is necessary that the number of volumes for books used as references should be increased in accordance with the number of students.

Visual aids. It was observed that colored kodaslides are popularly used to supplement lectures. The number of slides for the colleges is steadily built up by the arrangement that the film is supplied by the college and the faculty members take the pictures in connection with their field trips. The slides, however, will become the property of the college. I understand that the colleges have special prices for colored films from the Kodak company. This phase of instruction has not been given encouragement here because of the high price of films. The college should secure concessions with the Kodak company for reduced price for college use in order to popularize the use of visual aids in instruction. There is an up-to-date projector in the college for kodaslides which can be used to advantage with this arrangement.

School collections. The schools and colleges of forestry in the United States have execellent collections of fungi, insects, birds, botanical materials, forest products and other materials product of the forest. In

our college, we have no insect collection of our own so that students enrolled in Forest Entomology take the course in the College of Agriculture. The handful of collection of forest fungi is not properly kept for lack of facilities. The botanical collections, wood and seed samples, are, however increasing steadily. It is about time to consider the extreme necessity of having our entomological and pathological departments to bolster our own collection and improve our teaching techniques in connection with forest protection in the college. In the event that a complete separation of the ranger and undergraduate curricula could not be affected due to financial or other causes, the following are suggested. In the implementation of the undergraduate curriculum, however, additional faculty members would be necessary.

Terminal Ranger curriculum, following the description of courses presently offered in the College of Forestry, U.P.

FIRST YEAR

First Semester

	Units
Spanish 10	3
English 1	3
Botany 1a	3
Dendrology 1a	3
Mathematics 1a	3
Forest Engineering 1a	3
Introduction to Forestry	2
Military Science 1a	(1.5)
Physical Education 1a	(1)
Physical Education 2a	(1)

Second Semester

	Units
Spanish 11	3
English 2	3
Botany 1b	3
Dendrology 1b	3
Forest Management 1	3
Forest Engineering 1b	3
Military Science 1b	(1.5)
Physical Education 1b	(1)
Physical Education 2b	(1)

Summer: Field Practice—6 weeks; 6 credit.

SECOND YEAR

First Semester

	Units
Spanish 12	3
Mathematics 1b	3
Wood technology	3
Silviculture I	3
Forest Administration 1a	4
Forest Physiography	2
Military Science 2a	(1.5)
Physical Education 3a	(1)
Physical Education 4a	(1)

Second Semester

	Units
Spanish 13	3
Forest Economics	3
Lumbering I	4
Forest Products	4
Forest Administration 1b	3
Military Science 2b	(1.5)
Physical Education 3b	(1)
Physical Education 4b	(1)

Graduate Rangers may be admitted as irregular juniors under the undergraduate curriculum provided they have averages of 3 or better.

Undegraduate curriculum leading to the degree of Bachelor of Science in Forestry (B.S.F.). Only students that have an average of 3 or better may continue after the sophomore year. The description of courses follow those that are offered at present in the college.

FIRST YEAR

First Semester

	Units
English I	3
Spanish 10	3
Botany 1a	3
Chemistry 1a	4
Mathematics II	3
Introduction to Forestry	2
Military Science 1a	(1.5)
Physical Education 1a	(1)
Physical Education 2a	(1)
	18

SECOND SEMESTER

	Units
English 2	3
Spanish 11	3
Botany 1b	3
Chemistry 1b	4
Mathematics III	3
Forest Engineering Ia	2
Military Science 1b	(1.5)
Physical Education 1b	(1)
Physical Education 2b	(1)

SECOND YEAR

FIRST SEMESTER

	Units
Physics 11	3
Spanish 12	3
Dendrology Ia	3
Forest Engineering 1b	3
Forest Physiography	2
Zoology	3
Military Science 2a	(1.5)
Physical Education 3a	(1)
Physical Education 4a	(1)
	17

SECOND SEMESTER

	Units
Physics 12	3
Spanish 13	3
Dendrology 1b	3
Silviculture I	3
Forest Economics	3
Forest Soils	3
Military Science 2b	(1.5)
Physical Education 4b	(1)
Physical Education 4b	(1)
	18

Students that follow this curriculum will follow either the Forest Utilization curricula after the sophomore year.

A. FOREST AREAS
THIRD YEAR

FIRST SEMESTER

	Units
Mathematics 8 (An. Geometry)	3
Forest Pathology	3
Surveying 1a	3
Silviculture 2	3
Wood Technology I	3
Electives	2
	17

SECOND SEMESTER

	Units
Statistics II	3
Forest Entomology	3
Surveying 1b	4
Forest Soils (Advanced)	3
Electives	4
	17

SUMMER: Forestry work—6 weeks, 6 units.

FOURTH YEAR

FIRST SEMESTER

	Units
Business Law I	3
English 3	3
Forest Administration	3
Forest Management I	3
Research Problems	2
Electives	3
	17

SECOND SEMESTER

	Units
Business Law 2	3
Forest Protection	3
Forest Policy and History	3
Forest Management	3
Research Problem	3
Electives	3
	18

Suggested electives in addition to those already mentioned in the catalog for the current school year for the College of Forestry and Agriculture.

1. Recreational land administration—(2)
2. Principles of Wild Life Management (2)
3. Soil and water conservation—(3)
4. Range Management—(2)
5. Reforestation—(3)
6. Forest Tree Seeds—(3)
7. Regional Studies—(2)
8. Recreational land use and activities—(2)
9. Plant materials—(2)
10. Human relations in forestry
11. Advanced forest administration—(2)
12. Plant anatomy—(2)
13. Advanced forest protection—(2)
14. Statistics 12—(3)
15. Mathematics 10—(3)
16. Mathematics 11—(3)

(*Continued on page 54*)

A Forestry Formula Devised by The GSRC

By Teofilo A. Santos
Forester, Bureau of Forestry

Forestry is defined as "the scientific management of forests for the continuous production of goods and services". It is also defined as the science, art and business of managing forests in continuity for forest purposes.

Among other things, Republic Act No. 997, as amended by Republic Act No. 1241, authorized the Government Survey and Reorganization Commission (GSRC), to do the following:

(a) "to group, coordinate or consolidate departments, bureaus, offices, agencies, instrumentalities and functions of government;"

(b) "to abolish departments, offices, agencies or functions which may not be necessary or create those which may be necessary for the efficient conduct of the government service, activities and functions;"

(c) "to eliminate overlapping and duplication of services, activities and functions of the government;"

(d) "to transfer functions, appropriations, equipments, property, records, and personnel, from one department, bureau, office, agency, or instrumentality to another;"

(e) "to create, classify, combine, split or abolish positions;" and

(f) "to do whatever is necessary and desirable to effect economy and promote efficiency in the government."

As a result of such painstaking survey of the GSRC the NEW LOOK for the Bureau of Forestry, one of the bureaus under the Department of Agriculture and Natural Resources, as envisioned in this reorganization plan, is hereby presented, as would a painting on canvass be presented in a beautiful picture frame. The report has been forwarded to the President of the Philippines on February 14, 1956, and the President has in turn submitted it in full to Congress, which is now in session.*

This report includes Reorganization Plans Nos. 30-A and 77 of the Task Force on Agriculture and Natural Resources headed by the Honorable Isidro C. Kintanar as chairman with the Honorable Jose C. Locsin and Honorable Paulino Alonzo as members.

Reorganization Plan No. 30-A deals with the survey and report of the entire Department of Agriculture and Natural Resources, together with all the bureaus, offices, agencies, and functions under it. Plan No. 77 provides for the establishment of a Forest Products Research Institute, which will absorb some of the functions of the Bureau of Forestry and the Forest Products Laboratory and will centralize all forest products research work.

The writer believes that the two plans are both extensive and exhaustive and are self-explanatory. Hence they are presented here in full and watch for its implementation.

BUREAU OF FORESTRY

Recommendation on General Policy

1. Secure Executive approval to long-range policies on conservation and use of the public domain. Public domain once

* This report was one of the 33 plans approved by Congress.

declared permanent forest land should be withdrawn only for a serious national emergency and by an Act of Congress.

2. Institute a sustained program of public information designed to create understanding of the functions and services of the public domain.
3. Initiate a stumpage appraisal system based on the logging cost, market conditions, and the accessibility of logging operations to shipping points. Provide for the sale of timber to the highest bidder who meets the stipulatetd qualifications.
4. Provide for more effective utilization of technical personnel and for in-service training.
5. Develop an integrated code for all forest and public domain management legislation.
6. Concentrate on conservation and sustained yield programs rather than income activities.
7. Review reforestation program.

RECOMMENDATIONS ON REORGANIZATION

1. Abolish the Commission on Parks and Wildlife. Create a Parks and Wildlife Office in the Department.
2. Delegate authority to the Director who in turn should delegate authority to subordinate key officials of the Bureau.
3. Create a position of Assistant Director. Create an Office of the Director.
4. Reorganize the Bureau on a line and staff basis.
5. Reduce workload on paper processing.
6. Increase funds available for the purchase, replacement, repair, and maintenance of equipment.

Forest Products Research Institute

RECOMMENDATIONS ON REORGANIZATION

1. Create a Forest Products Research Institute.
2. Create a Forest Products Research Fund.

COMMENTS

Our remaining public lands, forested and clear, constitute one of the nation's most valuable resources. As a crop, the forest offers a continuing yield of lumber and its by-products. As land cover, the forest and grasses protect the precious top layer of soil from the ravages of erosion. As plant life, the forest and grasses deposit organic matter upon the soil, protect the watershed from erosion, and regulate runoff.

Our forest reserves and land resources are not inexhaustible. It appears that we may have already consumed our forests below the safe minimum necessary for the continued well-being of the country and the maintenance of a vigorous timber industry. We have also settled areas unsuitable for such use and washed valuable lands into the sea.

The destruction of forest areas through desolation timbering, the yet unchecked practice of kaingin; a lack of understanding of the advantages and benefits of sustained yield timbering; and the dedication of unsuitable public lands for settlement have created increasingly harmful effects upon our public domain and our remaining forest reserves.

Our nation must give greater attention to the conservation of the existing forest resources through wise utilization, public domain designation, and protection against encroachment; reforestation of the denuded and open areas; enlightened grazing practices; and widespread application of the sustained yield principle. In addition, a better distribution of timbering benefits from forest reserves as between concessionaires and government should be developed. The benefits of timber sales should more nearly relate to preserving the resource capital which produces the income.

It is believed that the wise management of our forest is to be found on four fronts: full legislative acceptance or responsibility to provide additional national income for the conservation of our forest; executive

resistance to the demands for opening public lands ill-suited to cultivation or essential for forest purposes; a growing awareness by the public of the value and significance of forests to their present and future well-being; and finally the development of governmental organization competent and capable of carrying out a national program of public domain conservation and development. This portion of the Plan and Report deals primarily with the fourth front. But it is interwoven with assumption that the Congress will accept its responsibility, belief that the Executive will move towards a program of balance use of the public lands, and faith that the public will become aware of the value of the public domain to their well-being.

The Bureau also bears a grave responsibility in the first three fronts, for it is the entity closet to the problem, most aware of the needs for changes in policy and programs, and best able to formulate them in understandable forms. The Bureau has not yet met these responsibilities. The proposed reorganization has been designed to move the Bureau closer to a realization of these basic purposes and objectives.

RECOMMENDATIONS ON GENERAL POLICY

1. *Secure Executive approval to long-range policies on conservation and use of the public domain. Public domain once declared permanent forest land should be withdrawn only for a serious national emergency and by an Act of Congress.*

   The Bureau of Forestry is handicapped by a lack of clearcut policy on the use and conservation of the public domain and its forest products. Such policies will undoubtedly change as public opinion, legislative enactments, and economic conditions change. The need, however, is not so much for unchanging policies as for authentic statements of what the government's policies are at a given moment. Program formulation and execution both require a firmly stated policy base. Examples of the need for such policy definition include: (1) the types and conditions which shall govern the designation of public domain as inviolate forest reserves; (2) the deadline for completing the primary designation of public lands; (3) the deadline for conversion of timber concessions to sustained yield basis and conditions under which it shall occur; (4) the conditions under which the sustained yield policy shall govern administration of concessions; and (5) the place and objectives of reforestation programs.

   Efficient, effective operations are almost impossible without definition of such policy. Actions are tentative, referrals of specific problems to higher authority occur too frequently, and higher authority interference in specific actions of the Bureau precludes or unreasonably delays dispatch of otherwise routine workload.

   The Bureau is also hampered in the performance of its mission by vacillating implementation of accepted policy by higher authority. Polices are ignored by specific decisions, exceptions are made without reference to general trends, constant factors, or justifying circumstance capable of definition. Local political pressures are to often permitted to exercise great influence in the reopening of public lands; the result is a constant attrition of the permanent forest without policy or knowledge of results.

   Lands declared permanent forest land should be given greater security of status. The policy and legislation should stipulate that once so declared, permanent forest land cannot be withdrawn except for a serious national emergency and then only by an Act of Congress. Legislation effecting the withdrawal of delegation should be passed by Congress.

2. *Institute a sustained program of public information designed to create understanding of the functions and services of the public domain.*

The wise use and conservation of public domain is of interest to all citizens. Their understanding and support of wise land-use policies is essential for acceptance of Bureau programs. The Bureau has done little to create this awareness. There is little understanding that such a program is necessary or desirable. Without it, inadequate appropriations reflecting public indifference will continue, the programs announced will fall short of achievements. The need is for a well-developed sustained program of scientific, factual information about the public domain and its place in the economic and recreational future of the nation.

3. *Initiate a stumpage appraisal system based on the logging cost, market conditions, and the accesibility of logging operations to shipping points. Provide for the sale of timber to the highest bidder who meets the stipulated qualifications.*

A stumpage appraisal system will benefit both the industry and the government. The industry will pay a fair value for the standing timber in relation to the cost of logging operations or conversion. On the other hand, a sound stumpage appraisal will bolster the revenues of the government and result in increased benefits to the people as a whole. A fixed price for timber not related to stand and terrain is no longer justified.

At the present time, forest charges are fixed by law and are applied without regard to such factors as cost of logging operations, the conditions of the market, and the accessibility of shipping points. Bidding for forest concessions is now handled in terms of qualifications of the bidders. The price is fixed by type of timber. This practice tends to encourage optimistic statements of capacity and financial status of the bidders. It also makes difficult the evaluation of the relative competency of the bidders. The stumpage appraisal system would encourage present and prospective concessionaires to conduct their operations in different areas regardless of topography and proximity to transportation facilities. Price bidding will insure greater returns to the government and will relate the commercial value of harvestable timber more nearly to the payments made to the government.

4. *Provide for more effective utilization of technical personnel and for in-service training.*

The government lacks well-trained technical personnel. While the Bureau suffers from lack of forestry technicians, it has not effectively utilized its available technical personnel. In many cases, the time of forestry technicians are devoted to clerical and administrative matters. Work done by one forester is repeatedly done as it progresses "up the line." This arrangement dissipates the very limited technical skills of the Bureau. In part, this condition arises from an exaggerated concept of what trained foresters can do, in part to a too limited notion as to what administrative personnel can do, in part to the stringent limitation of adequate administrative items in the budget, and in part to a simple lack of understanding of what is involved in delegating authority and assigning responsibility.

A program of personnel training should be launched by the Bureau. Personnel training includes training for forestry work as well as for mangement improvement. The Bureau should continue the in-service training program it has recently started. The Bureau should also avail of the facilities and

services of educational and training institutes such as the Institute of Public Administration and take full advantage of scholarships and fellowships offered by international organizations. In addition, the Bureau should systematically study the work of its foresters and eliminate the administrative work in their assignments wherever possible. Finally, there should be complete elimination of the "checking through redoing" practices. Supervision is best achieved through coordination and instruction prior to work performance not by detailed review and redoing.

5. *Develop an integrated code for all forest and public domain-management legislation.*

   The present laws which govern the management and disposition of public domain as well as the management of the permanent forest lands are many, complex, and often contradictory. The Bureau's operations are consequently hampered and delayed. There is an urgent requirement for codifying these laws, coordinating their intent, and unifying their directives.

6. *Concentrate on conservation and sustained yields programs rather than income activities.*

   Certain factors center the attention of the Bureau on income making activity which impair the achievement of their major purposes, the willingness of Congress to grant substantial appropriations for income-producing entities and the attitude of governmental officials that efficiency is primarily based on the income they produce for a given fiscal year.

   There is a concentration of efforts on income-making activities to the neglect of the Bureau's conservation and sustained yield programs. Appropriations should be principally based on programs and accomplishments relating to the major purposes for which the entity is established not on income which is derived primarily from capital depletion.

7. *Review Reforestation Program.*

   The functions of the Reclamation and Reforestation Division are reflected in its title. However, serious review of its programs should be undertaken. At the present tempo of reforestation it will require about 20 centuries to complete the areas designated for reforestation. This program should be made the focus of a technical committee chaired by a representative of the Congress. The Committee should evaluate the practical problems confronting this program, the possibility of extending private reforestation, the feasibility of a greater concentration of the Division's limited resources to highly selective areas, and the use of unemployed citizens for such work.

RECOMMENDATIONS ON REORGANIZATION

1. *Abolish the Commission on Parks and Wildlife. Create a Parks and Wildlife Office in the Department.*
   a. Transfer all the functions, appropriations, property, equipment, and records, and such personnel as may be necessary, of the Commission on Parks and Wildlife, to the new office.
   b. Attach the new Office to the Bureau of Forestry for policy, program coordination, and administrative supervision. Designate the head of the Office as Chief.
   c. Create a Parks and Wildlife Committee to serve as an advisory body to the Secretary on Parks and Wildlife matters. The Committee should comprise the Director of Forestry (chairman), the Director of Parks and Wildlife, and one representative each from the Department of Education, Social Welfare Administration, Department of Public Works and Communications, and National Planning Commission.

The members of the Commission on Parks and Wildlife are the Secretaries of Agricul-

ture and Natural Resources, Public Works and Communications, Health, and Education, and the Administrator of the Social Welfare Administration. It is charged with planning, conserving, and maintaining national parks, game refugees, bird sanctuaries, and national monuments. Its area of activity is carried on primarily within the public domain. It has personnel located in field areas where the Bureau of Forestry has jurisdiction and responsibilities. Its national monuments functions are related to the cultural and educational activities of the nation. The Commission form of organization is ill-suited for the administration of an operating program. There is need to bring the various interests in parks and wildlife together in the development of long range policies and programs. An advisory Committee will provide this perspective. The function has no justification for remaining in the Office of the President.

2. *Delegate authority to the Director, who in turn should delegate authority to subordinate key officials of the Bureau.*
   a. Provide initially for delegation of authority to the Director to issue the following licenses and/or lease agreements or their renewals:
      1) Timber licenses involving 10,000 cubic meters or less, or embracing 10,000 hectares or less.
      2) Pasture lease agreements embracing not more than 1,000 hectares.
      3) Tree farm lease agreements embracing not more than 500 hectares.
      4) Saltworks and other special land-use agreements covering a period of not more than ten (10) years.
   b. Provide initially and upon a selective basis for the delegation of authority to district foresters, to issue the following licenses and/or permits:
      1) Renewals of ordinary timber licenses covering a period of one (1) year for 500 cubic meters or less, or embracing less than 1,000 hectares.
      2 Ordinary minor forest products licenses except for minor forest products which need to be advertised for applications.
      3) Renewal of all minor forest products licenses.
      4) Private gratuitous licenses to cut timber for personal use.
      5) Public gratuitous licenses up to 500 cubic meters of timber.
      6) Annual tree farm permits up to ten (10) hectares or their renewal.
      7) Pasture permits up to 100 hectares or their renewal.
      8) Other special use permits up to 24 hectares or their renewal.

The Bureau Director should exercise only authority delegated by the Secretary. Efficient operation dictates that there be maximum delegation to the Director. These delegations will provide the Bureau the authority it requires for effective, efficient operation.

Delegations outline are those which the Secretary should initially delegate to the Director, and are intended to eliminate much of the paper work in the Office of the Secretary. Subsequent delegations may be made as the Bureau provides evidence of its competence to handle such authority. Policies governing the exercise of the delegations should be developed.

The director should, in turn, delegate certain authority to the district foresters. Lack of delegation has contributed measureably to a very large backlog on permit and license applications. As of July 1, 1955, there were pending 47,044 various land uses applications and 1,443 applications for permits and licenses.

Delegations to the field should be made by the Director on a selective basis depending upon the technical competence of fieldmen and the factors and pressures obtaining in any district office. There also needs to be delegations of authority by the

Director to his division chiefs to sign papers of a routine nature within their respective technical fields. This program should also be coordinated with the procedural simplification mentioned elsewhere in this Report. In fact, delegations can be made in some instances only after such simplifications. In other instances simplification is possible only when there is additional delegation. All delegations of course should be provided a framework of policy and criteria in terms of which it should be exercised.

3. *Create a position of Assistant Director, Create an Office of the Director.*

There is no immediate person or official upon whom the Bureau Director can rely to assist him in directing the Bureau's operations or to act in his absence. An assistant director will relieve the Director of much responsibility for the administration and coordination of the staff divisions of the Bureau, provide a person to act in his absence, and assist in field operations coordination. The Office should comprise the Director, the Assistant Director, and such supportive staff as authorized. It should be responsible for executive supervision.

4. *Reorganize the Bureau on a line and staff basis.*

The Bureau of Forestry suffers from over-centralization. There is no distinction between staff and line responsibilities. Each division carries on its own field operations, dealing directly with the affected field personnel. The reorganization of the Bureau as proposed below is designed to achieve a detailed internal reorganization of the Bureau on a line and staff basis; a strengthening and reorganization of the staff activities in the Bureau's central offices along major functional lines; the devolution of authority to district offices; and the strengthening of district offices to reflect a bureau perspective in the field. The following organizational changes are recommended:

a. Regroup and integrate staff services along major functional lines.

The organization of the Bureau's staff offices should reflect the major functions of the Bureau which are; delimitation and classification of the public domain into alienable or inalienable lands; reforestation of denuded or cogon areas in order to make a balance of forest cover; management of public commercial forests to maintain a sustained yield; regulation of use and occupancy of forest lands; improvement through research and experimentation of the breed of trees and large plants that thrive in the forest; and issuance of licenses and permits for the extraction of forest products. The present organization does not facilitate the performance of these functions. There is confusion in functional assignments and common supervision over unlike activities.

The Bureau should be divided into seven divisions: Forest Management, Sawmills and Licenses, Forest Research, Domain Use, Reclamation and Reforestation, Forest Land Uses, and Administrative Services.

b. Rename the Administrative Division, the Administrative Services Division, and provide the following branches:
   1) *Personnel Management* — responsible for matters pertaining to employment, training, investigation of personnel; and other activities relating to personnel administration.
   2) *Budget and Finance* — responsible for the preparation of program schedules, budget estimates, and justification requests, cash disbursements activities, statistical control, liaison with the accounts unit of the Budget Commission, such accounting work as is delegated, and other related activities.
   3) *Legal* — responsible for rendering legal advice to the Bureau Director and to the division chiefs, the preparation of legal documents, amendatory legislation, comments on legislation affecting the Bureau

of Forestry, and other related matters.

4) *Forestry Information* — responsible for conducting a public relations programs, the dissemination of forestry information, liaison with the Agricultural Information Division, and other related matters.

5) *Property and General Services* — responsible for the procurement, custody, and maintenance of the Bureau's property, supplies, and equipment; the maintenance of adequate janitorial and messengerial services; central typing pool; certification and checking of records; receiving and dispatching mail; providing security of Bureau building; and other related matters.

The present Administrative Division does not carry its appropriate share of the Bureau's workload. Property and records are ends in themselves rather than management controls. Personnel management is a clerical function. Budgeting and program scheduling rest too heavily upon the Director and division chiefs. Field requisition for procurement, changes on fund allocation, and related matters are held unjustifiably long in the Bureau offices. Messengers, typing, and related services can benefit from additional centralization. Availability and maintenance of field equipment is deplorably low and unsatisfactory. There is no specific entity responsible for the preparation of appropriation requests and justifications, and relating budget to programs. Forestry information has not been effective, and requires greater emphasis on and a broader conception of what is to be done or required. Legal services are mixed up with personnel management functions.

c. Abolish the Inspection Service. Transfer its investigation of personnel irregularities and misconduct functions to the proposed Personnel Management Branch of the Administrative Services Division, and transfer its field inspection functions to appropriate divisions.

Personnel activities are being undertaken by both the Inspection Service and Administrative Division. The evaluation of field activities is separated from the functionally responsible divisions. Division personnel do not have sufficient funds for field visits while the Inspection Service performs field evaluation and correction work. Assignments from PCAC are handled centrally rather than by the division responsible for the activity in question.

d. Abolish the Division of Forest Concessions and Sawmills. Create a Sawmills and Licenses Division. Transfer all functions of the abolished entity to the new Division except timber licensing functions which should be transferred to the Forest Management Division, together with applicable appropriations, property, equipment, and records, and such personnel as may be necessary.

Much of the work of the Forest Concessions and Sawmills Division pertaining to minor forest products licenses, issuance of sawmills permits, and lumber inspections involves paper processing. It is proposed that this paper work be performed by the new Division. It should not be mixed with the timber management functions of the Forest Management Division which is a major function involving evaluation and consideration of policy and administrative factors as well as the granting of timber concessions. As of September 2, 1955, the Concessions and Sawmills Division has a backlog of 1,453 permits and licenses to be issued. A significant portion of this pa-

per processing should eventually be transferred to district foresters when the recommendations on delegations of authority are implemented, thereby reducing the workload of the New Division. The Sawmills and Licenses Division should supervise sawmill operators, and inspect and scale lumber for collection of forest charges and other fees. The Forest Management Division should continue to bear responsibility for managing the public domain, developing means for sustained yield timbering, granting of timber and grazing concessions, and evolving the necessary policies and standards required for protection of the public interest.

e. Extend the functions of the Forest Management Division. Transfer to it the timber licensing functions of the Division of Forest Concessions and Sawmills together with applicable appropriations, property, equipment, and records, and such personnel as may be necessary.

Forest management is a broad activity which includes management of the public land resources, the issuance of timber licenses in commercial forests, evaluation and issuance of grazing licenses, and the establishment and administration of forest reserves. The modification proposed for this Division will focus concentrated attention to the need for wise use and exploitation of an estimated aggregate of 460 billion board feet of timber stand within the public forest as well as the use of reserved public domain. It will also enable the Bureau to prepare and enforce management working plans for areas under license. The Division will also handle the issuance of agreements and licenses for cutting timber and of grazing permits, and the supervision over licensees or concessionnaires in their operations. Timber and grazing licensing functions are intimately related to forest management and should therefore go with the Forest Management Division.

f. Abolish the Forest Investigation Division. Create a Forest Research Division and transfer to it all the functions of the abolished Division, except those of the Forest Products Research Section which should be transferred to the proposed Research Institute. Transfer the administration of forest experiment stations to the Forest Research Division.

The Forest Investigation Division performs research functions now also being undertaken by experiment stations under the direct management and supervision of a chief of forest experiment stations. The integration of these activities into a Forest Research Division will eliminate this overlapping of activity.

g. Rename the Division of Forest Lands and Maps, the Forest Land Uses Division.

The change is necessary since the preparation of maps is now being done in the Land Classification Division.

h. Rename the Land Classification Division, the Domain Use Division.

Land classification is more often used for studies to designate the types of soils occuring in a given area and their adaptability to various uses. The work of this Division is to establish that portion of the public domain which should be placed in inalienable permanent forest reserve and that which should be available under varying conditions for settlement or other uses. The change in title will more nearly reflect this basic function. It will also tend to avoid suggestion of duplication with the land classification work of the Bureau of Soils.

5. *Reduce workload on paper processing.*

a. Establish a program of procedural an-

alysis, work simplification, and forms control designed to standardize methods and procedures, reduce delay, and eliminate backlog.

The license, concession, and related granting of use rights to the public domain entail a heavy and continuing volume of paper processing which will increase with passing years. This work is not being handled in a current fashion nor in the most efficient fashion. Backlogs are large and increasing. Delays in reply to field submissions of requests for use rights are routine and have a serious effects upon the Bureau's public relations and enforcement ability. Renewals of routine annual concessions are never issued on time. Important renewals of concessions are often a quarter behind with the concessionaires faced with the alternatives of operating illegally or deferring operations with resulting costly layoffs. In part, decentralization of authority will resolve this problem, but a great part yield to nothing but costly increases in staff or a reduction in the time and effort required to process the necessary papers. There is evidence to support that the current workload can be handled with the present staff if a thorough study were made of procedures, methods, and forms used. Assistance will undoubtedly be required for this work, but the benefits from a well-conceived self-analysis program, possibly spear-headed by the Assistant Director, would produce sizeable rewards.

b. Attempt to secure external assistance in the evaluation of current administrative methods for handling paper.

The Bureau should develop further the statistics on paper workload now handled by the central office to establish its size and significance as well as to indicate the backlog. On its completion, the Director should explore the possibility of securing help from: The Department; Budget Commission; Congressional appropriations to resolve the backlog through increased staff, or through employment of personnel specifically trained in the study of such matters.

c. Establish and currently maintain a Manual System for the promulgation of all general orders, delegations, instructions, standards, and criteria.

A major weakness of the present administrative system in the Bureau is the lack of standard operating procedures or written manuals. Such a manual is essential to any entity with field offices. Delegations of authority must be accompanied with instructions on its use. Changes in policy and practice must be systematically transmitted to all employees. The Bureau of Forestry has a manual which has not been revised or made current since its publication in 1932. This manual should be revised to reflect modern communication practices and made to incorporate present procedures and the results of procedural and work simplication studies. It should define the authority delegated to subordinate officials, the policies and criteria for operation, and the procedures and method to be followed by subordinate personnel in the performance of their functions. Procedures for its preparation should be defined. Responsibility for maintaining the manual current should be assigned to the chief of the Administrative Services Division.

6. *Increase funds available for the purchase, replacement, repair, and maintenance of equipment.*

One of the major obstructions to the performance of Bureau activities in the field is the inadequacy of appropriations for the acquisition of equipment and for its adequate maintenance and replace-

ment. For example, Provincial Forest District No. 43 does not have a single motor vehicle. Yet its employees are required to inspect major timber concessions and police vast public forest reserves. In other districts vehicles were observed to be unusued for long periods pending availability of excessively limited maintenance funds. Because of unavailability of such vehicles the personnel were idle.

Forest Products Research Institute

COMMENTS

The effective utilization of our forest products is an essential aspect of our economic development. It is therefore necessary that vigorous and extensive research and development programs be instituted to improve techniques and methods in wood production and utilization, increase efficiency, reduce waste, and develop new forest products industries. The Commission believes that a semi-autonomous entity in the University of the Philippines free from routine procedures and controls is best for the implementation of this program. The proposal below for a Forest Products Research Institute will not involve additional appropriations since this entity will be equipped with facilities and resources currently available in the Forest Products Laboratory and Forest Products Research Section of the Bureau of Forestry.

RECOMMENDATIONS ON REORGANIZATION

1. *Create a Forest Products Research Institute.*
   a. Abolish the Forest Products Laboratory (Counterpart Project No. 474) and the Forest Products Research Section of the Forest Investigation Division; transfer their functions, appropriations, personnel, property, equipment, and records to the proposed Forest Products Research Institute, together with such personnel as may be necessary.

The forest products industries, including logging, lumber production, veneer and plywood manufacture, furniture manufacture, and the production of the great variety of lesser products and by-products constitute one of our major sources of income, besides providing means of livelihood for a considerable portion of our population. Such industries are also important in the internal economy of the country, supplying much of our needs for structural materials, furniture, resins, paint oils, firewood, and other products.

The present methods of harvesting timber, producing lumber and plywood, and manufacturing wood products waste from 2/3 to 3/4 of the wood that grows on the land. This is not willful waste but results from wasteful methods used by the industry as well as the inability to find profitable use for what is now considered waste. This waste constitutes an enormous economic loss to the nation. There is therefore a clear need for an aggressive research and development program to improve techniques and methods in harvesting and production, to find new and improved uses for wood and its by-products, and to develop new industries and processes to obtain the maximum utilization of timber.

The volume of research needed in forest products industries is too great and the need for it is too urgent to preclude such research being made part of the work of an institution engaged in a wide field of reseach or inhibited by slow and cumbersome administrative regulations not suited to the research activities now approved or required. The establishment of the Forest Products Research Institute will not entail additional expenditures. There exists a Forest Products Labo-

ratory with adequate plant facilities to perform the necessary research work. Converting the laboratory into an Institute would endow it with the flexibility so necessary in research, improve its ability to accomplish its purposes with maximum efficiency in the use of manpower, money and equipment, provide for industry representation in its management, facilitate the development of a private service function, and encourage its operation from private funds.

The Forest Products Laboratory (CP 474) and the Forest Products Research Section in the Bureau of Forestry therefore should be abolished and their functions, appropriations, property, equipment, and records transferred to the Forest Products Research Institute, together with such personnel as may be necessary.

b. Place the Institute under the University of the Philippines for policy coordination.

The Institute should be under the general supervision of the University of the Philippines. This is because the Institute's research is closely related to the research work of the College of Forestry and the training of foresters. The Institute's work will also be of major interest to the Bureau of Forestry. To insure coordination between the Bureau of Forestry and the Institute, the Director of Forestry should be the *ex officio* Chairman of the Board of Directors of the Institute. The Bureau of Forestry should continue to disseminate to the general public the results of the Institute's research in conjunction with other informative materials. Specific requests for technical information should be made directly to the Institute. The powers of the Institute should be vested in and exercised by the Board of Directors.

The composition of the Board is such that the timber and wood-using industries are represented with one member each while a third should come from and represent the general public. The management of the Institute should be vested in the Director. By not making him a member of the Board of Directors, a clear distinction between the policy-making powers of the Board and the execution and implementation of such policies is maintained.

c. Provided that the organization of the Institute should include a Director, an Assistant Director, and the following divisions: Administrative Services, Wood Technology, Industrial Investigation, Chemical Investigation, and Wood Preservation.

The Assistant Director should be the immediate aide of the Director and should assist him in managing the operation of the Institute. The divisions should have the following responsibilities:

1) *Administrative Services Division* —responsible for the personal actions, budget and finance, procurement and distribution of equipment supplies, publications and information, maintenance of records, and other related activities.
2) *Industrial Investigation Division*— responsible for the research into the mechanical properties of wood and the comparison and evaluation of different species of wood with regard to their behaviour or response during processing operation.
3) *Wood Technology Division*—responsible for conducting studies into the anatomy of wood for the purpose of identification, investigation of the suitability of wood for veneer and plywood, and utilization of minor forest products.

(*Continued on page* 64)

Keep the Philippines Green

FRANCISCO ABJAY
District Forester *

It is indeed a pleasure as well as a distinct privilege to be invited as your guest speaker in this gathering tonight. I feel highly honored in having given this rare opportunity of presenting before this distinguished group of Leyte Rotarians a forestry subject many of you, I presume, may have but a very superficial idea of its importance insofar as it affects our well-being as a nation. I propose to talk tonight on "Forest Conservation Program" as adopted by the First Philippine Forest Conservation and Reforestation Conference on October 1, 1954.

"Forest" as a theme of convention appears dull and quite uninteresting when it is treated in its limited sense as being merely a source of raw materials commonly known in the market as lumber. However, when we think of the forest as a living matter, a woodland, or a large area of land densely covered with tall plants we call trees, which is of vital importance to the welfare of every community not only in affording a steady supply of timber and other forest products of economic value but also for its influence in minimizing erosion, regulating stream flow and conserving water for irrigation and water power, our idea of a forest becomes broader in scope to the extent of urging us to come to realize our inescapable obligation as a civic organization or as a simple civic-spirited citizens to do something toward helping implement in some measure the present forest conservation program as adopted by our government. We come to understand that the forest is at once very indispensable for the economic prosperity of the people and for the sustained development of industries necessarily dependent on raw materials extracted from the forest. Consequently, and in consideration, therefore, of the foregoing proposition of facts, the Bureau of Forestry, has come to promulgate the basic policy in the management of the forest.

In line with this policy adequate measures are adopted from time to time aimed at regulating the cutting and utilization of timber and other forest products of economic importance so as to maintain the condition of the public forest in as high a state of productivity as possible and to prevent undue destruction of its natural power of reproduction. In the execution of this forest policy, the Bureau of Forestry never lost sight of the fact that the public forest is the patrimony of the people and as such it must be properly managed for the benefit not only of the present generation but also of the generation yet unborn. In providing, therefore, for the disposition of timber and other products of value from the public forest, and for the use of forest land, the interest and welfare of the nation are being considered always of paramount importance over and above those of private entities or corporations.

Aware of the tremendous drain of our forest resources in recent years brought about by destructive method used in mechanized logging operations in some section of the country and by indiscriminate clearing of the public forest in the practice of cultivation known as "kaingin system"

* Speech delivered before the Leyte Rotarian, May 5, 1956.

by our Filipino brothers, both Christian and non-Christian alike, the Honorable Secretary of Agriculture and Natural Resources deemed it necessary to call the First Philippine Forest Conservation and Reforestation Conference in Manila late September, 1954 for the purpose of adopting a comprehensive and workable program of forest conservation in the management of our forest resources. As adopted on October 1, 1954, the main features of the program may be briefly stated as follows:

I—*Natural Balance of Forest Cover*:

1. As soon as possible but not later than three years from the promulgation of the program, permanent forest areas shall be determined and that the permanent forest blocks shall be classified as follows:

(a) Protection forest including National Parks, and

(b) Production forest.

2. Protection of Forest shall be subjected to minimize logging operations.

3. Unforested areas of protection forests shall be given priority in reforestation to be undertaken either by the government or by private initiative including civic organization.

4. In the provinces or areas where the forest has already been reduced to an amount less than the required minimum, no new forest concession will be granted until the area of forest has again reached the required minimum, provided, however, that this prohibition will not apply to forest capable of sustained yield management.

II—*Logging System Under Sustained Yield*:

1. Logging operations on all areas declared permanent forest or areas not yet declared permanent forests but likely to be declared as such will be under sustained yield management. To this end, all such areas, as a general rule, the selective logging system will be enforced. This new regulation will be enforced beginning July 1, 1955.

2. All cutting rules shall be enforced.

3. Licenses who cooperated fully in the efficient management of the forest will be granted an extension of their licenses up to 25 years, renewable for another 25 years.

4. Forest research will be intensified.

III—*Forest Utilization in Relation to Forest Conservation*:

1. The Secretary of Agriculture and Natural Resources will create a Departmental Committee to—

a. Promote the commercial utilization of by-products from logging and sawmilling operation for possible manufacture into paper pulp, etc.

b. Encourage the utilization of commercial and industrial purposes the bulk of tree species not at present utilized but left to die and rot.

c. Study the economic use of wood shavings and sawdust especially for fuel of trucks.

d. Promote the reduction of sawmill waste through the use of improved and more efficient method.

IV—*Physical Protection of the Forests*:

1. Boundaries of permanent forests will be clearly marked by stenciling trees along the boundaries with a legend "Permanent Forest".

2. Provide one forest guard to protect a forest sector of about 2,000 hectares each.

3. In the expenditures of reforestation fees, priority shall be given to protection of the forest ahead of reforestation.

There are major problems confronting the Bureau of Forestry in the management of the public forest and in implementing the conservation program as adopted since October 1, 1954. These problems may be summarized as follows:

(1) Insufficiency of technically trained personnel for the early implementation of program one (1): Selective Logging.

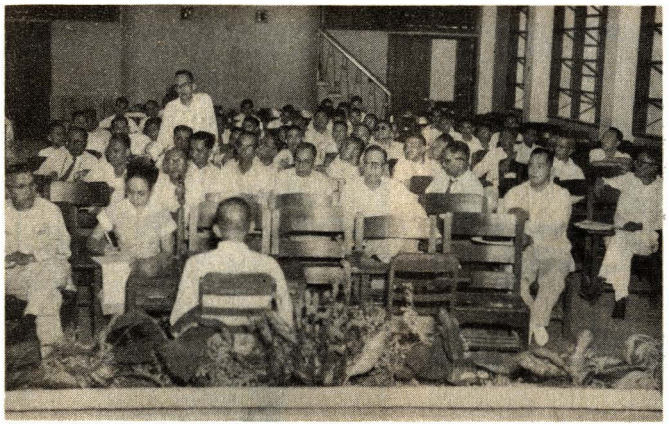
(2) Survey and establishment of per-

(*Continued on page* 63)

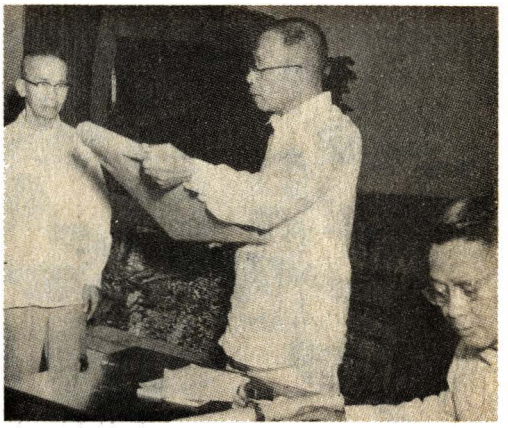
Moving Up Day Scenes

Congressman Jacobo Z Gonzales, 14th Moving-Up Day Convocation speaker.

The 1956 B.S.F. and Ranger Classes.

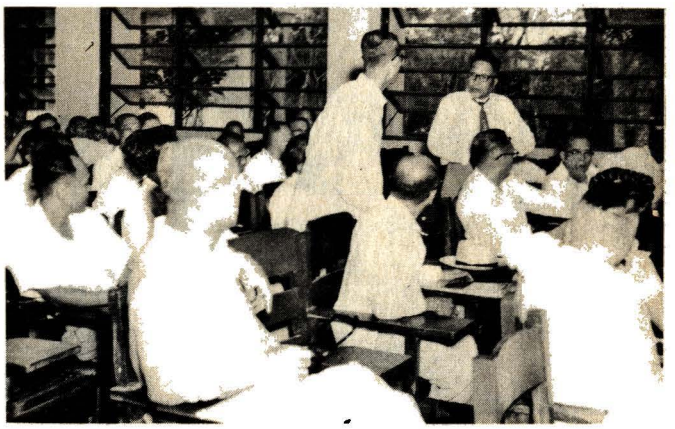


Director & Dean F. Amos presiding at the College Alumni Reunion. Forester Chinte speaks on behalf of the FORESTRY LEAVES.



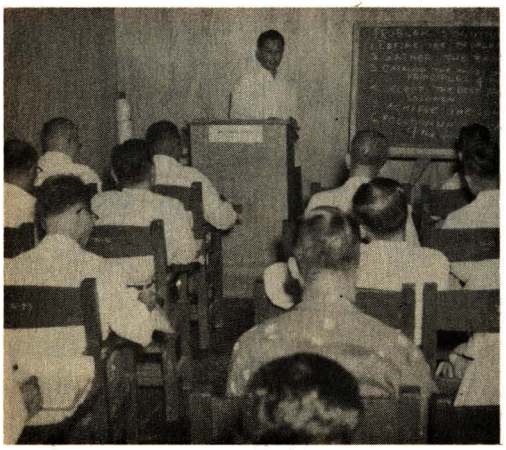
Director Amos reading citation to Assistant Dean Mabesa, elected most distinguished alumnus of the year. At right Alumni Secretary Zamuco listens.

Asst. Dean C. Mabesa accepting the award from Dean F. Amos. Prof. G. Zamuco, alumni Secretary, looking on.

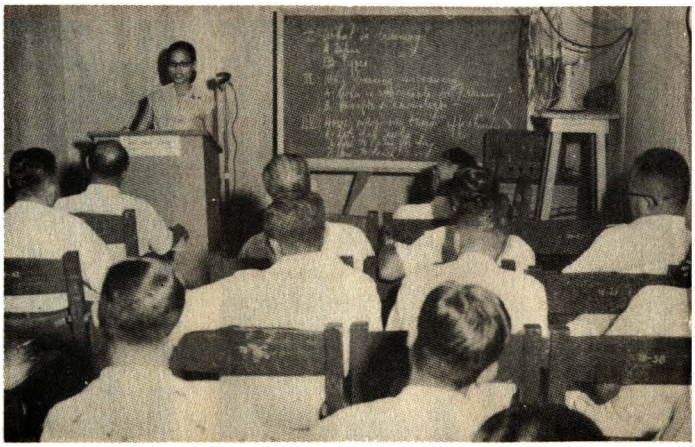


Foresters Sajor and Asiddao in a heated debate on forestry publications at the Alumni Reunion.

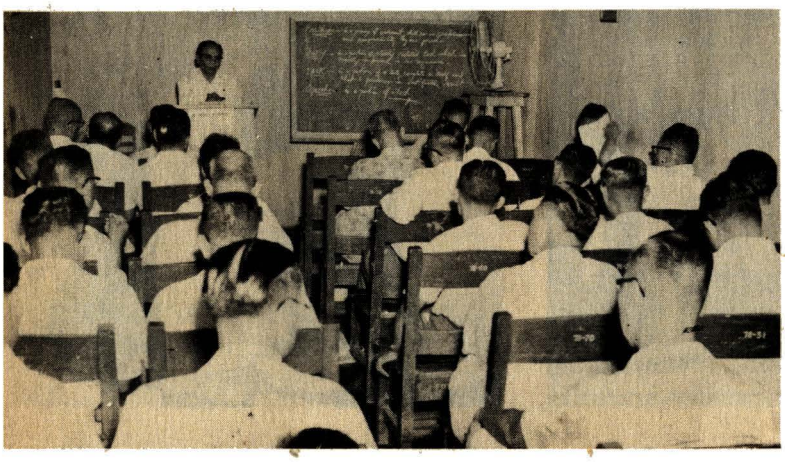
B.F.-II In Service Training Class Scenes



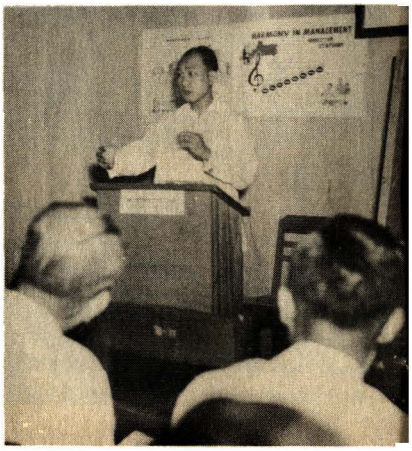
Prof. Ramon Garcia of IPA explaining the case studies and methods of solving them.



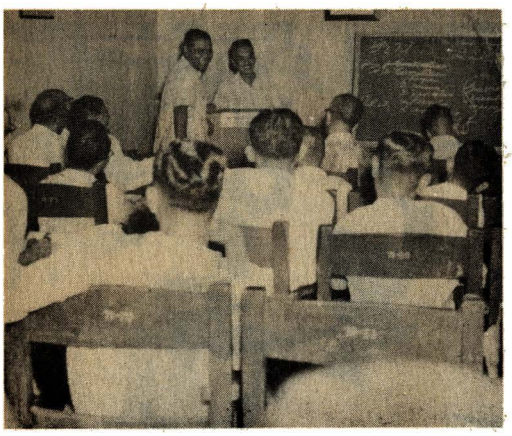
Miss Ligaya Jose PCS Training Officer stresses the responsibility of government employees.



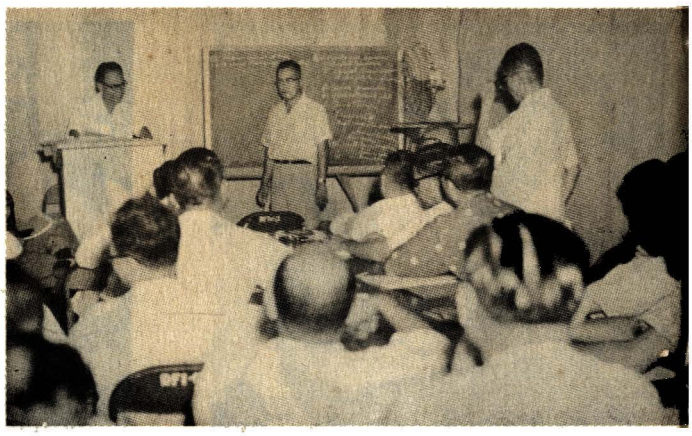
Forester Serevo, B.F., explains the methods of discipline.



Prof. Hernani Esteban explains principles of management



The "Molave Club" Prexy and For. Guerrero make plans with club members for their graduation exercises.

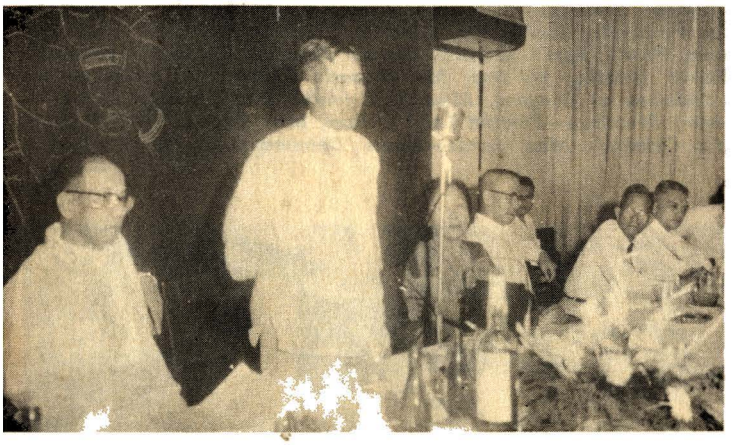


Forester Viado, Adviser of the Club entertains a suggestion from For. V. Paras, the PRO.

Graduation Exercises for the B.F.-II I.T. Graduating Class

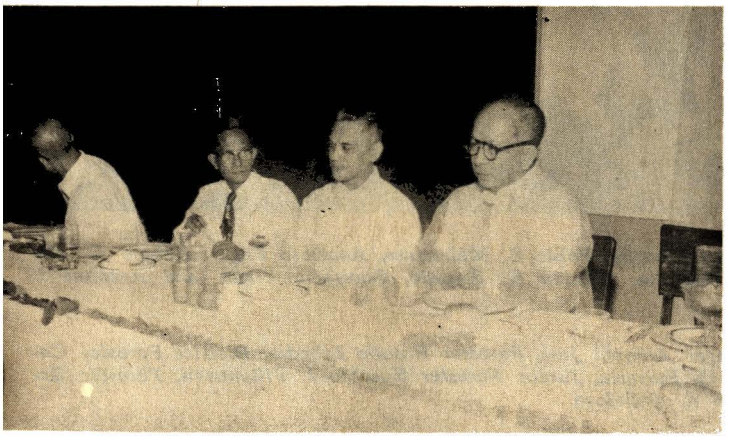
Secretary Rodriguez expresses his appreciation to Director Amos with a bouquet of flowers.

Forester Nablo receives his diploma from For. Teofilo Santos, B.F. Training Officer while Director Amos and Sec. Rodriguez look on.

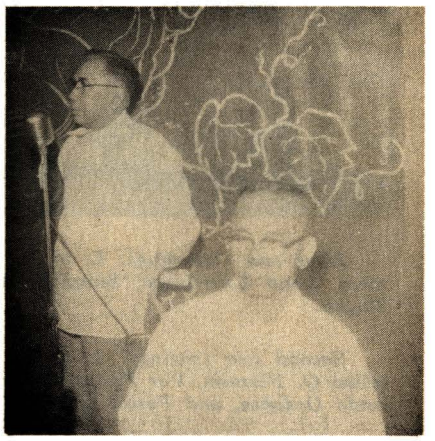


Secretary Rodriguez addressing the B.F. 2nd I.T. graduates

Forester Jacalne receving his diploma and is being congratulated by the Secretary.



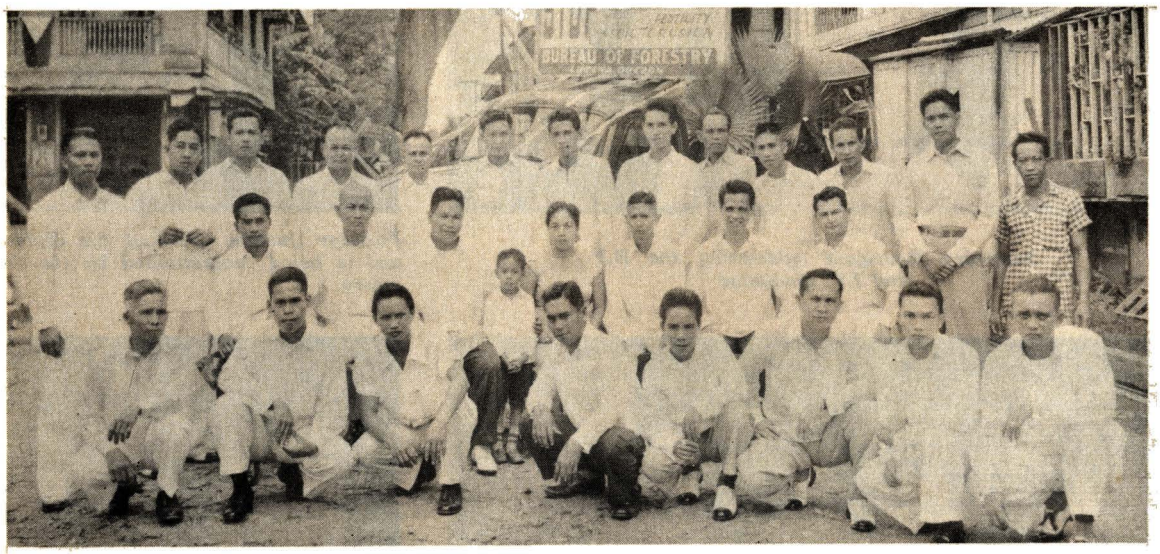
At the Speaker's table Mrs. J. G. Rodriguez, Asst. Dean Dean Mabesa, Forester Carlos Sulit, Prof. Jose B. Blando and Atty. Acogido, MC at graduation exercises.



Forester Eugenio de la Cruz inintroducing the Guest of Honor, Secretary Juan Rodriguez. In the foreground is Asst. Dean Mabesa.

HERE and THERE

From left to right: Junior Forester Vedad—O.C., Gingoog Forest Sta.; Forester Timoteo Quimpo—Dist. Forester of Mis. Oriental; Ranger Florenio Guirnela—O.C., Balingoan For. Station; Mr. F. Rosabal—Member of Prov'l. Agri'l. Council; Mr. Fortunato Acetre; Dr. Dionisio Parulan—Municipal Councilor of Gingoog; Mr. Narciso Reyes—Chairman, Prov'l. Agri'l. Council; Mayor Perfecto Ubalde of Gingoog, Mis. Oriental; Undersecretary Jaime Ferrer planting his tree; Mr. Nestorio Ubalde—O.T. Licensee of Gingoog, Mis. Oriental; Ex-Mayor Julio Ganaban of Gingoog, Misamis Oriental; Mr. Fernando Torres—Agricultural Extension Service; Mr. Simeon Mendoza—District Land Officer, Mis. Oriental; Mr. P. Emmata—Pres., Luzonian Club, Gingoog, Mis. Oriental; Miss Jamis—Home Demonstrator; Mr. Maximino Reano—Soil Technologist.



First row (kneeling): L. to R., Forest Guards: Pablo S. Melendres, Anacleto Lagar, Isabelo D. Romero, Leon Capistrano, Simplicio R. Abulencia, Alfredo E. Ragudo, Bonifacio Zuela, and Anselmo I. Ilagan.

Second row (sitting): L. to R., Ranger Antonio Jusi, Forester Braulio Libadia, District Forester Catalino Q. Ferreria, Ver Ferreria, Mrs. C. Q. Ferreria, Junior Forester Eusebio I. Villanueva, Forester Orlando Ordoñez, and Forest Guard Ramon E. Peñalosa.

Third row (standing): L. to R., Forest Guards Victorio Maraig, Jaime B. Marquez, Armando "Commander" Racelis, and Venacio Catalla, clerk Domingo Enriquez, Ranger Tomas M. Binua, Nurseryman Rosauro Rafa, Manuel Sanvictores, Forest Guards Guards Agaton Miano, and Damaso Mendoza, Nurseryman Eugenio Abella, Ranger Conrado Cardenas, and Helper Rufino Vergara.

SCHOOL FORESTS*

Love of trees is essential to an understanding of the importance of forests to national welfare and prosperity.

Civilizations have disappeared through a lack of this understanding. Proud and powerful empires have vanished under the stress, not of an involving army, but of the reckless destruction of their trees and the consequent loss of the soil and water which supported human life. The threat of similar disaster exists today. It may be seen in the spread of the Rajputana desert gnawing into the very heart of India, and in the desert encroachment on to marginal lands south of the Sahara.

Apart from the protection which forest cover gives to a nations's soil, water resources and climate, the tree is a thing of beauty and of use in man's immediate needs. This is well expressed in "The Prayer of the Forest" appearing in a special Arbor Day number of *Unser Wald,* a German forestry publication:

"Man! I am the Warmth of your home
in the cold winter night and the protective shade when summer's sun is strong.
I am the Framework of the roof to your house and the Top to your table;
The Bed in which you sleep and the Timber which you fashion your boats.
I am the Handle to your hoe
and the Door to your hut.
I am the Wood of your cradle
and the Boards of your coffin.
I am the Bread of kindness
and the Flower of beauty.
Hear my prayer: destroy me not!"

Trees adorn our homesteads and our cities. They shelter our farms and our wildlife and afford peace and rest from the worries and turmoil of our daily toil when we seek healing presence in recreational parks and national reserves.

Their abundance or absence may bear a direct relationship to industrial development and expansion, social progress and national strength.

From a wider view, the protective role of forests may affect not just one nation but an entire region, for their influence takes no account of national frontiers. Productive forests, too, are unevenly distributed over the world's surface, as are the varieties of hard and soft woods, the broad-leaved and the coniferous species. A natural deficiency in one place may have to be made up from elsewhere. Therefore, international understanding is also essential to a more equitable distribution of the produce of the forest, and to a worldwide raising of standards of living as they depend on forest values.

For all these reasons, and having considered the initial step required, the Sixth Session of the Conference of the Food and Agriculture Organization of the United Nations adopted the following resolution:

The Conference,

Recognizing the need of arousing mass consciousness of the aesthetic, physical and economic value of trees,

Recommends that a World Festival of the Trees be celebrated annually in each member country on a date suited to local conditions.

It has long been a tradition in many countries to hold annually a tree or forest festival. The origin may indeed date back to antiquity, and be lost in the dawn of religious feeling and awe for what trees represented. Tree mythology, at which we

* Extract from World Festival of Trees, Forestry Development Paper No. 2).

may perhaps now smile tolerantly, may still contain the germ of sound physiology and natural scientific wisdom. Therefore, whatever may be the origin of tree festivals, it is worth turning to good account such manifestations towards FAO's goal—the conservation and wise use of forests everywhere.

* * *

In this regard, consideration must be given to the education of children in the understanding of forest values. Schools can ensure full attendance and participation in forest festivals, and therefore offer the most valuable opportunity for instituting a successful drive for national, and, as we shall see later, international co-operation in safeguarding and developing forest resources.

Continuity of effort and of purpose are vital to success. It is not enough to put a tree in the ground and sing a song or say a prayer over it. Someone must see to its subsequent care, its needs of light, water, and fertile soil, and guard it against damage. If these requirements are neglected, the fruits of the planting are thrown away and, what is worse, the hopes of establishing an inspiring example to maintain and even to increase the enthusiasm of subsequent organizers of Arbor Day, are destroyed. The needs of a tree may be attended to by park-keepers, public garden employees and qualified state foresters, but if these needs remain the responsibility of the individual who planted the tree in the first instance, the planting ceremony is of far greater educative value.

Schools are one of the few organized institutions which have a lasting influence on almost every individual making up a nation's population; impressions gained from teaching, precept or example during the earliest formative years of a child's development last to old age. Schools are, furthermore, admirably suited to care continuously for the young trees planted in the neighborhood, especially where forestry and the maintenance of woodland become a regular feature of their activities.

Moreover, a child's pride of achivement in school tree-planting and tending activities may be communicated to, and also shared by, its parents. And if the child returns as a parent to visit the school he will revisit the trees he planted, take an interest in their exploitation and usefulness to the school in repairs to buildings, in new constructions or in the wood-working classes, and he will in turn communicate this interest and enthusiasm to his own children.

Schools therefore offer the greatest scope for inculcating and awareness of the values of trees and woodlands, and for keeping these values present even in the adult mind.

All this was early realized in the country where Arbor Day originated. To quote from *Arbor Day,* a bulletin issued by the United States Department of Agriculture: "Under the direction of (the) Superintendent of Schools . . . the schoolchildren of the city had a prominent part in the celebration, which included a parade through the streets to Eden Park, where trees were planted in memory of distinguished men. About 20,000 children participated in the singing and reciting and in putting the soil about the trees, which had already been set in place. Two new elements were introduced into the Arbor Day plan on this occasion—the day was made a school festival and the practice of planting memorial trees and groves was inaugurated."

Such developments were largely responsible for the spread of the movement throughout the country, and the occasion became a festival for schoolchildren combining utility with instruction and pleasure, and served to impress the value of trees and the need for conservation on the minds of the young.

* * *

Laws throughout almost all the States of the United States of America relating to Arbor Day now include mention of schools. For example, the provisions of the

laws of Arizona read: "The authorities in every public school shall assemble the pupils in their charge on Arbor Day and pro vide for and conduct, under the general supervision of the State superintendent of public instruction, such exercises as tend to encourage the planting, protection, and preservation of trees and shrubs and an acquaintance with the best methods to be adopted to accomplish such results and shall cause trees to be planted around the school buildings with appropriate and attractive ceremonies."

In Arkansas, the study of fire prevention is included in the course of study in the primary grades of all public schools, "and definite instruction in the said subject shall be given to each pupil and student therein, and a period of not less than 20 minutes during each scolastic week shall be devoted to the study and consideration of the said subject." Authorization is also given to adopt textbooks to be used in the teaching and study of fire prevention. California sets a date for the observance by schools of a conservation, bird and arbor day. Its observance will not constitute a holiday "but by including in the school work of the day suitable exercises having for their object instruction as to the economic value of birds and trees and the promotion of a spirit of protection toward them and as to the economic value of natural resources, and the desirability of their conservation." Boards of school trustees and city boards of education are empowered to conduct courses in forestry, acquire forest land by lease or purchase, afforest or reforest and plant trees, shrubs and vines on these lands or any public lands placed at their disposal, and transport pupils to places where forestry work is being done and practical demonstrations can be held.

In many other States, Arbor Day is a holiday, and educational officers and teachers are required to have the pupils observe the day by the "planting of trees or other appropriate exercises." As a variant, a list of school holidays includes Arbor Day provided it is observed "for the purpose for which it is designated by the Governor and Council."

In Iceland there is a Students' Afforestation Day of Act by which tree planting is made compulsory on one day a year during school term and at a time when afforestation conditions are favourable. The planting is under the control of a competent foreman and in the vicinity of the school. Other provisions are also made in cases where the conditions in a given locality are not suitable.

* * *

Schools have in many countries taken an active part in planting ceremonies organized by governments. In the case of city schools or where school grounds are fully planted or unavailable, the ceremonies may take the form of avenue or street planting, or the adorning of parks, memorials and entrances to public buildings in urban districts. In rural communities planting activities may be more extensive and range from roadside planting to village firewood plots, shelter belts, school forests or watershed and soil-protection schemes. In some countries, as for instance the United Kingdom, the need for a broader scope is recognized and the national forestry authority, in this case the Forestry Commission, as well as providing the seedlings for "Arbor Day" planting ceremonies, also allocates plots of existing forest in various stages of development to schools who "adopt" them and are responsible for their care and maintenance. Such a system offers all-the-year-round opportunity to schools or to smaller units within the school, such as clubs and Scout groups, for forest activity.

* * *

The sense of responsibility, and the interest can be much greater if, either through government grants (as for example in Victoria, Australia) or by raising funds

by an appeal to parents and friends, the school were to procure land close by, and make it the children's responsibility to reforest or plant the area. In Spain, plantings on "Tree Day" are actually being confined to "School Forest Plots." All facets of woodland development and care should be available, from seed collection and nursery work, to land preparation, planting, and the care and protection of young trees; and for the older boys as they grow up with the trees, initial thinning of their plots, forest mensuration, utilization and marketing of the older trees. The economic value of the forest will certainly be brought home to the older children when they have had a hand in the utilization and marketing of the produce from their school forest. In Ireland, the supply of seedlings to schools is reported a failure. Perhaps the active participation of children in tree nursery work would have taught them the value of each seedling.

Forestry and the care of woodland could become a regular feature of a school curriculum and "Arbor Day" could take the form of intensive planting by the entire school at the onset of the planting season. Lack of knowledge by teachers could be made good by qualified state foresters assisting and supervising the work, and forestry could be integrated in the more normal routine of lessons as a topic of almost every subject taught—in spelling and writing, literature, languages, mathematics, and even music, in addition to botany, biology and allied subjects of natural science, geography, drawing and woodwork.

The school forest could become a recreation ground and an open air classroom, and achievements in both planting and care, the collection of forestry material, or drawings, and writings in prose and poetry, in which the tree was the subject, could be stimulated and rewarded by nomination to a "forestry club," where the strong appeal of badges, pins or buttons as awards could be fully exploited.

Boy and Girl Scout organizations, often an important school activity, could also participate, especially during holidays, in the care of the school forest and of the nursery. One of the aims of this world-wide organization in forest protection, which has been put into practice in many countries by active planting schemes. From the United States we learn of conservation projects in compliance with the President's request that in 1954 they undertake "to arouse public recognition of the needs for adequate protection and wise management of our soil, water, mineral, forest, grassland and wildlife resources."

"Junior Forest Fire Fighter" groups have been formed in many communities, pledged to prevent and fight fires, and the effect of example on parents when the family is out on a picnic is invaluable, especially in areas where fires occur frequently.

Where school magazines are exchanged with other schools, articles and reports, drawings and photographs on the subject of the school forest can appear and would do much to encourage other schools to begin a similar scheme.

"Arbor Day," the culmination of a year of forest activity in the school, and the inspirational start of a new year with fresh courage and energy, when every child in the planting out of trees, could perhaps be preceded by the showing of films and by illustrated lectures, emphasizing the value of conservation of forest resources, and the effect of their misuse. Films and slides taken on previous tree festivals, pointing up the development and progress made since then, would be of especial interest. "Arbor Day" might be made to coincide with the principal annual school gathering or holiday, or with "Founder's Day," so that parents and friends, as well as prominent public figures, could be encouraged to assist and take part in tree planting ceremonies.

Where urban schools cannot either

"adopt" or own their school forest, a partnership between an urban and a rural school can be arranged, the city school providing the funds, for instance, and the country school doing the work and supervision of the area. Visits by the city school, especially on "Arbor Day" when the children can participate in the planting, would be of tremendous value in developing not only the forest but the interest of town dwellers in the subject for which "Arbor Day" is designed.

In India, government and state shields are annually awarded to educational centers, as well as to adult communities, for meritorious activities in forestry. In Italy, prizes are awarded to children who have given particular attention to the care of trees, and tours are arranged to observe the results obtained in other areas and in previous years.

"Arbor Day" for children and adults alike can and should be the culminating point of a year of achievement and the beginning of another year of working together. It appeals to the spirit of youth and carries with it the inspiration to work together toward the betterment of the community, the nation, the world.

* * *

That celebrations in which the tree is the subject have to date been a national rather than an international concern can readily be established by a rapid review of the diversity of names given, in different member countries, to occasions whose aims are essentially the same.

Apart from the more commonly used "Arbor Day," or "Arbor Week," "Tree Holiday" and "Festival of the Trees," we find such names as "Greening Week" of Japan, "The New Year's Day of the Trees" of Israel, "The Tree-loving Week" of Korea, "The Reforestation Week" of Yugoslavia, "The Students' Afforestation Day" of Iceland and "The National Festival of Tree Planting" of India as variations on a theme which denotes a specific opportunity for impressing upon those present the aesthetic and utilitarian value of trees. The festival is therefore both a patriotic celebration and a symbol of faith in the future. How much more valuable then would the day of national celebration be if it could also convey a feeling of international friendship and co-operation.

As in awakening and developing a realization of the importance of trees, and in establishing a lasting appreciation and love of them, it is the younger generations that are best fitted to learn, so surely is this the case in fostering an international feeling of friendship and world peace.

* * *

The exchange of indigenous tree seed between the schoolchildren of one country and another, and the establishment of "forests" or "groves of nations" would not only be of highly educative value to the children, but would also be a source of considerable community interest and an effective means of promoting goodwill among nations. Many nations have adopted trees, shrubs and flowers as national emblems. The supply of seeds of such plants to other nations' schools would provide for symbolic manifestation of friendship and co-operation. (In this connection, attention is drawn to the export and import formalities and quarnatine regulations necessary for such exchanges.)

Around such practical demonstrations of the fellowship of nations the normal school activities in geography, natural science, history and languages, literature and even art could usefully revolve during the period of planting. Exchange of letters, herbarium collections, compositions and drawings on forestry topics could be made between the schools of the nations effecting exchanges of seed, and appropriate recognition of accomplishment established either within the school or by the schoolchildren and authorities of the other country. A child would attach especial value to a prize awarded by

(*Continued on page* 63)

Some Observation . . .

(*Continued from page 34*)

B. FOREST UTILIZATION
THIRD YEAR

FIRST SEMESTER

	Units
Wood Technology	3
Forest Pathology	3
Surveying Ia	3
Lumbering 2	3
Mathematics 8 (Anal. Geometry)	3
Electives	2
	17

SECOND SEMESTER

	Units
Looging	3
Forest Entomology	3
Surveying Ib	3
Statistics II	3
Electives	5
	17

SUMMER WORK: Students may select from Forest Products, Lumber Manufacture, Pulp and Paper or Plywood Manufacture; Kiln Drying. 6 weeks, 6 units.

FOURTH YEAR

FIRST SEMESTER

	Units
Business Law I	3
English 3	3
Forest Products	3
Wood Preservation	3
Research Problem	2
Electives	3

SECOND SEMESTER

	Units
Business Law 2	3
Forest Protection	3
Research Problem	3
Electives	8
	17

Suggested electives in addition to those mentioned in the college catalog for the current school year.

1. Light Construction—(2)
2. Lumber Merchandizing and salesmanmanship—(2)
3. Portable sawmills—(2)
4. Timber Mechanics—(2)
5. Woodworking machinery—(2)
6. Elements of marketing and transportation—(2)
7. Glues and Finishes of wood—(2)
8. Kiln Engineering—(2)
9. Veneers, adhesives & plywood—(3)
10. Pulp and Paper technology—(3)
11. Physical Chemistry—(3)
12. Logging Engineering—(4)
13. Elements of Finance—(2)
14. Mill Management—(2)
15. Microtechnique—(3)
16. Statistics 12—(3)

Restriction of Log . . .

(*Continued from page 27*)

tended in violation of that intention, to loading and unloading on private wharves for which the government has not invested any amount.

The modification of our tax structure would encourage additional investments to develop and expand this dollar producing industry. It will inevitably result in bringing under production wider forest areas, with more revenues collectible out of increased output, and more opportunities for employment among our laborers.

There are, of course, other problems facing the industry and I would like to submit them to you in the future for your consideration. In your wise approach to the problems of the trade, I am confident that you will take into account the foregoing consideratoins.

Very sincerely yours,

(Sgd.) A. DE LAS ALAS
President

* * *

Private: "Sarge, one of the MP's just hung himself."

Sergeant: "Heavens' Did you cut him down?

Private: "No, he ain't dead yet."

* * *

"How'd you make out with you wife in that fight the other night?"

"Awe, she came on crawling to me on her knees"

"Yeah, What did she say?"

"Come out from under that bed, you coward."'

B. F. Notes

AGRICULTURE UNDERSECRETARY INVESTIGATES BASILAN SQUATTERS

Basilan City was host to Honorable Jaime N. Ferrer, Undersecretary Agriculture and Natural Resources, last week. He was sent post-haste by President Magsaysay to investigate the complaints of some 100 squatters of this City as contained in a telegram of Atty. F. Dianala Jo who represents the complaining squatters to the President dated March 13, 1956. Secretary Ferrer came to Basilan City on Tuesday, March 20, 1956 on the President plane. Accompanied by Engineer Erling Foss, of Denmark, he landed at Latuan aristrip at noon. He was met and welcomed by the personnel of the local Forestry Office led by District Forester Jose R. Claveria.

He got acquainted with the squatters problem and condition in a 2-hour meeting he held with all members of the Screening Committee of Basilan City created under Executive Order No. 116. This regular meeting purposely called by its Chairman, Forester J. R. Claveria, was attended also by Mayor Leroy S. Brown, Atty. F. Dianala Jo, representing the alleged 100 complaining squatters, Atty. S. J. Martinez and the technical staff of the Forestry Office. After due deliberations which showed the existence of conflict of the body in arriving at an effective solution to the squatters problem, he asked point-blank whether they want their Island City always green and told them that it is up to the City authorities and public spirited individuals whether they want to preserve their forest or not. The entire body rose in unison for the conservation of Basilan's dipterocarp forests. Whereupon, the Undersecretary advised the body to enumerate their decisions for the conservation of the City's forests giving due consideration to the amelioration of the squatters. Together with his findings, said decisions of the Screening Committee will be incorporated in his report of the case to the President.

Immediately after the meeting, the whole group then went to Barrio Concepcion to verify the area in question. Undersecretary Ferrer stopped at different places from Barrio Maligue to Barrio Matarling including Barrio Concepcion to observe the alleged improvements introduced by squatters inside the "resettlement area" now being subdivided into 4-hectare lots by the Bureaus of Forestry and Lands (the 2-party survey teams from the District Land Office at Zamboanga City began the work on March 5, 1956). The party returned to Isabela at about 5:00 P.M. as Atty. F. Dianala Jo failed to produce the alleged 100 complaining squatters.

Undersecreary Ferrer left for Manila at 6:00 A.M. the following day (Wednesday) to attend a meeting of the Cabinet at 9:00 A.M. scheduled that day. Before he left, he gave verbal order to continue the 4-hectare lot subdivision.

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Municipal Forestry Council of Odiongan Initiate Planting of Trees.

During the Arbor Week Celebration last July 24-31, 1955 the Municipal Forestry Council of Odiongan leads all other Municipal Forestry Councils in the program of tree planting. Among those in the picture are sitting: Mr. Pedro Formilleza (with hat) and Pedro P. Fradejos, all members of the Municipal Forestry Council of Odiongan; Forest Guard Pershing Menez, also member of the Municipal Forestry Council of Odiongan is shown planting a narra (Pterocarpus indicus) in the beautiful of all public plazas in Romblon province. Mr. Penaflor Ferrer, head teacher of Libertad Barrio School is also squatting as he looks on the tree planted. Others in the picture are Ordinary Timber licensee Jose Villamin, also member of the Odiongan Municipal Forestry Council (with hat), Mr. Ricardo Manzala a school teacher; Mrs. Inday M. Tobias (Municipal Teacher); Mr. Conrado Menez, Chairman of the Municipal Forestry Council, Ornum (teacher); Mrs. Francisca Servanez; Miss Angeles Medina, (teacher) Mr. Ireneo Fabon and school children of Libertad Barrio School, Libertad, Odiongan, Romblon.

The Municipal Forestry Council Chairman and member's term of office will terminate on June 31, 1956. The New Mayor of Odiongan Mr. Francisco Firmalo will take over as Chairman of the Odiongan Municipal Forestry Council on July 1, 1956.

TEODORICO MONTOJO
DANREA, PRO

AGRICULTURE UNDERSECRETARY JAIME N. FERRER VISITS GINGOOG

D-38, Gingoog, Misamis Oriental, May 19, 1956. Undersecretary Jaime N. Ferrer of the Department of Agriculture and Natural Resources was the guest speaker during the last day of the Seminar of the Barrio Council of Gingoog, Misamis Oriental, held in this municipality on May 19, 1956. He was introduced by Mr. Narciso T. Reyes, Chairman of the Provincial Agricultural Council in this province. Undersecretary Ferrer warned land speculators in this municipality who are making lucrative business out of the newly released areas by the Bureau of Forestry The subdivision party of the Bureau of Lands, now in Gingoog were cautioned by the Undersecretary to screen very well all land applicants as they might be acting as dummies of aliens and other people with already big land holdings. The Cebuanos are the worst farmers he said. He encouraged the farmers to plant trees in their farms to prevent soil erosion.

An open forum followed his speech. Most of the questions answered deals with land acquisition, needs of feeder roads and pre-fabricated school houses. He was surprised to have noted in this municipality the existence of several "squatter organizations."

Lumber Inspector Gregorio L. Santos accompanied the undersecretary during his trip in the province. Barrio roads in some places in Luzon are very much better than the National High Way in the province of Misamis Oriental, he said. He is of the opinion that Mindanao should be provided with railroad transportations. He commented that constructors are engaged in logging business. —*Greg L. Santos.*

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US MAPPING AGENCY THANKS BUREAU

Arthur L. Bust, a special assistant for maps of the U.S. Department of State, thanked the Bureau of Forestry in his letter to Director Felipe R. Amos on February 4 "for the courtesies which were extended to Charles B. Ferguson during his recent visit to your office." Ferguson who recently visited the Bureau was given maps and publication and were received in Washington, which were "of considerable value to us."

The mapping agency will send the bureau a group of publications and maps exchange for the material which the bureau gave him and it will include national arboretum, cinchona propagation, pests of cinchona, table of equivalents, equipment and methods for harvesting farm woodland products, forest resources, and other valuable forestry matters.

CREATE A COMMITTEE FOR FORESTRY LICENSEES' QUALIFICATIONS

Secretary Juan de G. Rodriguez of agriculture created a committee to determine the best and most qualified applicant for timber and other forestry licenses for forest products in compliance with the directives of President Ramon Magsaysay last March 7. The members of the committee which include the Undersecretary of Agriculture and Natural Resources as chairman, director of forestry and the legal adviser of the DANR as members, will decide the best and most qualified applicant for forestry license in connection with the notice calling for public bids for said licenses.

It is noted that the decision of the committee as to the best bid is conclusive and final unless within fifteen days from the date of receipt by the interested party, an appeal is made to the President of the Philippines. All regulations, directives, memoranda or orders which are inconsistent with the provisions of the said general administrative order are repealed. The said order came into effect immediately following its promulgation on March 8.

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TREE FARM LEASES GRANTED IN N. ECIJA

Forty-two permits for tree farm covering a total of 123 hectares were recently granted by District Forester Tranquilino Orden, concurrently chairman of the Department of Agriculture and Natural Resources Employees Association of Nueva Ecija. These tree farm areas are located in Sitios Lanib, Cabangbangan, Pandan, Dipayab and Lutit, Municipality of Bongabon, Nueva Ecija.

There are 88 hectares already planted with 33,367 economic trees of different species such as coffee, 12,440; coconut—1,247; avocados—1,210; dalanghita—1,0000; lanka—945; Lanzones—690; calamansi—1,100; cainito—650; chesa—485; mango—380; atis—720; oranges—100; cashew—30; santol—50; benanas—2,020; abaca—300. These were actually counted by the forest guard detailed in the areas. The permittees will continue planting until all the remaining unplanted areas shall be fully stocked. This is a bright index that this province shall be a producer of fruits for commercial purposes.

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BF PARTICIPANTS IN THE 11TH ANNUAL PVL CONVENTION

The national commander of the Philippine Veterans Legion recently requested Director Felipe R. Amos that the Bureau of Forestry put up a booth in conjunction with the 11th annual national convention of the legion at Baguio City on May 10-13 this year.

Director Amos communicated with district forester Edilberto Madrid to make a preparaion stressing the various assistance programs of the Bureau of Forestry regarding rural development. The Director also urged the personnel to chronicle the activities of the Bueau in the different media which will be disseminated to the rural people through the delegates of the veterans convention.

Meanwhile, the Forestry Post of the Philippine Veterans Legion will send two delegates to the national convention, it was learned from commander Roman R. Aquino. The delegates who will represent the forestry post in the forthcoming confab will be selected among the members. Among those who may be seleced are Roman R. Aquino, Valerio O. Ergino, Estanislao B. Samonte, Antonio Quejado, Juan Ravelo, Lorenzo Versoza and Jose B. Elpa.

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CREATE COMMITTEE TO SOLVE PROBLEMS OF FIELDMEN

To thresh out and solve the common problems of fieldmen of all the bureaus and offices under the DANR regarding the coordination of their activities which are different in nature and the acagriculture secretary Juan de G. Rodriguez created agriculture secretary Juar de G. Rodriguez created a committee composed of the director of plant industry as chairman, and directors of animal industry, forestry, lands, mines, fisheries, soil conservation, agricultural extension, officer-in-charge, fiber inspection service, administrator, fertilizer administration, and project director ,office of agricultural information, members.

The committee shall take charge of mapping out plans and finding out ways and means to push through the National Conference, and is authorized to call on any officer or employee of the different bureaus and offices under the DANR for such assistance as may be deemed necessary to bring about the success of the Committe.

The National Conference will be held sometime after June 30 of this year.

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FISCHER DONATES BOOKS

Former director of Forestry Arthur F. Fischer, now residing in San Diego, California, USA, recently donated to the BF library several volumes of "Encyclopedia of Horticulture," by L. H. Bailey of Cornel University. He revealed that more books would be donated if the US Navy could be contacted to transport free of charge the publications to this country. Director Amos thanked Fischer.

SECOND FORESTRY IN-SERVICE TRAINEES

Twenty-four ranking officials of the Bureau of Forestry underwent in-service training on basic supervision course for three hours a day. The in-service training was supervised beginning April 2 to 20 by Forester Teofilo A. Santos, newly designated personnel and training officer of the Bureau of Forestry. A set of instructors lecture in their respective lines of studies. This is in accordance with Executive Order No. 121.

The list of the in-service trainees included: Juan Acogido, Roman Aquino, Jose B. Blando, Vicente Caguioa, Braulio Cristobal, Florentino Fontanilla, Artemio Genio, Martin Guerrero, Anacleto Hernandez, Domingo Jacalne, Leonor Lizardo, Felix Mababayag, Severin Nablo, Camilo Pacio, Vicente Parras, Juan Ravelo, Martin Reyes, Paciano Rimando, Celestino Sabalo, Jose Salvador, Lorenzo Sison, Valeriano Suarez, V. Pagtalunan, Rodrigo Valbuena, Alfredo Eugenio and Jose Rayos.

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VEDAD IN BARRIO COUNCIL CONFERENCE

Vicente Vedad, officer-in-charge of the forest station, Gingoog, Misamis Oriental, was invited by the municipal mayor of Talisayan, Misamis Oriental to speak on some forestry matters in the barrio council conference.

Vedad explained to the delegates the important contribution of forest to agriculture. He emphasized the conservation of the forest resources, strict enforcement of forest laws and regulations, and the effects of "illegal kaiñgin."

He also discussed Commonwealth Act No. 447 which, among other things, provides that the kaiñginero, upon convicition, shall be ordered to vacate the area he cleared and occupied and all improvements made thereto shall be forfeited in favor of the government.

The conference was attended by about one hundred delegates aside from more than five hundred persons representing the different barrios within the municipality of Talisayan.

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"COORDINATE WORK, FORGET POLITICS"—FERRER

Coordination of work among government personnel and civic-spirited citizens with funds and human resources available can go a long way in improving rrural areas, Agriculture Undersecretary Jaime N. Ferrer recently told a conference of municipal officials, teachers, agriculture and health officials of Angadangan, Isabela.

In a confident tone, Ferrer advised them to "concentrate on developing a workable program to help raise the standard of living of the barrio people."

To realize this objective he urged them to first forget politics.

APRIL ACCOMPLISHMENTS OF THE BUREAU OF FORESTRY

Mr. Felipe S. Cortez of the *Forestry News Service* reports the following accomplishments of the Bureau of Forestry during the month of April, 1956.

Lumber and log production was 2,633,093 board feet and 571,164,704 board feet respectively, with inspection fees of ₱165,694.00 and forest charges of ₱24,933.38 and the total lumber export to different countries was 569,523, 285 board feet.

In land classification, 22,905 hectares of alienable and disposable forest lands were surveyed. 46,962 hectares were certified to the Bureau of Lands for disposition to the landless.

A total of 1,732 liters of seeds collected were set in 163,281.69 square meters of seedbeds. Seeds sown directly in the field was 594.33 liters.

There were 3,689,984 seedlings of which 6,138 were set out in the field, and 3,416 were distributed free of charge. The area of the plantation was 16,708 hectares. There was no increase or decrease in the number of reforestation projects, which is 39.

Forestry charges received from minor forest products during the month of April, with or without license were ₱4,431.21 and ₱2,609.10 respectively, or a total of ₱7,040.31.

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REORGANIZATION PLAN NO. 30-A AFFECTS BUREAU OF FORESTRY

The reorganization plan No. 30-A was recently approved by the Government Survey and Reorganization Commission for the Department of Agriculture and Natural Resources. In line with the "primary policy, programming and administrative entity of the nation in the allied fields of agriculture and Natural Resources", authority and responsibility for the operation of the Department are vested in the Secretary of Agriculture and Natural Resources. There will be two undersecretaries, namely: the "Undersecrtary for Agriculture" and "Undersecretary for Natural Resources".

Under the supervision of the Undersecretary for Natural Resources, the Bureau of Forestry will have a Director and an Assistant Director of the Bureau of Forestry. The Bureau of Forestry will be relieved of all responsibility of the College of Forestry which will be transferred to the jurisdiction of the University of the Philippines and for purposes of policy and program coordination and administrative supervision, the Commission on Parks and Wildlife will be attached to the Bureau of Forestry.

The Division of Forest Concessions and Sawmills, Division of Forest Investigation, and the Inspection Srevice are abolished in the bureau. Functions of the first are transferred to the Division of Forest Management and the remaining functions such as appropriations, property, equipment and records to the newly created Sawmills and License Division. Forest Research Division takes the place of the abolished Division of Forest Investigation and Forest Products Research Section, if such entity is created, shall be transferred to the proposed Forest Products Research Institute. The functions of the Inspection Service are transferred to the Administrative Service Division.

Forest Lands and Maps is renamed the Forest Land Uses Division, and Land Classification Division, the Domain Use Division. The Division of Reclamation and Reforestation is retained together with such personnel as may be necessary.

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FREE USE PRIVILEGE

Anyone who wishes to construct a house with timber and lumber free of the corresponding forest charges can secure a gratuitous permit from the Municipal Mayor to cut second and lower groups of timber from the communal forest. Cutting of first group is allowed under the license issued by the Director of Forestry or District Forester.

A gratuitous license may be issued by either the Director of Forestry or District Forester for cutting at least 20 cubic meter irrespective of groups, from any public forest in the province if no communal forest has been established in one's municipality. This privilege is given under Section 1839 of the Administrative Code.

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KAIÑGIN CASES SETTLED

Temporary settlement of the nineteen cases in the Makiling National Park was effected at a conference held at the Lopez Elementary School between the government representative and the kaiñgineros on April 15, 1956. It was agreed that the kaiñgineros should vacate the area at any time the government wants it for reforestation purposes. Failure to comply with the government order would revive the case against them. Congressman Jacobo Gonzales, Forester Valentin Sajor, Chief of the division of forest investigation and Forester Eugenio de la Cruz, chief of the forest products laboratory worked out this settlement at the conference.

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LAND CLASSIFICATION IN FOREST DISTRICT NO. 9

Land classification, a great help to the present administration in its program of giving lands to the deserving landless, has helped in the in-

creased production of lumber because clear-cutting of timber is required on alienable and disposable areas. Accordingly, as population increases, it progresses but at least 42% of the total land area of the Philippines should be maintained for forest purposes to effect a necessary balance of forest cover so as to prevent wood famine.

Forest District No. 9 has exerted ways and means in attending to all requests, either by indidual or group, for the classification of forest lands more adapted to agriculture than forestry due to the absence of land classification party under the ICA-PHILCUSA counterpart projects.

During the past three quarters a total of 8,095 hectares were certified as "alienable and disposable lands" within the district. These areas certified as alienable and disposable are distributed in (1) Nueva Ecija: Bongabon—871 has.; San Isidro—500 has.; Cabiao—3,025 has.; Gabaldon—34 has.; Muñoz—260 has.; Cuyapo—530 has.; Talugtug—715 has.; and Laur—724 has.; (2) Aurora subprovince, Quezon: Baler—1,216 has.; and Maria Aurora—222 has. for "timber lands", 1,216 has. are at Baler, Quezon, 76 has. at Gabaldon, Nueva Ecija, 88 has. at Laur, Nueva Ecija and are now under the Bureau of Lands for dispostiion.

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INTENSIVE DRIVE AGAINST SOIL EROSION POISED

Agriculture Secretary Juan de G. Rodriguez stressed the importance of soil to farmers. He said that "Poor soil make good farmers", and that the desired goal "can not and will not be realized unless immediate steps are taken to prevent soil erosion."

He said that every year there is an estimated amount of about 500 million tons of soil washed away by heavy rains from all open hill and mountain of the Philippines. Secretary Rodriguez remarked also that wanton destruction of our forest and the primitive system of cultivation by the majority that is "plowing up and down elevated areas of land not according to their contour accelerates the rapid deterioration of our soil". He further stated that in view of the danger, the soil conservation will launch a full-dress campaign against soil erosion known as the No. 1 soil malady in this country.

Meanwhile, the director and his technical staff are busy preparing a pamphlet about all phases of soil erosion, their prevention and control.

MADRID CAMPAIGNS AGAINST FOREST FIRES

Baguio District Forester Edilberto Madrid instructed the Officer in Charge of the Kennon Road Reforestation Project at Tuba, Benguet to take necessary steps to minimize grass fires during the dry season. He ordered the Officer in Charge to make signs on strategic boulders along the Kennon Road such as (1) "Keep Forest from Fire—B.F.; (2) Protect Forest Against Fire—B.F.; (3) Do not throw Lighted Cigarette Butts—B.F.; (4) Use Our Forest Wisely—B.F.; (5) Notify Immediately Forestry Office in case of forest fire, Stop It.—B.F.; (6) Help Beautify the Highway By Preventing Grass Fires—B.F.; and (7) It Is Yours, Protect It From Fire.—B.F."

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BOAT BUILDER THANKS DIRECTOR AMOS

Llyd White, development engineer of Tacoma Building Company, Inc. of Washington thanked Director Amos for the two books on Philippine Woods in his letter dated April 19 which stated, "We wish to better understand and utilize boatbuilding wood available from the Philippines. The books forwarded to us greatly assist us in recognizing the properties and availability of Philippine wood."

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FERRERIA HONORED AT LUCENA

Lucena District Forester Catalino Q. Ferreria chosen as the outstanding Red Cross Fund Campaign Volunteer for 1950 in Quezon Province was awarded a ribbon last April 28 at the Provincial Auditorium at Lucena by Governor Leon Guinto, Sr. and Miss Pilita Corales.

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SOCIETY OF FILIPINO FORESTERS OPPOSE H. B. NO. 4618

The Society of Filipino Foresters of Laguna opposed vigorously House Bill 4618 sponsored by Congressman N. Babao creating the Philippine Lumber Administration. The group cited the following defects of the bill: (1) Freedom of action which is essential in a competitive enterprises would be curtailed, (2) Control of forest lands and minor forest products by the Philippine Lumber Administration and the Bureau of Forestry, (3) Duplication of work of the Forest Products Laboratory, (4) the Philippine Lumber Administration would act as a bother and would compete with private enterprises, (5) the Philippine Lumber Administration would assume control of all forest lands including the granting of concessions, issuance of licenses and permits, thus leaving only to the Director of Forestry the duties of certifying forest lands available for exploitation purposes, and (6) the conservation of the forest would be left at the mercy of the operators.

WARN AGAINST FARMING OF TIMBER

Agriculture Undersecretary Jaime N. Ferrer seriously warned timber concessionaires on the reported rampant practice of farming logs in favor of particular persons or entities.

He cited the Rules and Regulations governing ordinary timber license which prohibits "the acceptance of compensation or royalty from another for permission to secure forest products" from the concessionaire's area.

It has come to the attention of the Agriculture department that many timber licenses execute contracts, for compensations, with private entities who would monopolize the logs cut from their concession areas.

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JUNI PROMOTED TO CAPTAIN

Forester Deogracias A. Juni, district forester of Bataan is one of the 74 reserve officers promoted to the rank of Captain under inactive roster of reserve officers of the Armed Forces of the Philippines according to an announcement by the army GHQ at Camp Murphy, Quezon City on April 26, 1956.

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TWO FORESTRY MEN GET A BREAK

Two men of Forest District No. 9 appointed as acting officers in charge by the Director of Forestry were Forest Guards Catalino O. Fortes and Sisenando Pobre. Forest Guard Pobre relieved Ranger Rodrigo R. Ardieta in San Jose Forest Station who was transferred to the District Office in Cabanatuan City and Forest Guard Fortes assumed the position of Acting O.C. of Villa Aurora Scaling Station.

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FORESTER LABITAG RETIRES

Forester Gregorio Labitag, district forester of Albay was automatically separated from the Bureau of Forestry in accordance with the retirement law upon reaching the age of 65 years on May 9, 1956. Forester Labitag has to his credit an efficient and satisfactory service from the beginning of his employment as ranger until he was gradually elevated to his present position.

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BASILAN CITY MAYOR DESIGNATES CLAVERIA DEFENSE HEAD

Basilan City Acting District Forester Jose R. Claveria was designated Head of Evacuation under the National Civil Defense administration. He will take care of evacuation activities within his jurisdiction in case global war breaks out. The forester acted switfly by designating all officers in charge of that district as sub-heads, they having the shortest and fastest possible evacuation routes towards the forests. He instructed them to submit plans of evacuation together with the road map of the locality.

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ORDEN ELECTED CENTRAL LUZON DANREAS REGIONAL

In the first conference of the Central Luzon DANREA on May 5, 1956 District Forester Tranquilino Orden was elected chairman. Forester Orden is at present head of the DANREA Nueva Ecija region. The region comprise the provinces of Bataan, Bulacan, Nueva Ecija, Pampanga, Pangasinan, Tarlac and Zambales. Among the topics discused in the conference were (1) the problems confronting the activities of the DARN, (2) the implementation of the rural improvement program for the President and (3) establishment of the DANREAS for better understanding toward the synchronization of the respective work of all members.

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UNDERSECRETARY FERRER VISITS BASILAN CITY

DANR Undersecretary Jaime N. Ferrer visited Basilan City on March 20, 1956 to investigate complaints by squatters to the President against certain authorities here. When these "anonymous" squatters, thru their counsel, were unable to prove their complaints, the Secretary ordered the Screening Committee to continue their subdivision project and assured the forestry office the necessary help in their effort to preserve the forest of Basilan City along the DANR's policy of fairness, justice and service to all.

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BASILAN GIVEN 3 N. P. GUARDS

Implementing the verbal approval of DANR Undersecretary Ferrer upon his visit to Basilan City, this district was allowed 3 National Park Guards & Game Wardens by the Commission on Parks & Wildlife. But a letter from the Commissioner limits the services of these guards up to June 30, 1956 because they are covered by special budget. This should be okay if the park will last that long—but the Basilan National Park will be a park forever Couldn't something be done about it?

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LOGGING EXPERT INSPECT BASILAN CITY

Basilan City was inspected on June 12-15, 1956 by Forester Martin Reyes, the "B.F.'s selective logging expert." He arrived here in the afternoon of June 12 from Kabasalan, Zamboanga

del Sur, with Forester Rosales Juni and Ranger Honorato Esteves, both of the Forest Experiment Station at Malaybalay, Bukidnon. The three visitors were accompanied by District Forester Jose R. Claveria, Forester Doroteo Antonio and Ranger Florencio Mauricio in their visits to the concession areas of Basilan Lumber Co., Sta. Clara Lumber Co. and Western Mindanao Lumber Co. Forester Reyes was impressed by the progress of the management work here and advised the district dual to pay special attention to improving still the residual stands in logged-over areas. Forester Juni recognized the potentialities of these areas such that he established a reproduction sample plot in a newly logged high-lead set-up in the WEMILCO concession and a survial plot (planted to bare-root Mayapis wildlings) in the BASLUM concession. All three visitors lauded the forest concession of the City officials and residents, commenting that Basilan citizens are growing up like American with regard to the preservation of the forest. Forester Reyes left Basilan for Zamboanga City on June 15, while the two research technicians on June 17.

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RANGERS TAKES A WIFE

Ty. Ranger Alejandro Turqueza, O.C. of Tumajubong Sub-Station, the District, married Miss Narcisa Tesoro on May 12, 1956. Both are from Abra. "Papait" served in the reception at the bride's residence after the afternoon ceremonies performed in the Catholic Church at Isabela was relished with gusto by some 200 well-wishers.

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PERSONNEL COME AND GO

As training grounds in Forest Management, Basilan City has lost old and acquired new personnel. Those who came to and left Basilan are: District Foresters Nicanor Lalog (deceased), Hipolito Marcelo (Sta. Clara), and Martin Reyes (Central Office); Foresters Rodrigo Valbuena, Segundo Fernandez (Central Office, Isidoro Siapno (Zamboanga City) and Eulogio Tagudar (Butuan City); Rangers Francis Mabanag (Aparri), Ambrosio Feleo (Manila) and Honorato Esteves (Experiment Station, Malaybalay). The present new personnel are: District Forester Jose R. Claveria (Cebu City); Ty. Rangers Florencio Mauricio (BSF '55), Melanio Alconcel (BSF '56), Rogelio Baggayan (BSF '56), Jose Malvas, Jr. (BSF '56), and Josue Tadle (BSF '56); and Ty. Rangers (Ranger Certificate) Feliciano Barrer ('52), Juan Orallo ('55), Bienvenido Paragas ('55), Quirico Tan ('55), Mariano Valera ('55) and Zoilo Udaundo ('55). After training, they will be transferred to other districts to implement forest management thru sustained yield on our forests.

FORESTER CLAVERIA DANREA PRO

Forester Jose R. Claveria, Acting District Forester of Basilan City was selected as PRO of the Zamboanga-Basilan Cities DANREA in the election of officers at Zamboanga City on May 31, 1956. Forester Claveria was guest speaker of the Zamboanga Rotarians in their luncheon meeting on May 3, 1956. He also led the Basilan City delegation to the meeting-demonstrating of the DANREA held at Tictapol, Vitali, Zamboanga City, on May 5, 1956.

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DANREA DEMONSTRATIONS AT LAMITAN

The DANREA, Zamboanga-Basilan Cities Chapter, will hold a field meeting-demonstration at the Lamitan Central School Campus, Lamitan, Basilan City, on the occasion of that district's fiesta on Friday, June 29, 1956. As arranged by District Forester Jose R. Claveria, in the morning will be a program with the different chiefs of offices under the Department of Agriculture and Natural Resources as speakers and followed by an open forum. Demonstrations in rice culture at Balobo Farm and Pamaran Farm by the Bureau of Agricultural Extension, caponizing of roosters by the Bureau of Animal Industry, and canning of local fishes by the Bureau of Fisheries will feature in the afternoon.

The public is cordially invited to this field activities of your DANR. Those who have some curiosity or problems on agriculture, forestry, animal husbandry or fisheries are urged to attend our open forum and see our field demonstrations. Your problems are our problems. Do not miss your opportunity at the Central School Campus at Lamitan, Basilan City, on Friday, June 29, 1956.

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LEXSCOPE

Every employee in the government service should know all civil service laws. If he is to be guided properly in the discharge of his duties and in the manifestation of his deportment as a public servant, it is necessary that he should have at least a fundamental knowledge of civil service laws.

As a special service to the forestry employees, we are starting in this issue this column. We will try to cite important principles based from the Bureau of Civil Service decisions:

1. *What Letters Need Not Be coursed Through Official Channels.*—If the contents of the letter are not fit as a subject of official communication because of the illegal and immoral proposal it contains and the same letter is highly confidential in nature, the charge that the writer should have

coursed it through official channels would not lie (CSD, Sept. 16, 1964).

2. *Political Activity Clarified.*—The mere fact that an employee promised to work for the candidates of a political party in order to win favors from the powers that be is not enough to hold him guilty of engaging in political activity. It is necessary that he had done an *overtact.* (Ibid).

3. *Highly Unbecoming Conduct.*—If an employee writes to a politician that he be promoted to a certain position so that he can work for the candidates of a political party, he is guilty of highly unbecoming conduct even if he has done no overtact of political activity because his letter "clearly indicates his dishonest mentality, one that would use any means, fair or foul, to attain a purely personal end." (Ibid.)

4. *Effect of Death on Administrative Proceedings.*—The BCS opined that the death of the respondent had the effect of dismissing or dropping the case and recommended approval of the widow's claim for payment of her claim and whatever leave is allowable. (BSC 4th Ind., Mar. 17, 1956).

(To be continued)

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REGULATIONS ON REGISTRATION OF LOG DEADERS BARED

Forestry Administrative Order No. 26 regarding forestry registration of agents, contractors and dealers in logs, lumber and commercial piles came into effect on May 21, 1956 after it was signed by Agriculture secretary Juan de G. Rodriguez. The salient provisions of the said order are (1) the authority of the director of forestry; (2) who may apply for registration; (3) form and content of applications; (4) when an application is considered filed; (5) false statement; (6) fees and bonds; (7) when a certificate of registration may be issued; (8) duration and expiration of certificate of registration; (9) cause for suspension or cancellation of registration; (10) reports required of each registrant; and (11) penal provision.

Under the said order, the director of forestry is granted authority to (a) issue registration; (b) examine all records of registrants; (c) require registrants or applicants to submit certain inofrmation aside from the regular reports and form; (d) summon registrants or applicants to appear in an investigation; (e) suspend or cancel registration certificates; (f) change the term and condition of registration; (g) refuse or reject any application field; (h) forfeit bond filed in connection with the certificate of registration; (i) exercise such other powers and perform such other duties as may be deemed necessary to carry out the interest and purpose of Republic Act No. 1239 and the said forestry administrative order.

The penalty for violating the said forestry administrative order is fine of not more than one thousand pesos (₱1,000) or imprisonment of not more than one year.

For additional information, interested persons may inquire from the Bureau of Forestry, Manila.

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RESEARCH ON TEAK CONDUCTED IN ASIA FORESTERS COMMENT ON LOCAL TEAK PROPAGATION

Bangkok, Thailand. — The Forestry Working Group for Asia and the Pacific (FAO) received information from Thailand, Indonesia, Burma, Laos and India that teak is indigenous in those places. Similar reports were also received from France that teak grows in Africa under exotic condition. There were discussions in the teak sub-commission which was held in Bangkok from February 9-18, 1956 that "brought to light many problems which call for further research in important matters, such as ecology, seed problems, races within the species, protection, natural and artificial regenerations, etc." During the season, the thirty-six representatives from eleven member countries dry season of about 4 months and if grown in high rainfall areas the species becomes susceptible to many pests.

Meanwhile, the chief of the Division of Reclamation and Reforestation of the Bureau of Forestry wrote the officers-in-charge of reforestation projects to submit reports on the evaluation on teak. Likewise, the Wood Technologist, Forest Products Laboratory commented that "teak should be suitable in Ilocos Regions."

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FOUND BASILAN FOREST POORLY STOCKED LOGGED OVER-AREAS

Acting Sr. Forester Martin R. Reyes, Asst. Forester Lorenzo Diaz and Ty. Ranger Melanio S. Alconcel revealed in the Research Notes No. 17, May 7, 1956, that "the Basilan forest has some poorly stocked logged-over areas." They stated that poorly stocked areas are either inadequately stocked with the desirable species, or if sufficiently stocked, the trees are ill-formed, defective or badly damaged.

In the observation of the three forestry men, it was concluded that there would be no problem of re-stocking if there were enough dipterocarp seeds left. Seed years of these species occur at the intervals of three to seven years, and the regeneration of weed species and shrubs go ahead, according to the forestry group.

They further disclosed that when the seed year occurs, the low or under-story vegetation will have grown so thick for the dipetrocarp seeds to reach

(*Continued on page* 63)

School Forests . . .

(*Continued from page 53*)

another school, coming from another country, and bringing with it the unmistakable evidence of its origin, as a reward for the care given by the child to trees in the school forest originating from the woodlands of that distant and foreign land. The incentive to learn something of the geography, the history and the language of that country would be further enhanced, and ties of friendship strengthened, if the reward could take the form of a holiday in that land, among the children of the same school age and from the school which sent the seeds and was thus symbolically bound by the trees to the child's own school.

With the development of radio and television broadcasts in the classroom and the showing of films of other countries, the relations between schools of different nations can be made even closer, and the co-operation and friendship between the schoolchildren of the nations made more real to them.

In closing, it is desired to stress once more the broad aspects and far-reaching effect of a festival of trees observed on a world-wide basis. The use of the tree as a symbol of peace around which international celebration is concentrated, and the development of mutual understanding through the exchange of forestry knowledge on the occasion of such a festival might contribute greatly to the feeling of co-operation among nations. The role of forests affects regions, and not nations alone, so that it is well suited to this purpose. In addition to the forest's importance in world economy, the consideration of its influences, and of world conservation and protection problems, encourages a better mutual understanding among nations, and this can be brought home to the peoples of the world through the occasion of a "World Festival of Trees," when the publicity and educational programs developed for national purposes may be extended to international significance.

Keep the . . .

(*Continued from page 48*)

manent forest blocks (3) on research work and other major phases of forestry activities, requiring technically trained men for the efficient prosecution of the projects;

(3) Insufficiency of fund or allotment to finance the projects;

(4) The indifference and lack of cooperation on the part of the local officials in extending positive cooperation with the Bureau of Forestry in the protection of the public forest against wanton destruction. Political influence of municipal mayors toward his constituents can be incalculable assets in preventing forest destruction in their respective localities.

In the over-all program on forest conservation, I believe the Leyte Rotary Club, being a civic organization can help greatly towards keeping the forest land in Leyte perpetually verdant with luxurious forest vegetation for the prosperity and happiness of the people of this province.

A Forestry . . .

(*Continued from page 46*)

4) *Chemical Investigation Division* — responsible for research on the pulp and paper making qualities of wood and the chemical composition and other properties for the purpose of determining suitability for various uses.

5) *Wood Preservation Division*—responsible for conducting studies on the seasoning properties of wood, preservation, and resistance to fire, fungi, and insects.

2. *Create a Forest Products Research Fund.*

As a revolving fund for the Institute's it is proposed that service fee derived by the Bureau of Forestry for inspection and identification of logs, timber ties, and other forest products (particularly those derived from the operation of Forestry Administrative Order No. 15, dated July 31, 1955, as amended by Forestry Administrative Order No. 9, dated June 21, 1947) be constituted into a Forest Products Research Fund which should be available exclusively for the use of the Institute. A research institution of this kind will require a substantial fund which will secure to it from year to year. Congressional appropriation to augment the research fund above that produced by service fees is encouraged and necessary. Since the research work being conducted by the Institute will redound to the benefit of the lumber industry, it is only proper that industry contribute to its support. The use of fees arising from the sales or processing of timber for maintenance of the Institute is justified initially as a means of relating the cost of the laboratory more directly to those immediately benefiting. To this fund should likewise accrue grants, donations, fees, service charges derived by the Institute in connection with its work. If the Institute is successful in its work the reliance upon annual appropriations will be reduced and ultimately the Institute may be completely self-supporting.

B. F. Notes . . .

(*Continued from page 62*)

the ground, or the ground will have been so shaded as to be unfavorable for successful regeneration. They stated that delayed restocking is not conducive to sustained-yield program, so much so that "there is a need of doing some planting in such areas to improve the stands."

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CLAVERIA ROTARY CLUB SPEAKER

Basilan City.—The Bureau of forestry and lumbermen as well as the general public particularly well-informed men like Rotarians should work as a well-coordinated team if sustained yield management plan is to be successfully implemented.

This was the gist of the extemporaneous speech of District Forester Jose R. Claveria of Basilan City before the Zamboanga Rotarians who invited him as their guest speaker in their luncheon meeting at Zamboanga City on May 3, 1956.

Speaking on the forestry problems of the country, Forester Claveria revealed that according to recent experimental results, "a seedling will take from 90 to 100 years to attain a merchantable diameter, but actually in Basilan the bureau of forestry requires all lumber companies to leave 'residuals' from 70 cm. diameter an ddown in order to shorten the period to about 30 to 35 years only."

Claveria was introduced by Rotarian-Forester Higino Rebosura who observed that "only dead men are given long list of achievements and virtues."

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CAPIZ FORESTRY DISTRICT AWARDED DIPLOMA

Roxas City.—Forestry district office No. 27 at Roxas City was awarded a diploma for "Most Helpful Office of the Year," by the Capiz Press Club at a banquet program and ball held at the Capiz Provincial Capital on April 29. District Forester Alfredo de los Reyes received the diploma for and in behalf of the Bureau of Forestry in general and of the forestry district in particular from Miss Mila Fuentes, Muse of the Capiz Press Club of 1956-57. Governor Jose Dinglasan of Capiz, guest speaker, headed the list of high government officials.

Some Useful Derivation and Application of Diameter Growth of Commercial Dipterocarp in the Basilan Working Circle

(From the first periodic growth data taken from six sample plots)*

by
MARTIN R. REYES
Forester, Bureau of Forestry

Growth is a basic data needed for determining the yield in a working circle to regulate the cut on a sustained yield basis. The table presented here summarizes some useful figures from the data gathered in six sample plots (one-hectare and 2-1/4-hectare plots established in 1950 in a 22-year old logged-over by steam donkeys, and two 1-hectare plots established in 1950 just after logging by tractors) in the southwestern. These plots were remeasured in 1954 and central western portions of the Basilan Working Circle. The derivations are briefly explained to serve as a simple guide in their use or preparation of similar tables for other forest tracts.

Column (2)—These are the periodic annual growth in diameter (dbh or dab) in centimeters, reckoned at diameter class when first measured in 1950. These figures are derived from smoothed free-hand curves. From seedling to 35 cm. diameter class, the curve for plots established just after logging was used; from 40 cm. diameter class and over, the curve for plots established 22 years after logging was used.

$$\text{PAI} = \frac{\text{Total diameter increment of trees in dia. class}}{(\text{No. of trees})\ (\text{No. of Yrs. between measurements})}$$

Example: For diameter class 30—
Total diameter increment: 41.40
No. of trees considered: 15

$$\text{PAI} = \frac{15 \times 4}{41.40}$$

.69 cms. actual, which was plotted; from smoothed, free-hand curve, .72 cms.

Column (3), Years in class.—(For seedling to 5 cm.-dia. class, 11.4 years: this was derived by extending the curve to the zero line of the diameter class ordinate).

Column (4), Age at diameter class.—Years from seedling to a certain diameter class (Col. 3) are added and the sum is the estimated age at that diameter class.

Example: To compute for years a 30-cm. tree stays in this class until it "graduates" to the next diameter class:

$$\text{Years in class} \quad \frac{\text{Diameter class interval, 5 cms.}}{\text{PAI, .72}} = 6.94 \text{ years}$$

* Established in 1950 by Foresters I. Achocoso, F. Asiddao, L. Diaz and R. Valbuena; remeasured in 1954 by Foresters M. Reyes, L. Diaz and Rangers H. Esteves and J. Cruz.

Thus, age for 20 cm. class tree is found by summing up seedling—11.4, 5 cm. class—9.09, 10 cm. class—8.62, 15 cm. dia. class—8.06 and 20 cm. dia. class—7.58, which is 44.75 years.

Column (5), Diameter reached after 5, 10, etc. years. Ex.: What will be the approximate diameter of a residual 30 cm. dbh (Col. 1) 30 years after logging? Add consecutively years in class (Col. 3) from ~~cl~~ diam. class down the line until a sum nearest to 30 years is reached; interpolate for year difference and add the centimer so found to the next diameter class. The sum is the diameter reached. Thus, sum of added years in class (Col. 3) from 30 cm. class nearest 30 years is 29.64 which is at line for 50 cm. class. The diameter (approx.) reached is the next line down, or 55 centimeters. Difference of 30 and 29.64 years is .36. .36 of 1.18 cm. increment rate at 55 cm. (Col. 2) is .42 cm. Adding .42 cm. to 55 cm. gives 55.42 cm.

Column (6), Number of years to reach 50, 60 and 70 cm. diameter.—

Ex.: How long will it take a 30 cm. (Col. 1) residual to reach 60 centimeters in diameter? Add years in class (Col. 3) from 30 cm. class line until 35 cm. class line. It is 33.88 years.

Some application of the derived figures will be shown in the next issue.

George Bernard Shaw was having lunch in a London restaurant one day, when an orchestra struck up a particularly noisy tune. Without any intermission, it followed with another, Shaw called the head waiter and asked,

"Does the orchestra play anything on request?

"Yes sir," the man replied," Is there something you would like them to play?'

"There is," said Shaw," Ask them to play dominoes until I have finished eating."

GROWTH FIGURES DERIVED FROM SAMPLE PLOTS IN LOGGED-OVER AREAS IN THE BASILAN WORKING CIRCLE
(FOR COMMERCIAL DIPTEROCARPS*)

(1) Diameter Class cms. (d.b.h. or d.a.b.)	(2) Periodic Annual Increment (Cm.)	(3) Years in Class	(4) Age at Dia. Class (Years)	(5) Diameter (Centimeters) Reached After ... YEARS																			(6) Number of Years to Reach Diameter class:		
				5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	50 cm.	60 cm.	70 cm.
Seedling		11.4	11.40			6.98	9.73	12.62	15.55	18.65	21.87	25.17	29.62	32.16	35.78	39.48	43.58	48.13	53.24	58.97	65.29	72.26	79.70	76.97	85.88	93.44
5	.55	9.09	20.49	7.75	10.53	13.43	16.42	19.52	22.80	26.14	29.59	33.17	36.82	40.59	44.74	49.46	54.74	60.67	67.21	74.29	81.87	89.78	98.03	65.57	74.48	82.04
10	.58	8.62	29.11	12.91	15.86	18.96	22.19	25.51	28.96	32.51	36.15	39.85	43.98	48.59	53.77	59.54	65.96	72.97	80.45	88.33	96.51	104.99		56.48	65.39	72.95
15	.62	8.06	37.17	18.10	21.28	24.58	28.01	31.52	35.13	38.83	42.84	47.28	52.29	57.92	64.13	70.97	78.35	86.12	95.87	102.63				47.86	56.77	64.33
20	.62	7.58	44.75	23.30	26.67	30.12	33.72	37.39	41.23	45.44	50.21	55.63	61.65	68.26	75.42	83.07	91.03	99.33						39.80	48.71	56.27
25	.69	7.25	52.00	28.45	31.98	35.60	39.30	43.37	47.89	51.98	58.67	64.95	71.96	79.32	87.14	95.27	104.33							32.22	41.13	48.69
30	.72	6.94	58.94	33.60	37.26	41.09	45.28	50.03	55.42	61.43	68.03	75.17	82.81	90.75	99.05									24.97	33.88	41.44
35	.74	6.75	65.69	38.70	42.70	47.12	52.11	57.71	63.92	70.73	78.10	85.84	93.94	102.34										18.03	26.94	34.50
40	.83	6.02	71.71	44.15	48.78	53.98	59.78	66.23	73.26	80.76	88.65	96.85												11.28	20.19	27.75
45	.95	5.26	76.97	49.75	55.08	61.07	67.63	74.74	82.36	90.28	98.56													5.26	14.17	21.73
50	1.07	4.67	81.64	55.39	61.40	67.99	75.12	82.76	90.71	99.00		119.93													8.91	16.47
55	1.18	4.24	85.88	60.97	67.55	74.64	82.25	90.16	98.44																4.24	11.80
60	1.28	3.91	89.79	66.49	73.54	81.06	88.95	97.17				124.66														7.56
65	1.37	3.65	93.44	71.96	79.38	87.21	95.34	103.80																		3.65
70	1.45	3.45	96.89	77.34	85.05	93.12	101.49																			
75	1.51	3.31	100.20	82.63	90.57	98.86																				
80	1.56	3.21	103.41	87.86	96.03	104.50																				
85	1.60	3.13	106.54	93.07	101.44																					
90	1.64	3.05	109.59	98.28																						
95	1.68	2.98	112.57	103.45																						
100	1.71	2.92	115.49																							

* Tangile, Almon, White Lauan, Mayapis, Kalunti, Manggasinoro. (Nato also included).

Acknowledgment: Curve and readings by Forester E. T. Tagudar; computations by Forester D. Antonio and Ranger F. Barrer.

PRICES OF LUMBER (DIPTEROCARP SPECIES ONLY)

MONTH	AVERAGE MONTHLY WHOLESALE PRICE (BY PRODUCERS) PER THOUSAND BOARD FEET OF LUMBER (ROUGH) FOR PERIOD FROM JULY, 1955 TO MAY, 1956						AVERAGE MONTHLY WHOLESALE PRICE PER THOUSAND BOARD FEET OF LUMBER (ROUGH) FOR THE PERIOD FROM JULY, 1955 TO MAY, 1956.							AVERAGE MONTHLY RETAIL PRICE PER THOUSAND BOARD FEET OF LUMBER (ROUGH) FOR THE PERIOD FROM JULY, 1955 TO MAY, 1956.							
	Apitong	R. L.	Tang.	Palo.	W. L.	Maya.	Apitong	R. L.	Tang.	Palosapis	W. L.	Guijo	Yakal	Narra	Apitong	R. L.	Tang.	Palo.	W. L.	Guijo	Yakal	Narra
1955																						
July	₱175	₱200	₱200	₱175	₱175	₱175	₱182	₱240	₱245	₱182	₱210	₱305	₱405	₱600	₱220	₱260	₱265	₱200	₱220	₱335	₱435	₱650
August	175	210	210	175	175	175	177	197	220	200	195	330	373	600	205	243	238	212	215	346	450	650
September	165	200	200	165	165	165	176	206	226	186	203	320	376	600	213	241	241	215	199	346	447	650
October	178	210	210	178	175	175	177	200	220	190	190	326	376	600	207	247	247	207	210	245	447	650
November	175	210	210	175	175	175	185	215	227	193	201	339	390	600	210	250	245	210	220	244	450	650
December	175	210	210	175	175	175	181	230	215	195	192	330	375	600	218	250	238	220	217	347	453	650
1956																						
January	180	210	210	180	180	180	200	222	217	205	195	325	428	600	221	249	249	227	221	348	458	650
February	180	210	210	180	180	180	195	218	218	195	195	323	424	650	224	252	252	221	218	249	454	650
March	185	220	220	185	185	185	218	227	220	196	202	331	432	650	225	250	249	220	219	348	452	652
April	185	220	220	185	185	185	195	216	217	202	185	320	425	650	220	247	247	226	215	345	449	650
May	185	220	220	185	185	185	195	216	217	202	185	320	425	650	220	247	247	226	215	345	449	650

Note: The data contained herein are gathered from sources believed to be reliable.

Prepared by MANUEL R. CASTRO
Div. Forest Concessions and Sawmills

• Campus Notes •

14TH MOVING-UP DAY

With Congressman Jacobo Z. Gonzales as guest speaker, the UP College of Forestry held its "Moving-Up" Day affair last March 17 on the forestry campus in Los Baños, Laguna. The affair was highlighted by "passing the key ceremony" of the junior and senior classes. Director Felipe R. Amos presented the candidates for graduation. UP President Vidal A. Tan awarded ranger's certificates. Asst. Dean Calixto Mabesa gave the opening remarks, while Prof. Gregoior Zamuco made the announcement of awards, prizes and donations.

The following received their Bachelor of Science in Forestry degree: Abraham, Felipe, Jr. B.; Alegre, Simplicio, Jr. S.; Baggayan, Rogelio B. Batoon, George T.; Empedrad, Francisco A,; Eugenio Alfredo A.; Galinato, Primitivo F.; Galo, Juan B.; Gulle, Marciano E.; Ilagan, Jose M.; Pollisco, Felixberto S.; Tadle, Josue F.

The following received their ranger certificates: Alcos, Augusto L.; Aminan, Jessie B.; Angeles, Leonardo D.; Anuma, Roberto K.; Briones, Jaime G.; Capili, Alberto B.; Cuadra, Helano J.; Ellazar, Magdaleno B.; Esber, Gayred G.; Estoque, Jose D.; Felix, Remedios E.; Francia, Gregorio Jr. P.; Francisco, Apolo B.; Lamanilao, Juanito D.; Lazo, Alejandro P.; Lazo, Pedro P. Mejia, Isabelo M.; Menor, Venancio A.; Narciso, Policarpio Jr. M.; Paet, Eustaquio M.; Pareja, Bernardo L.; Pauig, Roger G.; Peig, Florencio Q.; Rendorio, Francisco C.; Romero, Jose Jr. C.; Salvador, Petronilo Jr.; T.; Sapiera, Cleto M.; Tabangil, Siegfred U.; Tongacan, Arsenio L.; Udarbe, Aquiles C.; Vedad, Azuero T.; Veracion, Vicente P.; and Zamoranos, Alfredo C.

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IN-SERVICE TRAINING CONDUCTED AT LOS BAÑOS

Chief Valentin Sajor of the division of forest investigation created a committee on in-service training at College, Laguna to improve the effectiveness of service and accelerate personnel efficiency. The conference speakers were selected among the personnel of the division of forest investigation, forest products laboratory, college of forestry, and from casual visiting government officials. Although the in-service training being conducted by the forest investigation division lacks the requirement of the general system of in-service training as instituted by the Government Training Coordinator of the U.P. Institute of Public Administration, the committe has been doing its best to conform to the system. The committee is composed of Prof. Valentin Sajor, Prof. Juan Daproza, Forester Domingo V. Jacalne, Forester Francisco Rola, Forester Felipe R. Lopez, Sr. Rgr. Aurelio Mejia and Mr. Zoilo C. Fraga.

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FORESTER SAN BUENAVENTURA CONVOCATION SPEAKER

The College of Forestry held a convocation program last February 20, with Sr. Forester P. San Buenaventura of the division of reforestation, Bureau of Forestry as guest speaker. Among the members of his party were Foresters Vicente Caguioa and Daniel Allas of the said division.

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THE FOREST PRODUCTS RESEARCH INSTITUTE

The reorganization of the Forest Products Laboratory of the Bureau of Forestry has been approved by Congress and will become effective after an executive order to that effect has been issued by the President. The Laboratory will then become a semi-autonomous Forest Products Research Institute attached to the University of the Philippines and under the supervision of a Governing Board of five members. The Director of the Bureau of Forestry will be ex-officio Chairman of this Board and the Dean of the College of Forestry will be an ex-officio member. Three other members will be appointed by the President of the University, one each to represent the lumber industry, the forest products industries other than lumbering, and the general public.

The Director of the Institute will exercise considerable freedom in handling the affairs of the Institute with only general supervision by the Board.

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ADDITIONAL EQUIPMENT FOR THE FPRI

A 64,000lb. shipment of machinery has been received by the Forest Products Laboratory, consisting of one Coe automatic veneer dryer and one 56-inch Coe veneer lathe. These items complete the $150,000 worth of equipment purchased in 1955 with ICA dollar funds. The veneer and plywood equipment is expected to be ready to operate within 1-1/2 or 2 months.

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IN-SERVICE TRAINING TAGALOG EXAM CONDUCTED IN LOS BAÑOS

A Tagalog exam was conducted for the first time at the Division of Forest Investigation last March 28 to determine the interest in and knowledge of each employee gained from the in-service training.

Forest pathologist Felipe R. Lopez was designated as head of the examiner-committee with Mr. Zoilo C. Fraga, secretary of the division in-service training and Miss Paterna Burgos, division clerk as members.

Tagalog was used by most speakers during the session and examination question were written in Tagalog. Of the 52 examinees, 29 passed and 25 failed. Most of those who passed were elementary to college graduates. Considered failed were those who could only write their names.

Silviculturist Domingo V. Jacalne, who had just completed his 3-week in-service training in the Manila Office, announced that the training he obtained would enable him to find ways and means to improve the present system of the in-service in the division of forest investigation and thus promote efficiency in public service.

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COLLEGE UPSCA

The College of Forestry, U.P. UPSCA, formally recognized by UPSCA Central Council on January 5, 1954, elected Azuero T. Vedad as its president for the school year 1955-56, Juanito D. Lamanilao, Vice-president, Teresita B. Bañaga, secretary, Remedios Felix, treasurer, Cesar Tolentino PRO. Misses Herminia Jundos and Jesusa Taleon were elected advisers of the club. The outstanding and active chapter members are former Ranger trainees of the college. Professor Valentin Sajor, Chief of the Division of Forest Investigation and Grand Knight of Columbus and Miss Jundos have spared no efforts in guiding and inspiring the club in all its activities.

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THREE AMERICAN FORESTERS EXPECTED NEXT SEMESTER

Three American Foresters are expected to arrive at the U.P. College of Forestry next semester of this school year according to Asst. Dean Calixto Mabesa. They will observe the trend of the forestry course and give pointers or suggestinos to improve our medium of instructions. Each of the American foresters will teach Forest Economics, Silviculture-Management, and Forest Products. Besides giving recommendations on some equipment that may be needed in teaching these subjects, their coming will also give opportunities to some of the college faculty members to take up graduate work in the United States.

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DECREASE IN THIS YEAR'S ENROLLMENT

Dean of Men and Counseling Consultant College Speakers.

Of more than two hundred applicants for admission in the College of Forestry, only one hundred students, twenty of whom were alternates, were selected after a screening with an entrance examination and a personal interview.

Because of the limited number of entering freshmen, this year's student population has decreased by over ninety students. Last year's freshman class alone numbered two hundred and sixty-eight students. There were eleven freshman coeds last year as against three of this year. There are 2 new Thai students and three returning old students. This year's total population of four hundred and ten students shows the predominance of students from Pangasinan, followed by those coming from the Ilocos regions. The increase of students coming from Mindanao has also been noted, quite a number of whom are honor students.

It is expected by the Colllege officials that the screening will improve the scholastic work of the students. Records in the U.P. Registrar's Office reveal that the College of Forestry has the highest rate of scholastic delinquency among the U.P. Colleges, having reached new high of 52% last year.

Dr. Eleanor Elequin of the Student Personnel Services gave pointers on "How to Study" at the Freshman Orientation Program this year. And Dean Juan Canave, U.P. Dean of Men, this year's first convocation speaker stressed the importance of personal adjustment to the different College environments before effective study can be effected.

TIMBER

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

The first quarter of this year has been marked by gloomy predictions about consumption prospects for timber in 1956. As usual, these forecasts have been exaggerated but the important point to note is that such forebodings are having an effect on the international market, far out of proportion to their actual truth. This has added to the inactivity of markets making it certain that sales this year will be well below last year's levels.

The main cause of all the trouble is the United Kingdom where fears of a slump have recently strengthened. At the first sign of a firmer economic policy, many sectors of the timber trade have automatically assumed that a depression is inevitable and have acted accordingly. Importers, many of whom were holding embarrassingly large stocks, have been running them down and any purchases which have taken place, have been on a hand-to-mouth basis. Forward buying has been almost non-existent. Fortunately, suppliers have in the main, remained confident of an eventual rush of new orders and consequently prices have stayed comparatively firm. How long situation can last is anybody's guess. Already some West African hardwoods and Japanese oak are showing signs of weakness under the strain of this reduced buying and it is more than likely that suppliers will soon be forced to ease their prices somewhat to accommodate British sentiment.

There may not be any significant change in this situation until after April 17th, the day on which the Chancellor of the Echequer will outline his budget proposals. Once these are known it will be easier to estimate future demand from the main timber consuming industries—the building and furniture industries. Present indications all suggest that the budget will bring no relaxation to these sections of the economy at present hardpressed by higher purchase restrictions and high interest rates. As yet building activity shows no sign of abating but many people are saying that the level of building will begin to fall off towards the end of this year. The gloom which has already hit the furniture trade will not lift this side of the budget, if at all this year and substantial cuts have been made in output in the radio and television industries.

All this does not add up to anything very promising for timber consumption. But it must be remembered that any decline in timber imports in 1956 will also be partly a corrective to the heavy buying of last year, which so much exceeded consumption. Moreover, fears of mass unemployment and depression are not justified on the present evidence. No Government in the United Kingdom can afford to allow any recession to get out of hand, and in this fact lies hope for anxious sellers to the British market. Thus, while the timber trade will not have such an easy time this year as last, it should not really be in the doldrums.

Throughout Western Europe, trade has also been only moderate during the past few weeks. The severe winter in this region reduced building activity almost to a standstill,lowering the anticipated demand for all types of timber. Credit restrictions, high interest rates and large stocks as in Britain, have been hindering importers. However, there is hope that with improved weather conditions more timber will be needed in the coming months.

The American scene, in spite of some pessimistic utterances, remains reasonably bright. There is every prospect that incomes will not only be maintained but even improved during 1956. Business plans—an important determinant of economic trends—suggest an even higher expenditure on new plant and equipment than was previously thought possible and Government spending will continue to increase as the year goes on. Only the motor industry and housebuilding have shown any serious decline from 1955 boom levels. The number of new houses built has been falling since last September but the prevailing view is that housing starts will begin to rise again in the spring, or at worst will fall no lower than recent levels. In aggregate, building construction will only be slightly below last year's level because so far the slump in residential building has been offset by the construction of offices,shops, roads and schools.

Eleswhere, demand does not appear to be flagging. New orders for durable consumer goods such as furniture, continue to outpace sales. In fact retail sales are a full 4 per cent above the levels of a year ago. All in all, fears of a slump in

the American economy in 1956 are premature. What is taking place is probably no more than a flattening out of production and consumption, followed by a slow recovery at a later stage. For timber this means a steady, but not excessive, demand throughout this year possibly at a level slightly below the 1955 consumption total.

T I M B E R

United States construction activity in April was only slightly below last year's record. While private house building has declined, large advances continue to be made in industrial and commercial building. In normal circumstances this fact would be enough to calm the prophesiers of doom. But in recent weeks, with evidence of continuing increasing difficulties in the automobile industry, serious doubts have been expressed again about the future of the American economy. Output has been more or less static since September and business inventories have been rising sharply. The real danger of a slump, it is argued, lies in the fact that once manufacturers begin to live on stocks this could precipitate a general downward slide.

Of course, the danger is exaggerated. Business inventories have certainly been rising but they are by no means excessive in relation to current sales. Only at the retailers' level is there any real sign of congestion and this is especially so in the motor industry—stocks held by dealers today exceed 900,000 car units. If this recession in the motor industries spread to other industries the situation could become out-of-hand. But as yet there is no indication that this is happening. Supplies of raw materials which would normally go into car production have been diverted to other sectors of the economy. And most metals are still not in easy supply.

For the present, then, the economy is steady and demand for timber is satisfactory. The building industry prospers and there is no let-up in consumer buying of items such as furniture. But it is worth recalling that 1956 has, so far, proved to be a year full of apprehension about future trends. Much may yet happen to change the course of events before the year is out.

The only fact worthy of note in Britain is the continued lack of activity in hardwoods. There has been a considerable amount of business done, but this has been mainly from stocks and little attention has yet been paid to replacement.

The truth is that little change can be expected in this situation for some time to come. Furniture manufacturers do not now sales to the public until the autumn. And this means that they will be purchasing their timber requirements on a hand-to-mouth basis unil then. On op of this, short-time working in the radio and T.V. industries is also depressing demand for timber.

But building activity remains surprisingly steady. Earlier forecasts of a considerable decline are now seen to have been unjustified. In fact, building output in 1956 will probably be only slightly below last year's total.

Even with requirements declining, however, the time must come when stocks are too low and need to be replenished. Firms with good varied stocks always do better than most, even when business generally is at a low ebb. Moreover it is dangerous for importers and wholesalers to rely too long on existing stocks to supply current needs. A sudden improvement in trade might cause a rapid increase in the demand for timber which could not be immediately met. Before very long, then, British importers will probably be forced to enter the market.

As in Britain, the European timber market has been quiet but is showing signs of renewed activity. The basic features are also similar; internal buying has been brisk and stocks have been eaten into. In some countries there are even indications of a growth in demand for the products of some timber consuming industries. In Holland the furniture industry is expected to need more timber in the coming months. Overall, however, the situation is characterised by hesitancy; but as stocks get lower, importers are cetain to become braver. Perhaps, then, the desultory trading of the past few months is gradually drawing to a close, and from now on, the timber market may be more active.—*June* 8, '56.

• Forestry in the News •

CANADIAN BUILDING BOOM MAKES THAT COUNTRY GOOD MARKET FOR PI PLYWOODS

Construction boom in Canada called for exploitation of a tremendous market potential for Philippine plywood in that country according to a report received yesterday by the department of commerce and industry from Justino M. Navarro, trade assistant in the Philippine consulate in Vancouver.

He said Philippine plywood was considered in Canada as one of the best construction materials of its kind. They were being used extensively for making doors and wall panelings, he added.

Navarro said Canadian firms desirous of importing this commodity, wanted to know whether Philippine manufacturers and exporers could supply them with Philippine plywood among other products, in sufficient quantity.

He noted that Philippine export of this product at present was negligible.

He urged that Philippine lumber manufacturers intensify their production of plywood to a point where a substantial exportable surplus would be achieved. With this surplus, he said, the Philippines could supply foreign demands for Philippine lumber products particularly in Canada.

The trade assistant stated that although Canada had extensive forest resources, it lacked species of hard wood comparable to the Philippine mahogany.

With the present boom in construction of new houses and apartment buildings going on in Canada, this country had to import "Philippine plywood" from Japan, he said.

He pointed out that for lack of required machinery to process lumber, the Philippines exported logs and lumber to Japan where they were processed into plywood and veneer. Japan in turn exported these "Philippine plywood" and other finished products to other countries like Canada.

(*Manila Times*)

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VIRGINIA TOBACCO DANGER

Raising our own cigarette tobacco is not an unmixed blessing. Some may question our good judgment in raising tobacco when we do not produce enough food. But that is one of the inalienable rights of free men: to spend their earnings for what they crave.

But it is not the right of free men to lay waste the natural resources of the nation, and destroy the productive capacity of the soil. That is what seems to be taking place in the Ilocos provinces. The forest cover in the nearby and distinct hills is being stripped bare to provide firewood for the flue-curing of Virginia tobacco. In a region already deteriorating from excessive erosion, the firewood gatherers are rapidly converting Ilocandia into another despoliated Cebu. Flooding of the lowlands, silting of rivers, and the loss of the topsoil of the farmlands is the inevitable consequence of this unrestrained exploitation.

The bureaus of forestry and lands appear to be impotent to stop this ravaging of the nation's patrimony. Perhaps ACCFA should make sound conservation procedures a condition to further financial help to the tobacco FaCoMas.

Erosion is not the only threat to the farmlands posed by the boom in Virginia tobacco raising. The high support prices promised by ACCFA are encouraging the use of ricelands for tobacco. The soil scientists believe that three crops of tobacco will rob the soil of so much fertility that a profitable rice yield will become impossible. The use of fertilizers is still in its infancy in the Philippines, so we can expect today's tobacco raisers to be asking for food doles a few years from now.

(*Manila Times Editorial*)

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USES OF ISOTOPES IN PLANTS REPORTED

The Department of Agriculture and Natural Resources today received reports from Geneva, seat of the International Atoms-For-Peace Conference, on the amazing progress in the study of plant life, and the absorption of fertilizers and other nutritive substances by plants through the use of radioactive isotopes.

It was disclosed that these isotopes are used as tracers, whose movements inside the plants can be followed step by step with radioactive sensitive instruments.

In a general review of studies on special problems in agriculture and forestry, J. W. T. Spinks of Canada, reported that isotopes are used to check cobalt deficiency in sheep, to determine the use of phosphorus and calcium by hens, and to observe the behavior of dicumarol, the anti-blood clotting agent.

A. J. Biker of the University of Wisconsin, reported how he and his colleagues of the midwestern United States institution observed reactions under the bark and down inside the roots of trees through the use of radioisotopes. They were thus able to study the sap system, through which most

plant diseases are transmitted, and to follow the course of food substances, poisons and diseases organisms from one part of tree to another.

H. B. Tuckey of Michigan University, reported that experiments carried on there had shown that leaves, fruits, flowers and even the bark of trees can take up plant food applied by spraying.

Tuckey said absorption of plant food from sprays is now known to be many times more efficient than through the roots from applications of fertilizer.

(*Manila Times*)

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AN EDITORIAL *

MR. MONSALUD'S MESSAGE

We wish that more people from around here could have talked to the chunky, earnest little Filipino chemist who stopped by our office last week. A talk with him would make anybody feel more proud to be an American.

The man, Manuel Monsalud, is chief chemist for the only forest products "lab" in the Philippines. He is in this country studying forest products chemistry and processing.

In Marquette Country he had toured several local industries and had been at the Dukes Experimental Station. He dropped in to give us a story on what he and his country have done and intend to do about their forest products. In the process he gave us what we thought was a better and important story.

Today when almost everything one reads carries stories of hatred and violence in the colonial system of the world, it is refreshing to meet a man from one of our former holdings whose people think the United States is a wonderful country, It is humbling and amazing to have a man from another land extend personal and obviously sincere thanks for what one's country has done for his. It is a moving experience to hear a man speak of our commonly taken-for-granted freedoms in a way that makes them suddenly very real and important.

Mr. Monsalud fought the Japanese as a guerilla all through the war and speaks with the conviction of a man who knows what it means to live in fear without freedom and security. When he speaks of the simple everyday things like living in peace with the opportunity to study, work, or start a business, they take on a startling perspective that is hard to get when one has never known anything else.

"Speaking unofficially, and for myself," says Mr. Monsalud, carefully, "I can assure you that the vast majority of the Philippine people are deeply grateful for what the United States has done for our country. When we look at other countries embroiled in nationalistic struggles, we have only to look at the just way the United States gave us our promised freedom to feel good reason for gratitude.

"In the war with the Japanese we came to know the difference between justice and tyranny, and for us the United States became the symbol of our salvation. When we were fighting in the mountains, radio broadcasts from San Francisco were all that kept many of us from giving up hope. Fragments of these messages of truth were passed from hand to hand until they were worn out. I am sure that 99 out of every 100 Filipinos feel friendly toward the United States.

"In all our relations with your country, help rather than exploitation has been the byword, and all of this help has not gone unappreciated. Today we are more and more able to take care of ourselves, but we have not forgotten what the people of the United States have done for us.

"While we have received a great deal materially from the United States", says Mr. Monsalud, "the greatest gift in our eyes has been the example of democracy. To the Philippine people the United States is the most wonderful country in the world and most of us do all we can to make our country like yours.

"My presence here is an example of the sort of thing the United States has done for us. Sixty per cent of the waste from our logging has been thrown away for years. Our forest products laboratory at Los Baños is only two years old. It is only a beginning. But with the help of the U.N. and the International Cooperation Administration, in which we and the United States work together, we are studying so as to be able to make the best possible use of what we have.

"In the Philippines we have 35 million acres of forest cover and a population of 22 million people. Yet we have no pulp mills [1] and only a few small paper mills. We have 7,100 islands, but only 400 are inhabited. With what I and others are learning here, we hope to be able to make our own pulp, paper, wallboard, charcoal products and chemicals. We hope to expand our economy and develop our agricultural potential.

"In the laboratory at Madison, Wis., where I am studying and in the plants and experimental stations I have visited I have never asked information or help from anybody without receiving it. It

* Appearing in the *Mining Journal*, May 25, 1956 issue, Marquette, Mich. Northern Michigan's Oldest and Largest Daily Newspaper.

[1] We have one bagasse pulp and paper mill in Bais, Negros Oriental, Philippines. This, however, is not a pulp and paper mill utilizing forest trees or wastes from logging. It is a small mill with about 50-ton capacity.

is amazing to me to meet so many helpful, interested people. It has always amazed my people that so many from another land should be so ready to help us.

"Although we are now doing more and more on our own, we look forward to the day when we will be completely self-sufficient and able to repay some of the many things that we owe your country."

Quick, filled with facts and figures and ideas, Mr. Monsalud talked to us for about an hour. He spoke with a heavy accent, but appeared to have complete command of the language and never fumbled for a word. With vigorous gestures, he enthusiastically outlined his country's plans. With obviously intense interest and fascination, he told of the things he had learned in this country and of the things he had seen. A modest man, he outlined his considerable background and accomplishmemnts with a few brief sidelights.

When he got up to go he thanked us for our interest and shook our hands, and we were very glad to shake his. We grew to like the man a lot in a very short time. We think you would like him too. It would make any American feel better to know that the United States has friends abroad like Manuel Monsalud.

We wish Manuel and his country well.

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5,000-YEAR SEQUOIA UNDERLINES PLANTS' AGE, AGELESSNESS

By Mona Lisa Steiner, Ph.D.

What is the oldest living thing known? According to the National Geographic Magazine it is the General Sherman tree, *Sequoia gigantea* at the Sequoia National Park, California. It takes 20 men with outstretched arms to encircle the tree, and it is supposed to have flourished before the pyramids were constructed—5,000 years ago. Even if the date may be somewhat dubious, there is no doubt that this Sequoia is several thousand years old. Other Sequoias, *Sequoia sempervirens,* have been cut and the annual rings revealed an age of about 2,000 years but were much smaller than the General Sherman tree.

The annual rings in trees, found on the cross-section of stems, are due to the fast development during the growing season, and the slow formation of cells in the resting period.

We have tremendous giants in the virgin jungle, but it is difficult to find their age because the lack of definite seasons blurs the picture. In some locations dry and wet seasons alternate regularly, and then more accurate accounts of age are possible. But trees in the rain forest hardly tell their life span.

In some instances it is most difficult to tell the beginning and the end of some plants—amoeba divides into two parts, the other half again is propagated by division. The same is true for a number of common ornamentals. The waterplant, *Scindapsus aureus,* for example, never flowers and fruits here, and all plants have been derived asexually from a few mother plants. Even if the mother plant dies the cuttings, part of the mother plant, still continue to flourish. (*Manila Times*)

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REFERENCE BOOKS AT LUMBER BODY

The following books are available for reference at the office of the Philippine Lumber Producers' Association located in El Hogar Filipino building:..

A Veneer Storage Shed.

Soft Wood Freedom.

The Conversation of Small Timber.

The New Timber Bus Shelter In Greater London.

Have You Thought of Plywood?

Timber And The Festival Britain.

Some Used For Home Grown Timbers On The Farm.

Construction Timbers.

The Examination of Timbers.

Sound Practice In The Use Of Timber.

Lecture And The Householder.

Timber—Distribution, Growth, Properties And Uses.

Determination Of Working Stresses.

Glued Laminated Timber Structures.

Thermal Insulation.

Tests On Buildog Connectors.

Glues And Their Uses.

Timber Connectors.

Timber Statistics—1954.

Why Wood Floors Are Better And Cheaper.

Design Sheet Nos. 1 to 24.

Preparation Of Timber For Microscopic Examination.

Decay Of Timber In Buildings.

Preservation Of Farm Timber.

Storage Of Timber To Prevent Decay

Plastics And Timber.

Lumber Shipped Green Can Be Protected Against Decay.

What Is Wood?

Timber—Its Use In Home Construction.

Forest To Consumer.

(*Manila Times*)

———o 0 o———

TWO WOMEN ENROLLED WITH 586 FORESTERS

by

PEG BITTEL

A father who is the foremost authority on eagles in the world; a flair for science!

These are the elements which inspired two young women to become forestry students.

Jeanne B. Patric, 222 Groyden St., and Aurora Reyes of Los Baños, Laguna (in the Philippines), are the only two girls enrolled in the State University of New York, College of Forestry.

The male enrollment numbers 586!

Both Graduate Students

Both girls are graduate students, Jeanne is working for her doctorate and Aurora, her master's degree in forest chemistry.

Being a forestry student is a "natural" for Jeanne. Her father, Charles L. Broley, is a well known ornithologist; has been written up in several leading magazines; and was the subject of a book written by his wife, entitled "Eagle Man."

Her husband is Earl Patric, resident biologist at Huntington Forest, the 15,000 acre experimental station in the Northern Adirondacks belonging to the State University.

Presently, Jeanne is working on her thesis which deals with the classification and cataloguing system for literature in the Roosevelt Wildlife Library at the College.

"It's a rather slow process," she said quietly. And quite understandable . . . Jeanne has two children, Betty and Kathy, to care for, a house to keep; and of course her thesis to finish.

Called Exceptional

Modest and reserved, Mrs. Patric was deemed an exceptional student by her major professor, Prof. Ralph T. King. Her major is forest zoology.

A native of Delta, Ontario, Jeanne took her undergraduate work at Queen's University in Canada, and received her master's degree from Vassar College.

At Queen's she wrote a column for the *Kingston Week Standard* called "Nature Notes."

Her interest in wildlife goes back to her childhood when she accompanied her father on forest trips to band eagles. Mr. Broley has set up headquarters in Tampa, Fla., for his work.

Jeanne told of her father's retirement from banking in Winnepeg, at the age of 55, and his decision to band eagles as a hobby. "Now at the age of 75 he is still going strong," she exclaimed.

Jeanne and Early spend most of the year at Huntington Forest, and have returned to Syracuse to stay untill May.

She will be the first woman to receive her doctorate at the College of Forestry.

Her plans for the future? "I want to teach, write, and work with my husband."

Many "Firsts"

Being a student at the college has brought about any number of "firsts" for Aurora.

This is her first trip to America; the first time she has seen snow; her first purchase of winter apparel, and the first time she has attended a co-educational college.

Although both Aurora and Jeanne are in a sense classmates, they met for the first time last week while being interviewed for this newspaper.

Aurora is studying the chemical utilization of forest products, and is here on a combined travel grant from the Rockefeller Foundation and scholarship to the College of Forestry.

A diminutive five feet tall with flashing brown eyes, she says of her male classmates: "They are courteous, friendly and cordial and I feel quite at home".

At the University of Santo Tomas where she received an associate degree in Liberal Arts, and a B.S. degree with a major in chemistry, Aurora explained that "both boys and girls attended the University but were segregated in classes."

Temperature Change

Before coming to this country, she was on the staff of the Forest Products Laboratory of the Bureau of Forestry in Los Baños.

"Syracuse is quite a big city," Aurora commented, "but the weather is such a drastic change from the moderate temperatures of my country."

"Here the weather is either very cold, or very hot," she said, "in the Philippines there are sunny skies and moderate temperatures."

Miss Reyes (pronounced Ryez) expects to be in this country for about a year and a half. She lives at 613 University Ave., with two roommates . . . both from the Philippines.

After she receives her master's, Aurora plans to return home and "apply her knowledge at her job with Forest Products Laboratory."

She's the daughter of Mr. and Mrs. Mauro Reyes, and has two sisters and a brother: Mauro Jr., an attorney; Teofilo, an accountant; Adoracion, a home economics major; another sister, Rosario and a brother, Eusebio.

"I wish you would mention," Aurora said, "that the Syracuse Business and Professional Women's Club presented me with a check upon my arrival here."

And Aurora is "very grateful for all these kindness."

Only five girls have preceded Aurora and Jeanne at the College of Forestry: Diana M. Smith, Lung Chu Chun, Barbara J. Hennessay, Mildred Kocic and Ruth Worrest who married a forester, Warner Gosharm.—(*Syracuse Herald-Journal,* Mar. 3, 1956)

Chances are the woman who doesn't gossip has no friends to speak of.

* * *

Science is very resourceful. It couldn't open a Pullman window, so it air-conditioned the train.

* * *

A lie is a poor substitute for the truth, but the only one so far discovered.

BASILAN LUMBER COMPANY
Basilan Brand Mahogany
Zamboanga
Philippine Islands

Manila, July 4, 1956

The Honorable
Secretary of Agriculture & Natural Resources
M a n i l a

Dear Sir:

You will find attached a digest of information covering the application of the Basilan Lumber Company for additional area at Milbuk, Cotabato. During the conference which you have called I stand ready to present and discuss accurate maps, produce aerial photographic mosaics, and even to display the three dimensional effects of aerial photographs when placed under a stereoscope, and in any way possible to help clarify the questions raised regarding this application.

Since much of the moral force behind the Basilan Lumber Company application lies in its fulfillment of a sustained yield program for forest management, I sincerely hope that you will take the time before the conference to read the comments on sustained yield contained in the following paragraphs.

To begin with, unlike such resources as minerals, coal, or oil, the forest is a renewable resource. Since the forests are managed by the Bureau of Forestry in your Department, they represent an investment by the people in a natural resource. When a forest reaches maturity and passes on into old age, it becomes subject to the diseases of old age and reaches a point where the loss through decay exceeds the rate of growth. As an investment it is like holding a bond that is matured and must be cashed and the proceeds put into another investment in order to earn interest. This is the condition of most of our so called virgin commercial forests which comprise the bulk of the present timber resources in the Philippines.

But when an overmature forest is logged under a sustained yield forest management program, and the logged lands are left in good condition with many small trees still undamaged to grow and provide increment, and regeneration coming to add to the increment, then the forest, as an investment, is like holding stock in a company that is returning excellent dividends. This is the rightful heritage of the people.

Therefore, the problem of your specialists in the Bureau of Forestry from the Director on down is to convert the present unregulated forest—and I am not including here forest land which is best suited to agricultural development—into one which is producing increment through regulation, by growth. To do this, the overmature forest must be cut as rapidly as possible, but at the same time at such a rate that it will maintain the maximum possible stability of industry and community support until the new crop is ready for harvest.

The harvesting of the new crop, and the succeeding crops in a managed forest results in undreamed of benefits. For one thing, the volume per hectare of the new crop, if cut at the proper time, will far exceed that which was found in the virgin forest. A good example of the total benefits resulting is found in Gray's Harbor County in the State of Washington. The

forests in this county were exploited with reckless abandon to produce largely export logs, squares, and rough green lumber. Any way you look at it, this is representative of the Philippine lumber industry today. By the late 1920's it seemed apparent that most Gray's Harbor cities would end up as ghost towns, but for the last 15 years this county has enjoyed prosperity far beyond that experienced in the heyday of logging in the virgin forests. This came about through diversification in manufacture and through the forest regeneration and growth on logged areas favored by a heavy annual rainfall.

A managed forest results in an assured timber supply. This in turn results in the bringing forth of venture capital for the construction of diversified manufacturing plants, and the secondary effects on community prosperity and the national economy are endless. Thus it may be seen that good forestry is good business, and good business is of inestimable value to the country.

The problems of placing a forest under management are threefold: (1) The determination of economically feasible logging practices which will result in leaving growing stock, and the desired regeneration and increment; (2) The protection of the managed forest from destructive influences, from illegal clearings to insect epidemics; (3) The regulation of the cut during the initial cutting cycle in the virgin forest to maintain a stable industry until the new crop is ready.

In the Philippines a good start has been made on the first two considerations. The third consideration is that which provokes bitter contentions for license areas. Since the first Philippine Conservation and Reforestation Conference in October of 1954, there has been an unprecedented timber license rush which has reached incredible proportions in the last two years. For example, the bulk of the years ago. Now there is no area on the entire peninsula not licensed or applied for. Generally speaking, for the entire Mindanao area, the only unlicensed areas are either so remote from shipping points as to be inaccessible at this time, or they are strictly non-commercial for other reasons.

Along with this issuing of licenses to new firms, and the procurement of additional licenses in this area by many existing firms from other parts of the Philippines, there is a rush of public announcements concerning the proposed establishment of manufacturing plants. Several factors such as the need to justify license application, or the Japanese reparations agreement may have triggered these announcements, but the fact remains that there is now either a speculative bubble in forest industries here, or the forest industry in the Philippines is beginning to come of age. With increasing industry awareness of the Bureau of Forestry's sustained yield forest management program, it is more than likely that substantial industries will be built around it.

The full implementation of this program by the already undermanned Bureau of Forestry will be fraught with difficulties, but the merit and benefit of such a program should never be questioned. Some companies may prove to be absolutely uncooperative, but the majority will probably endeavor to fit in the program to the best of their ability, and in some instances industrial foresters may contribute as much in research and experimentation as the Bureau of Forestry with its limited funds can do.

The degree of industrial development during the period of liquidation of the virgin forests will be substantial, but in the historical sequence of events previously experienced in other countries, it will be far exceeded by the development and diversification which will come with the logging of the new crop in a managed forest. None of this is highflying economic theory—it all has historical precedent, and the Philip-

pines is fortunate to be standing on the threshold of a new and proven era of industrial development through the wise use of a natural resource.

Basilan Lumber Company has been fortunately in the forefront of much of the testing and development of the logging practices possible and practical for the implementation of this program, having committed its entire logging operation, representing an investment of nearly two million pesos to the Bureau of Forestry from August of 1953 to the present time for pioneering in the testing of untried practices, and the weeding out and refining of applicable sound forest practices, and conducting independent coordinated research to evaluate the results of such practices and of previous logging practices. All of this simply for one reason. Good forestry is good business, and we look forward to continued good business in the Philippines.

Sincerely yours,

BASILAN LUMBER COMPANY

Sgd. P. O. DONALDSON
Forest Engineer

———o O o———

Office of the District Forester
Tarlac, Tarlac

March 24, 1956

D-10, Public Relations
Director of Forestry
Manila

Sir:

For information and record purposes:

I have the honor to inform you that, in line with a Department Circular, the DANREATAR held its March, 1956, monthly meeting and community asembly in the far-flung barrio of Iba, Tarlac, a distance of about 30 kilometers of bumpy, mountain road, on the night of March 23, 1956.

For convenience of the audience, mostly farmers numbering about 200 from Barrios Sula and Iba who are busy at daytime, the meeting and community assembly was held at the Iba primary school from 8:30 p.m. to 1:00 a.m. All chiefs of the Bureaus of the Department in this province spoke on the missions of their respective offices. Deputy Forest Guard Alejandro de Leon of this Office who lives in Barrio Iba with quite a following in that barrio, delivered the welcome address for the guests. The undersigned, for his part in the gathering, spoke on free use privilege, forest conservation and evil effects of kaiñgin-making.

After all the heads of the different bureaus in this province have spoken, there was an open forum wherein questions from the audience were answered by the Bureau heads concerned to the satisfaction of the audience.

The party motored back to Tarlac, Tarlac at about 1:30 a.m. arriving at around 3:30 a.m. on March 24, 1956.

Very respectfully,

TORIBIO V. MANZANO
District Forester

———o O o———

MOST USEFUL GREEN LEAVES

Upli is the common name in Quezon province for Isis (*Ficus ulmifolia*), Upling gubat (*Ficus ampelos*), Upling bontotan (*Ficus caudatifolis*), Pakiling (*Ficus odorata*) and Mala-isis (*Malaisia scandens*). Most common leaves being used is that of Isis (*Ficus ulmifolia*). The Green leaves of upli are being utilized for cleaning unpolished furniture and fixtures, unpolished floors, kitchen utensils and every part of the house to the stairs except the posts, ceilings and walls.

It is then rare to see a dirty house of a true Quezonian family. Upli leaves are best used for cleaning with the aid of water and not used with soap. It is the most economical cleaner for leaves of upli are free and abundant in backyards and in farms of Quezonians.

Visitors to Quezon province walk in white-clean floors and eat in shining dishes, the sheen the product of the green-scabrous leaves of upli.

Cleanliness is indeed second to godliness!

Respectfully submitted,
TOMAS M. BINUA
Ranger, B. F.

NOTE: Because of the popularity of Upli leaves, the civic organizations and public schools of Quezon province are requesting the District Office to use Upli trees for reforestation and in forest planting during Arbor Week.

Same,

Rgr. TOMAS M. BINUA

613 University Avenue
Syracuse 10, New York
March 7, 1956

Dear Chief:

I was delighted to hear so much from you about the doings of the Lab and I appreciate very much your taking particular concern over my study here. God willing, I do hope I will be able to hurdle all the difficulties. I was allowed to take the second semester subjects but of course, this means that I have to do more reading than any of the other students so I will understand what they are talking about—especially in connection with the first semester work. I am fully aware that there "is no royal road to success."

The tentative plan for me is this: 12 credit hours of academic course work (minimum requirement for academic units) and 18 credit hours of thesis making a total of 30 hours—the requirement for M.S. I expect to finish this in 1-½years, maybe two, depending on my thesis. One can never forsee or be able to predict what troubles may come up, especially in one's experiments. My work in school is not very heavy though—correcting students' papers, assisting the Professor in his work, etc. but very seldom. I am more concerned with my studies, so I can maintain my scholarship.

Saturday of the first week I arrieved here, I was brought in to the office of Dean Shirley by the head of our Dept., also my major Prof., Dr. Jahn. He did not forget you and Mr. Aquino and the last time I saw him I extended your regards, of which he was very glad.

One evening, two weeks ago, the telephone in our apartment rang. Who was at the other end, but the PRO of the College, saying that the Syracuse Herald Journal was requesting an interview? I never thought my studying here would stir so much interest. A clipping is enclosed for your perusal.

Sometimes people can be over-solicitous and sometimes, too, I'm not sure if I am doing right or wrong. The Secretary of the Graduate Office is suggesting that I be made to stay with American girl students so I will learn the American ways of life and other insights into American culture, etc. My stay here will be bee too short, so I have to make the most of it, I was told. Arrangements are being made, but the final decision will lie with me.

Prof. "Teddy" Delizo will have arrived by the time my letter reaches Los Baños and he will provide you with more of the grape-vine. My regards to everyone in the FPL and Mrs. Cruz.

Sincerely,

(SGD.) Auring

Sunshine Corner

IN ONE OF THE BARRIO SCHOOLS IN THE PHILIPPINES

Barrio teacher: Children, tomorrow our lesson will be elementary home demonstration. This row will bring hens, the next one vegetables and rice, and the third, spices and fruits and the last will be kitchen utensils. (To the class) Any objection?

Junior: (son of a Forester) I object Mam.

Teacher: On what ground?

Junior: Well, I will bring 2 cubic meters of firewood for cooking. My Pa gets them free.

———o 0 c———

FOR BETTER OR FOR WORSE

Instructor—Fritz, will you illustrate the difference between verse and prose?

Freshman—" 'There was a young lady named Betty, who waded out up to her ankle.' That is prose. If she had gone a little further, it would have been verse".

———o U o———

SPILLING THE BEANS

First Frater—"What was that clatter?"

Second Frater—"Brod Ed just fell down the stairs with a quart of whiskey!"

First Frater—"Did he spill it?"

Second Frater—"No, he kept his mouth shut."

———o 0 o———

HIS USUAL FORM

"If I refuse to be your wife," she whispered dramatically, "will you really commit suicide?"

"That," he said grandly, "has been my usual procedure".

———o 0 o———

BELL HAIR TONIC

Mrs.—It's a bottle of hair-tonic, dear".

Mr.—"Oh, thats' very nice of you darling."

Mrs.—"Yes, I want to give it to your secretary at the office. Her hair is coming out rather badly on your coat."

———o 0 o———

IN FLAGRANTI DELECTU

Many—"Did you ever catch your husband flirting?"

Mabel—"Yes, that's the very way I did catch him."

EDITORIALS

IN THE BEGINNING . . .

In the beginning was darkness and man sought light about him; in the beginning was chaos and man sought order within him. Everything around him filled him with awe and terror: every tree, every rock, every stream, every hill, the sea, the mountain, and the sky: everything he imagined inhabited by deities that haunted him and hounded him like cruel relentless gods. The flash of lightning, the roar of thunder, the tremor of the earth beneath him struck terror in his heart: There was nothing that he did not want to know — about the world about him and about himself. And his insatiable curiosity and his unquenchable thirst for knowledge and his spirit of adventure kept him plodding on and on until he beheld, shining from a distant mountain top, a ray of light. There a goddess stood and held high a torch that dispelled the surrounding gloom with its effulgence. Slowly man struggled up the mountain to the top. And he saw that the goddess held in her other hand a key and this key she gave to him. She told man to go forth and use the key to unravel the mysteries of nature.

The man began to understand that there was nothing to fear from nature for nature was his friend. He began to see that man was meant to stand tall like the tree, tall on his hind legs and cast a shadow. And from nature's secret and sacred vaults he drew forth the treasures that were to help him on his journey through the arches of the forests of time. The tree would be his faithful friend and ally. The tree was to be his faithful companion through the silence of the years. The lovely crown of trees would lift up his heart to God. The tree would protect him against the sun's oppressive rays and the pelting rain's cold fingers; the wood of the tree would become his home and the things that would give him joy and comfort, the music that would stir his soul, the store of the vast knowledge accumulated through the ages, the weapons against tyranny and oppression, disease, famine and ignorance.

The Staff of the FORESTRY LEAVES

Organ of the Student Body and Alumni of the College of Forestry, College, Laguna

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The years and the silence would teach him the lessons of the forest: That like the tree he must serve his fellowmen — that he should not think of himself alone but also of others and the oncoming generations — that he must conserve this precious heritage for posterity's use down through the rippling centuries.

For the goddess said unto Man: "To you I give this key. Keep this trust, this secret and sacred trust; keep it untarnished, keep it bright; and keep using it with vision, courage, wisdom, and honor for the good of your fellowmen."

And Man in answer said, "And I, recipient of this key, accept this trust; I shall keep it untarnished, I shall keep it bright; and I shall keep using it with vision, courage, wisdom and honor for the good of my fellowmen."

As it was in the beginning, so shall it ever be, the key to the knowledge of the secrets of the forest shall be passed from hand to hand from one class to another so that this precious legacy which has been bequeathed to man should benefit mankind.

WHY THE SELECTIVE LOGGING PROGRAM

Questions have been raised from some quarters as to the wisdom of adopting selective logging as a general program in the utilization of our timber resources. (Selective logging as a forestry program means the cutting of mature trees, leaving in the progress an adequate and good residual stand of immature and thrifty trees to develop for the next cut.) Some contend that clear cutting, shelterwood, or the uniform systems could be adopted just as well.

The requirements of our "lauan" species and the structure of our dipterocarp forest are the main considerations in deciding the silvicultural system to be adopted. The forest we are mainly handling consists of dipterocarp species which need partial shade during the early stages of growth, becoming intolerant or light-loving towards maturity. We must correlate these requirements to the structure of the forest. Generally, we find that the curve expressing the size (age) distribution from the smallest (youngest) to the largest diameter is a side-reversed "J". The best known silvicultural system for this condition is the selection system.

Why have we to clear-cut and plant with great expense or start from seeds and wait for over a hundred years (which is uncertain in the first place), when we have already on the ground thrifty trees needing only a few more years until they will be ready to be cut? These trees have survived through the elimination process in nature, and therefore, have a high potential value.

The selection system results in the least disturbance to the soil and forest conditions most favorable for the development of our climax vegetation—the dipterocarps. This system is a sure means for natural re-stocking of the cut-over lands.

By the selection system, we maintain the forest cover necessary to keep its water storage and soil protection functions, allowing at the same time regular periodic harvests of timber. These functions are the most vital services of forest to communities. Under other silvicultural systems, these functions are markedly interrupted if not entirely disrupted.

Under other systems cheaper cost of logging may be attained which is most desirable to the logging operator. However, when we consider the stability of the business by the assurance of continuous, adequate supply of raw materials, the selection system

will prove in the long run a more economical approach toward permanent forest industry. The higher cost of logging as necessitated by lesser volume cut per unit area and the care exercised to minimize destruction and injuries to the immature trees of the commercial species, will be compensated by assured subsequent harvests. In the selection system, the next crop is left standing on the area.

Man's ingenuity and great capacity for adjustment always made him successful to go through changes. He has a passion for creativeness and the thrill to meet fresh challenges. In the logging industry he has reduced cost by increasing production. He developed equipments and techniques to bring out more logs per unit time and area. It is believed that the logger will meet successfully the new challenge of leaving more immature trees undamaged and at the same *time maintain profitable* production.

—T. S. Serevo & M. R. Reyes

ENTRANCE EXAM FOR A GREATER CAUSE

The screening of new students is finally practised in the school year 1956-57 in our College. The faculty members unanimously approved such entrance examination during one of their previous meetings which was sanctioned by the Registrar's office. The faculty members fervently believe it is the only way to maintain the high standard of the college and to avoid the waste of money to many students who depend more on their parents for their support. To save money on the part of the government and to limit the number of students, the college authorities implemented this cause for they have fully observed during their past years of experience that some students were not fit to take Forestry course as shown in the records of mortality which was high. And above all, the College can accommodate only a certain number of students beyond which instruction would not be efficient.

This signifies that our institution calls for quality unmistakably and not for quantity. The institution wants to train young men for our country, either for the government service or for private lumber industry. Undoubtedly, we are proud to say that our forestry alumni are the best examples in the eyes of the public for rendering unselfish service to the government.

So if the student fails in his studies, it can only mean two things; either he failed to do his job as a student or he is a square peg in a round hole. Or could there be other reasons? A substantial prize awaits him who can give us the $640 answer.

—R.U.

ARBOR DAY

The forestry student is familiar with the stories of the once thickly-forested China, of the arid Palestine and of Lebanon which was famous for its stately cedars and cypress trees during biblical times. More than once, he has heard of conditions in old World Europe where housewives and children meticulously gather faggots to kindle in their stoves; of present-day India where dried cow manure is used for fuel because of the scarcity, or total absence, of wood. So scarce, indeed, that houses are made of mud —no wood, not even bamboo.

We hear of these treeless countries and we shudder, and we sigh and think of how lucky we Filipinos are to be blessed with rich timber-lands and lush forests teeming with wildlife and with sparkling lakes and streams.

Yet how long will this blessing last? How many years are left for us to enjoy the

abundance of wood which is now still so cheap and so plentiful that our poorest farmers can build their houses with the choicest ipil posts and valuable narra boards for floors? For it is a cold, visual fact that our timber line is fast receding. Our timber stand may not last another hundred years, in spite of the optimists who, still relying on obsolete half-a-century old figures, would have us believe that we actually have more timber now than before!

It is heartening that the importance of Arbor Day was recognized by our leaders years ago but deplorable that the significance of this celebration is too often lost in empty speeches and ceremony that are soon forgotten until the next Arbor Day comes around. Too often a seedling is planted on Arbor Day which is Saturday, left by itself on Sunday, may be watered by the little boys and girls when they go back to school on Monday, neglected on Tuesday, completely forgotten on Wednesday, and is usually already dried up and dead on Friday. If this were not so, the countless seedlings planted by millions of school children every year for the past twenty years would have covered every school ground in every town in the Philippines with trees. As it is, every time Arbor Week comes around, now boys and girls plant new seedling most probably on the same old spot where the seedling planted during the previous year's ceremonies withered and died. The new seedling will eventually die, too, and another one would be planted again on the next Arbor Week, and so on, but never or only occasionally by pure chance, producing a mature tree. This is not gloomy pessimism. This is a statement of fact.

Arbor Week, really, should not be confined to school children and to schoolground, nor to a single day of the year. To logging operators particularly, Arbor Week should be a weekly, perpetual affair, to be given as much importance, as felling for profit. "Cut one, plant ten" should be the ringing motto of people whom the forests have made wealthy, to be echoed and re-echoed simultaneously with the lumberjacks' cry of "Timber."

This message is one of hundreds to be spoken and written on Arbor Week this year. And like all those other speeches, essays, editorials, poems, songs and what not, this message will soon be forgotten. That we are sure of, just as we are sure that the day will come when all these will be remembered, and that day will be when our forests are no more.

—G.F.C.

FRESHMAN CORNER

By E. G. Dizon

Hi! Didn't expect to see a column of this around? Well then, sit back and relax and ponder over it carefully. I should say we freshmen should be at least grateful to know that the school lay open its doors to welcome us. This column is out to prove that. It will serve as a mouthpiece of the freshmen's activities and goings-on around the campus.

——————o0o——————

Well, to start with, here's congrats to all of those who successfully hurdled the entrance examination. This batch of new-comers form the first selected group, young, but tough and agressive.

The College team had its first victory against the Aggie sophies and "Freshies". Mr. Recto, the coach of the team, is quite satisfied with the "rookies" who made the stonewall defense against the Aggie onslaughts.

——————o0o——————

At the Smokers' Rally, many agree that it was a Freshmen's night. The "greenies" proved their superiority in the different fields of entertainment, coping the lion share of the prizes. Their skit won the first place and their vocal numbers though out of tune showed that there are Jerry Lewises among them.

INCIDENTALLY.....

This year's screening of entering freshmen by means of an entrance examination and a personal interview is out to prove definitely one thing: *a well screened freshman class will do better scholastic work.* The main reason given for the very high rate of scholastic delinquency, reaching 52%, the highest of all the U.P. units, has been the poor quality of students seeking admission in the college. Poorly prepared, immature and below average in mentality, this kind of students now form the College loafing population. By a juggling of their schedules, dropping of courses and tearful pleadings, they managed somehow to linger in the college halls from year to year, some of them finishing the Ranger Course in *five* years.

If high school grades are a reliable gauge of a student's success in his studies in College, then the twenty-seven ranger trainees, two years ago, should have made good records during their stay. Unfortunately, one half of them made such a "colorful" record (of the *gumamela* hue) that they had to leave College at the end of the first year, 50% of the other half passing by the "skin of their teeth." Neither can one rely on predictive value of the Intelligence Test Scores. Records show that high I.Q. scorers found their way into the delinquency list.

Prof. Delizo in his article in this issue shows that the units required for graduation in our College is much more than those of the other units of the University and even those of American forestry colleges. Perhaps it is high time we were looking into this. Giving a heavy load to a week camel would surely break its back.

Or what about trying to give the students the chance to rate their professors. It is being done in the College of Liberal Arts with satisfactory results. There are professors that are allergic to this. One faculty member was in such a hurry last year to have the Seniors' Supper set before the grades were in, so, he argued, he would be freed from the Seniors' roasting.

Or what about the grading system? Dr. Panlasigui in his studies on the grading system of U.P. Professors concluded that there was much to be desired in the whole set up of faculty grading.

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Some people have a perverted way of looking at the purpose of intramural games. They have been blinded by their ambitious desires to win at all cost, by hook or by crook. A good example was one of the competing teams in the Los Baños intramurals, which tried to win, in fact beat us in our initial game, by including an unregistered member just so it could place in the elimination round. Thanks to the timely sleuthing of our coach, the *hocus pocus* was nipped in the bud.

We are very fortunate that our Registrar's Office is very careful in these matters, especially in the application of scholastic rules not only to those seeking positions in their class organizations but to all competing athletes. We are also fortunate that our coach, being an assistant registrar, would rather lose the best men of his team than break these rules.

At no time in the past were we accused of evading the rules just so we could win. And this a tradition that we have always lived up to.

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Every time we have an affair, or visitors, we wish we had a drinking fountain. One that is centrally located. Have you ever watched some of our guests pause and take a good look at the water in our drinking glasses before quaffing it? That turbid look gives them the impression that either the glass is dirty or the water must have come from some ditch behind the College.

Arbor week activities set

Arbor week this year will be celebrated from July 22nd to 28th pursuant to Proclamation No. 129 issued by President Magsaysay on March 5, 1955. Pattern for the week-long celebration was set by the national forestry council last year and will be followed in this coming celebration it was learned from Agriculture Secretary Rodriguez, who is the chairman of the council.

Civic and religious organizations actively gave their fullest cooperation and support last year and Secretary Rodriguez is confident that with the same whole-hearted participation of such organizations this year's affair will be just as successful. Following is the program pattern:

July 22, Sunday — Opening Day: This day will be devoted to church services, with the local forestry councils making the necessary arrangements with local parish priests and/or ministers who may include in their sermons and messages the importance of trees and the significance of the arbor week celebration. The church services will be followed by literary-musical programs after which local leaders and ranking government officials will plant trees in public squares or parks previously selected for the purpose.

July 23, Monday — School Tree-planting Day: This day will be devoted to planting of trees around public and/or private school grounds and college campuses. Students, pupils, teachers and parent-teacher associations will participate in this.

July 24, Tuesday — Public Building and Factories Tree-Planting Day: This day will be devoted to the planting of trees around government and public buildings, army installations, churches, and factories or business establishments. This should be undertaken by the employes in the public buildings concerned, by army personnel, by the parishioners of the church and by the employes of the factories or business establishments.

July 25, Wednesday — Street and highway tree-planting day: This will be devoted to the planting of trees along streets and highways to be participated in by the various local organizations like the rotary club, the lions' club, the jaycees, the women's club, the girl scouts' the knights of columbus, the chamber of commerce, the puroks, the PPRM, the PRUCIS, etc.

July 26, Thursday — Mountain tree planting day: This will be devoted to the planting of barren and denuded areas on water sheds previously chosen by the local forestry council to be participated in by the boy scouts, the 4-H clubs, the PRRM, the PRUCIS, the puroks, the barrio councils and other civil groups and organizations. Representatives of the bureau of forestry in the field will take charge of this.

July 27, Friday — House lot tree-planting day: This day will be devoted to the planting of fruit and forest trees in homelots and in places immediately surrounding the homes. This will be an affair of families under the over-all supervision of a commitee composed of representatives of civic and religious organizations which should be responsible for the success of the planting.

July 28, Saturday — Evaluation day: This day will be devoted to the evaluation of the accomplishments during the whole week — the number of trees planted, number of young trees planted and/or cultivated. A general rally may be undertaken during which reports of accomplishments may be rendered by the various groups.

The over-all report on the accomplishments of the week, Secretary Rodriguez said, will be the responsibility of the local forestry council and should be submitted to the national forestry council, Manila, for compilation and record.