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Youth Is Not a Time of Life

BY GEN. DOUGLAS MACARTHUR

YOUTH IS not a time of life. It's a state of mind. It's a temper of the will, a quality of the imagination, a vigor of the emotions, a predominance of courage over timidity, of the appetite for adventure over love of ease.

Nobody grows old by merely living a number of years. People grow old only by deserting their ideals. Years wrinkle the skin, but to give up enthusiasm wrinkles the soul.

Worry, doubt, self-distrust, fear and despair—these bow the head and turn the growing spirit back to dust.

Whether 60 or 16, there is in every being's heart the love of wonder, the sweet amazement of the stars and the starlike things and thoughts, the undaunted challenge of events, the unfailing child-like appetite for what-next, and the joy of the game of living.

You are as young as your faith, as old as your doubt; as young as your self-confidence, as old as your fear; as young as your hope, as old as your despair.

So long as your heart receives messages of beauty, cheer, courage, grandeur and power from the earth, from man and from the Infinite, so long as you are young.

When the wires are down, and all the central places of your heart are covered with the snows of pessimism and the ice of cynicism, then, and only then, are you grown old indeed, and may God have mercy on your soul.

“Live everyday of your life as though you expect to love forever.”

The Value of Cut-Over Forests in the Philippines

By

BERNARDO C. AGALOOS

INTRODUCTION

An inventory or stock-taking of the forest resources is basic to forest management planning. To this end, the Forest Resources Inventory Project was established. It is a joint undertaking of the U.S. Agency for International Development and the Bureau of Forestry. The former provides technical advisers and equipment while the latter furnishes the personnel to do the job. The National Economic Council assists in the Project by providing counterpart funds for aerial photo coverage and traveling expenses of the field crews.

Among the aims of the Forest Resources Inventory are (1) to find out where and how large the forest areas are; (2) what is the condition of the forests; (3) how much merchantable volume is available and (4) what changes are resulting from cutting and from timber growth. To accelerate the work, modern inventory techniques are now applied. Aerial photographs are used extensively to gather information regarding the forests, supplemented by ground checks in the field. The field sampling not only serves to verify the results of photo-interpretation but is also used to collect data not directly available from photographs. The data presented in this paper are taken from the computations and analyses for the Zamboanga Peninsula and Cotabato inventories.

¹ Based on a paper of the same title read by the author during the 301st meeting of the Los Baños Biological Club, UPCA, Feb. 28, 1963.

PREVALENT NOTIONS

A common experience among foresters is to be asked about our forests by people from varied walks of life—doctor, businessman, teacher, merchant, housewife. Based on their questions two misconceptions regarding our cut-over forests are specially evident. One is that cut-over forests are areas cleared of standing trees. To them, areas that have been logged present a picture of desolate waste, bare except for tree stumps and debris. The second misconception is that in order to regenerate these cut-over forests, seedlings have to be brought in and planted by hand, in a manner similar to establishing citrus plantations. Any logger, perhaps even the careless ones, will tend to disagree about cut-over forests being devoid of trees. He knows there are many trees left. It is his business to leave trees and he is required by the government to do so. As to the need for re-planting cut-over forest stands, any forester who knows his forest will say that is not the rule. It is rather the exception. What seems to have caused these prevalent notions about cut-over forest?

When the clear-cutting of timber stands was still allowed by the Bureau of Forestry, most of the mature trees were cut down. In the process, much of the remaining forest cover was usually destroyed. Large areas were laid bare temporarily until reproduction, mixed with weed species, brush and cogon took over. Un-

fortunately, not too many people could differentiate reproduction of tree species from brush and weeds. And among the few that could, almost none cared to see the forest back. To the landless many, cut-over areas were worthless except for cultivation and were thus burned, cleared and planted, only to be abandoned after their yields became poor. Thus, the idea of cut-over forests became closely associated with the barren, cogon-dominated lands which resulted from abandoned cultivations. This image still persists in the public mind. What is the real situation today?

ACTUAL CONDITIONS IN ZAMBOANGA PENINSULA

Perhaps a few facts and figures taken from field measurements will help. Let us consider the old growth forests first and find out what the stand is per hectare. The data presented in this table (see Table No. 1) came from 29 sample areas of

The table shows that on the average, there are 157 trees per hectare belonging to the dipterocarp species and 294 trees per hectare composed of other species. It can be seen that 82% of the dipterocarp trees in a hectare belong to the smaller diameter sizes and 18% belong to the merchantable diameter sizes.

Measurements from 17 sample areas of cut-over stands in the Peninsula show that there is an average of 134 sound dipterocarp trees per hectare 5 cms. or larger, left after timber harvesting operations, and 205 trees of other species. It should be mentioned here that all the 17 sample areas of cut-over stands were subjected to logging operations only. Sample areas on cut-over lands which showed evidence of having been cleared and burned after the logging operations were excluded since they received other forms of treatment in addition to logging and therefore, would not give a representative picture of cut-over

Table No. 1.—Average Stand Per Hectare In Un-cut and Cut-over Forests

D.B.H. Cms.	DIPTEROCARPS				OTHER SPECIES			
	Un-Cut-Stands		Cut-Over Stands		Un-Cut Stands		Cut-Over Stands	
	No. of Trees	Per Cent	No. of Trees	Per Cent	No. of Trees	Per Cent	No. of Trees	Per Cent
5 to 54.9	129	82	123	91	290	99	202	98
55 and larger	28	18	11	9	4	1	3	2
Ave. stand								
Per Hectare	157	100	134	100	294	100	205	100

old growth or un-cut forests, distributed all over Zamboanga Peninsula. Only those sound trees 5.0 cms. in diameter or larger are included in the table. The numerous seedlings and saplings of smaller diameter which are part of the forest understory are excluded.

stands. Of the 134 dipterocarp trees per hectare left on cut-over stands, 91% belong to the smaller size classes and 9% belong to the merchantable size classes. The following table (Table No. 2) shows the number of seedlings found in a hectare of cut-over forest:

Table No. 2.—*Seedlings Per Hectare in Western Mindanao (1 to 3 Meters Tall)*

Location	Dipterocarp	Other Species	T o t a l
Basilan City	972	208	1,180
Zambo del Sur	1,688	1,250	2,938
Misamis Occ.	234	1,250	1,484
Average	965	903	1,868

The data was obtained from reproduction measurements conducted by the Forest Experiment Station in Western Mindanao. The table includes only those seedlings at least 1 meter tall and not more than 5 cms. in diameter. It shows that on the average, there are 965 dipterocarp seedlings and 903 seedlings of other species per hectare of cut-over forest, or a total of 1,868 seedlings. These are sources of future timber trees if they are allowed to develop unmolested.

Figure 1 compares the number of dipterocarp trees per hectare in uncut and cut-over stands in the Zamboanga Peninsula. The average number of trees per hectare was plotted by 10-cm. diameter class. The solid line represents the un-cut forests and shows how the trees are distributed in an old growth forest among the different size classes. The broken line shows the distribution of the remaining trees by size classes, after the stands were cut-over. The figure graphically shows a large increase in number of trees in the 10-cm. diameter class in cut-over stands. This increase resulted from the growth of reproduction already present at the time of cutting, which occurred as much as 10 years before the date of the inventory on some sample areas.

More than one half of the number of trees per hectare belonging to the merchantable sizes was removed when the

stands were cut. This is obviously due to the fact that loggers usually cut timber in accordance with the minimum diameter limits set by the Bureau of Forestry and because trees from 55 cms. in diameter or larger contain enough merchantable volume to make them profitable to cut. The reduction in the number of trees with diameters ranging from 15 to 54.9 cms. may be attributed to the inevitable damage caused during the felling and logging of the merchantable trees. Figure 2 compares the number of non-dipterocarp trees per hectare in un-cut and cut-over stands. It graphically shows a large decrease in number of trees belonging to the small diameter classes, which resulted from logging and felling damage. Only a slight decrease due to cutting is shown among the merchantable-sized trees.

Table No. 3 presents the change in number of trees per hectare that takes place when old growth stands are cut.

For dipterocarp species, out of 28 merchantable-sized trees per hectare of un-cut forests, only 11 trees remained after cutting. This represents a reduction of 17 trees or 61% of the original stand per hectare. In a separate study conducted to determine the degree of utilization of Mindanao logging operations, it was found that for the merchantable-sized dipterocarp trees, a per hectare average of 14 trees is cut for utilization, 1.4 trees destroyed in felling and 1.6 trees destroyed during logging, or a total of 17 trees. By sheer coincidence, this checked precisely with the results obtained in the Zamboanga inventory. The table does not reflect the true reduction in number of trees of the smaller diameters showing only a decrease of 6 trees or 5%. Actually, much more were destroyed at the time of cutting, but as mentioned earlier, the decrease soon was offset by the growth of reproduction into larger size classes following the cutting operations. Not much change has occurred in

Table No. 3.—*Change in Average Stand Per Hectare Caused by Cutting*

D.B.H. Cms.	D I P T E R O C A R P S				O T H E R S P E C I E S			
	Un-Cut Stands	Cut-Over Stands	Decrease	Per Cent	Un-Cut Stands	Cut-Over Stands	Decrease	Per Cent
	No. of Trees	No. of Trees	No. of Trees		No. of Trees	No. of Trees	No. of Trees	
Saplings & Small Trees (5—54.9)	129	123	6	5%	290	202	88	30%
Merchantable trees (55 and larger)	28	11	17	61%	4	3	1	25%
Stand per ha.	157	134	23	15%	294	205	89	30%

the number of merchantable trees of other species, with an average reduction of only 1 tree per hectare. This is expected because there is no commercial demand for non-dipterocarp species, with a few exceptions. The decrease in number of trees of the smaller sizes was mostly due to damage sustained during the logging operations.

PRESENT QUALITY AND CONDITION OF OLD GROWTH AND CUT-OVER FORESTS

Besides obtaining information on the number of trees contained per hectare on both old growth and cut-over forests, data on the quality and condition of these trees are gathered during field sampling. Partial results of quality and condition

classifications performed in the Cotabato sample areas are presented in Table No. 4. All trees tallied are classified according to quality; also, all plots are classified as to the condition of the timber stand dominating the area. For old growth forests, it was found that 31% of the area is occupied by future crop trees. These are trees which are not more than 75 cms. in diameter, vigorous, either dominant or co-dominant, and could be safely held for a future harvest cutting. Forty-nine per cent is occupied by merchantable mature trees. These are trees 55 cms. in diameter or larger, which are considered poor risks to hold for future harvest and should therefore be cut and utilized first. Small, low value trees occupy 7% of the area, and another 7% is occupied by cull trees. The remaining 6% is open or un-stocked.

Table No. 4.—*Quality of Forest Stocking
OLD GROWTH FOREST
(Per Cent of Area Occupied)*

Diameter Cms.	Future Crop Trees	Merchant- able Mature	Small low-value trees	Cull Trees	Total area Occupied	Open Area
0-14						6
15-34	3		3		6	
35-54	12		4	1	17	
55-74	16	8		1	25	
75-94		26		2	28	
95+		15		3	18	
TOTAL	31	49	7	7	94	6

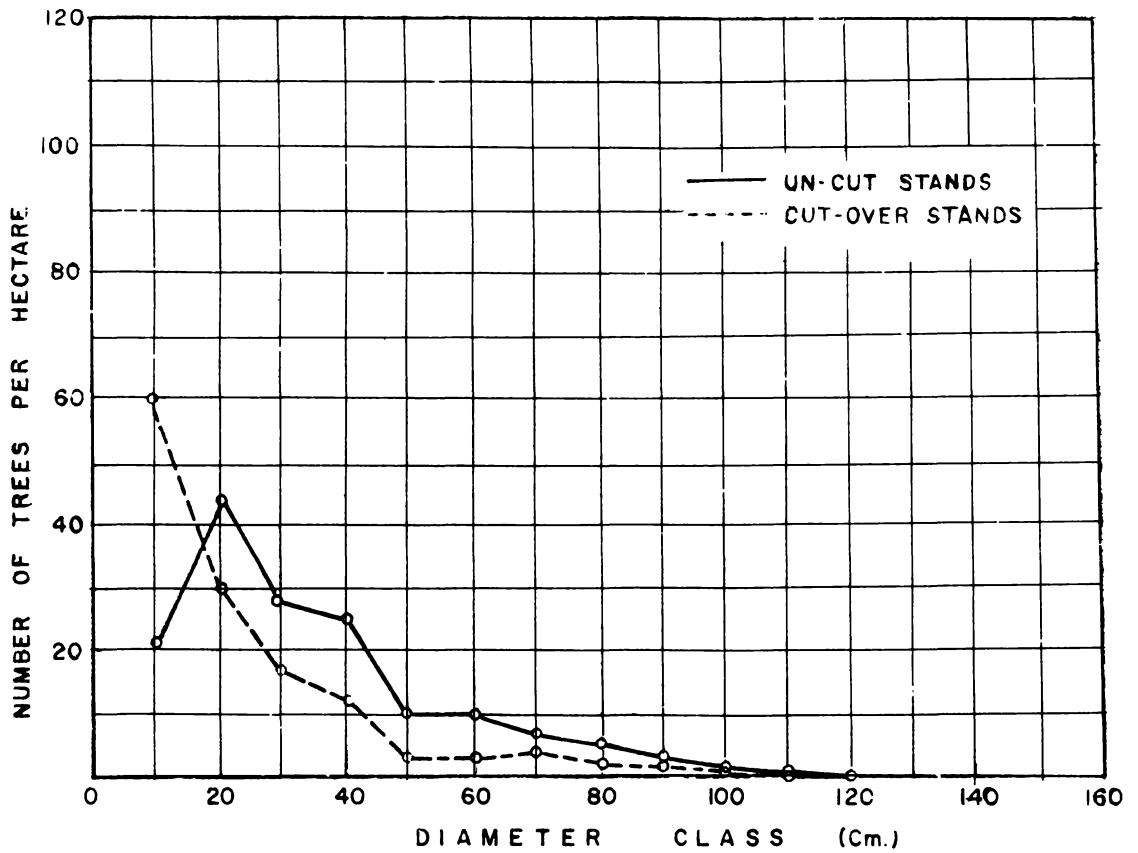


FIG. I. NUMBER OF DIPTEROCARP TREES PER HECTARE IN UN-CUT AND CUT-OVER STANDS.

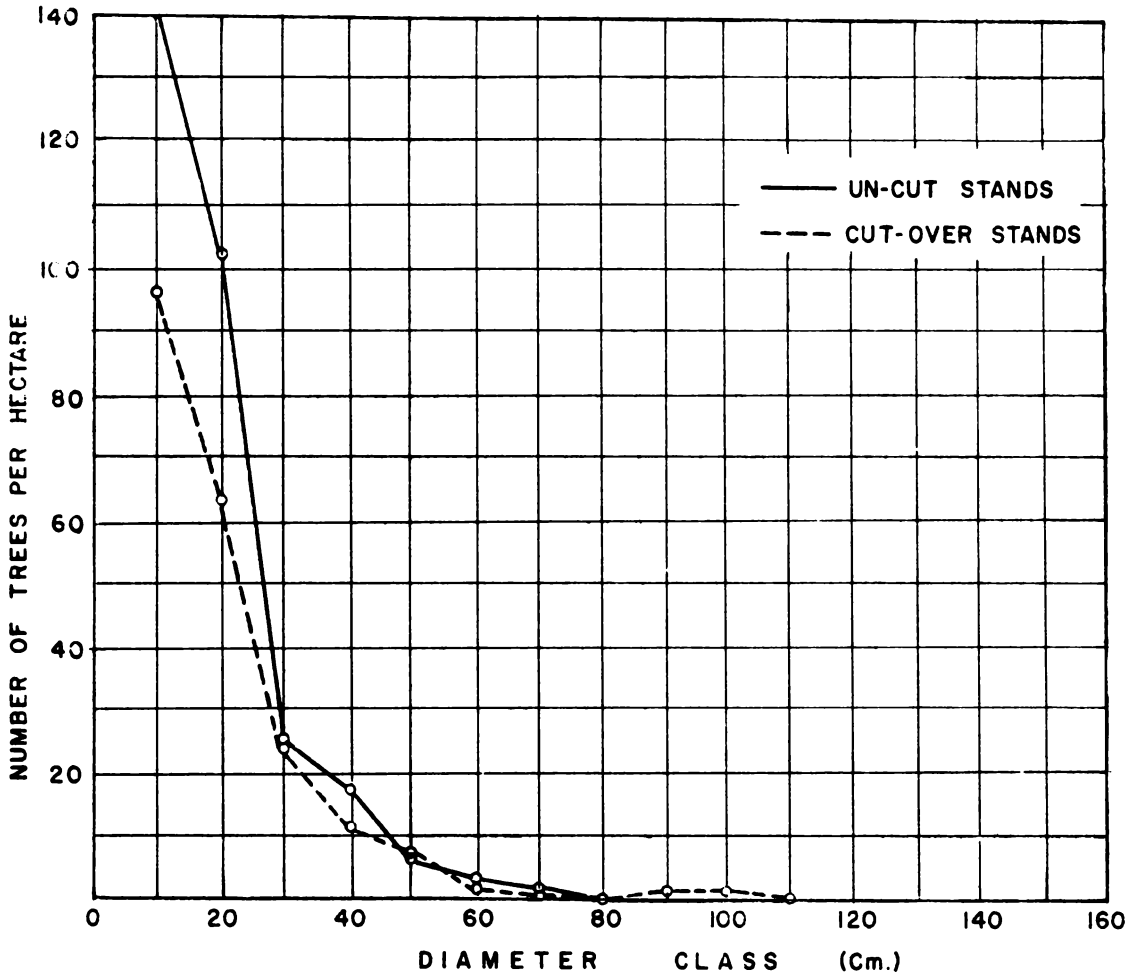
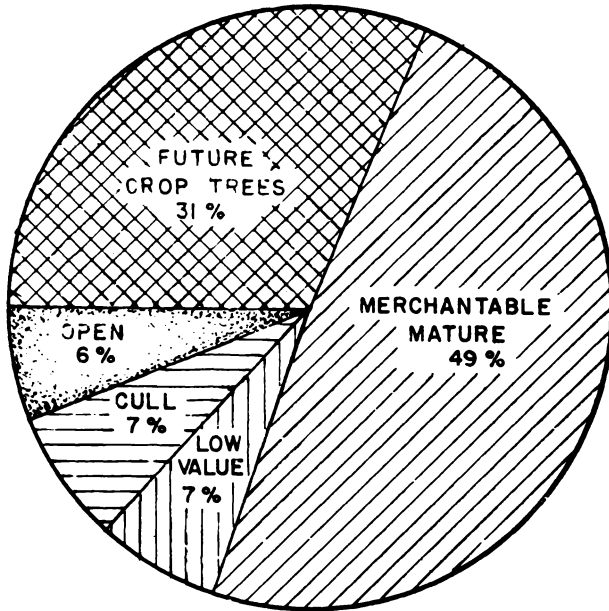
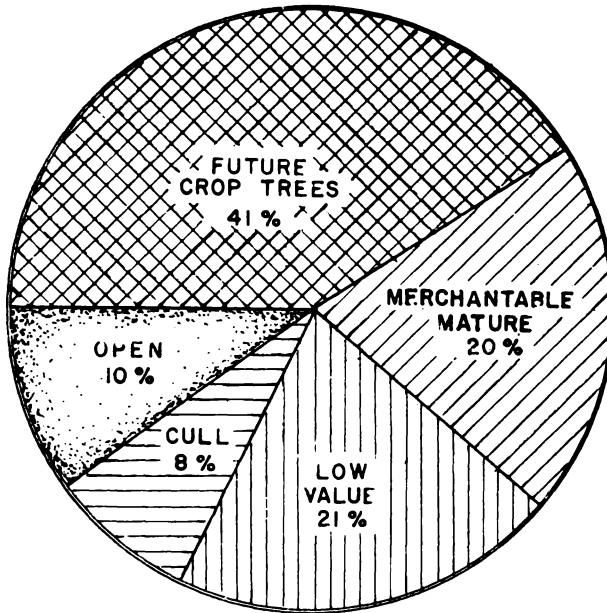


FIG. 2 NUMBER OF TREES (Other Species) PER HECTARE IN UN-CUT AND CUT-OVER STANDS

FIG. 3 QUALITY OF TREES OCCUPYING FOREST LAND
(PER CENT OF AREA OCCUPIED)

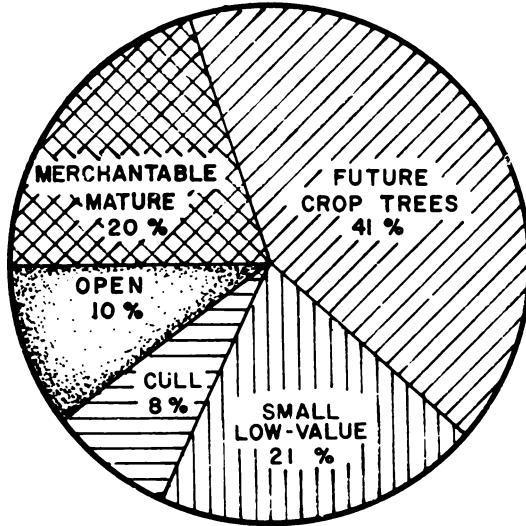


OLD GROWTH FOREST

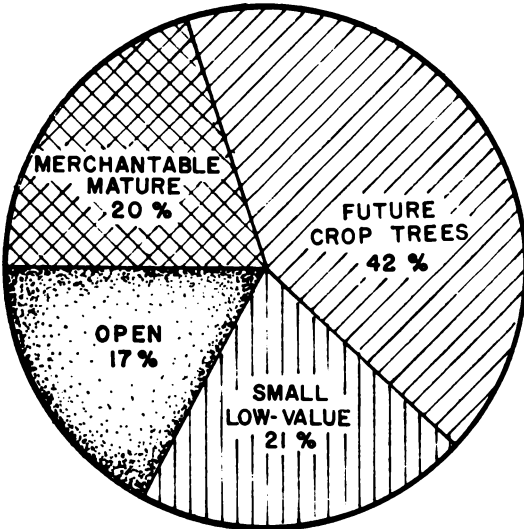


CUT-OVER FOREST

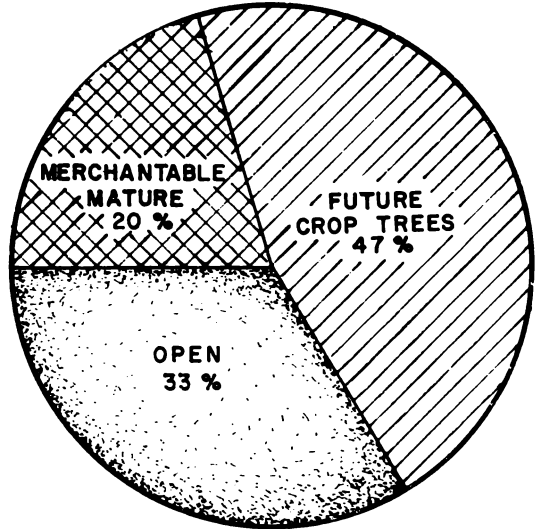
FIG. 4 EFFECTS OF TWO LEVELS OF TREATMENT ON THE PRODUCTIVE CAPACITY OF CUT-OVER FOREST (PER CENT OF AREA OCCUPIED)



UNTREATED CUT-OVER FOREST



CULL TREES REMOVED



CULL AND LOW VALUE TREES REMOVED

CUT OVER FOREST
(Per Cent of Area Occupied)

0-14	1		2		3	10
15-34	9		12	4	25	
35-54	30		7	1	28	
55-74	11	13			24	
75-94		6			6	
95+		1		3	4	
TOTAL	41	20	21	8	90	10

After the forest becomes cut-over, the proportionate area of each tree quality and stand condition classification changes. The lower portion of Table No. 4 shows that future crop trees now occupy 41% of the area, merchantable trees 20%, small, low-value trees 21%, cull trees 8% and open space, 10%. The area changes can be appreciated more clearly with pie charts. (See Figure 3). The largest area change occurred for the portion occupied by merchantable mature trees, from 49% to 20%. This is simply because areas occupied by mature trees underwent more cutting than the others. The next largest area change took place in those dominated by future crop trees, from 31% to 41%. The expansion resulted from the opening up of additional space, allowing young, high-quality trees to dominate more area when the mature trees were removed. Similarly, the increases in the area dominated by small, low-value trees, cull trees and open space resulted from the removal of the more dominant merchantable trees, letting the inferior trees take over.

EFFECT OF STAND IMPROVEMENT TREATMENTS ON CUT-OVER AREAS

What can be done to improve the productive condition of cut-over forests? Depending upon the requirements of individual stands, some forms of timber stand improvement can be applied to increase the productive capacity and value of cut-over stands. These treatments consist of liberating desirable trees from choking weeds and vines, killing of cull trees, thinning of crowded stands, etc. The following

pie charts show the immediate effect of two simple levels of treatment on cut-over areas, based on data obtained in Cotabato. (See Figure 4).

The upper chart represents the untreated, cut-over forest. The chart on the lower left shows the effect of removing all cull trees. From a proportionate area of 10, the open space is increased to 17, while that of future crop trees is increased by 1. By increasing the open area and given favorable conditions, seedlings would eventually get established and become future crop trees. Thus, the space previously occupied by undesirable cull trees can be utilized to produce better quality trees.

The chart on the lower right illustrates the change resulting from removing not only all cull trees, but also all small, low-value trees. Small, low-value trees are trees less than 55 cms. in diameter that do not qualify as future crop trees because of poor form and because they contain substantial defects, or because the species is of low value commercially. A big change occurs in the proportionate area that is open, increasing from 10 to 33, while the proportionate area for future crop trees is increased from 41 to 47. These changes simply improve the capacity of the cut-over stands to produce higher quality trees of desirable species, if the required conditions are met. It will be noted that the area occupied by the mature trees is not altered by either treatment. This is because only the immediate effect of the treatment is considered. In the long run, as the future crop trees grow in size,

more area would be occupied by the mature trees, with less area covered by the other stand conditions. Eventually, a stand composition similar to the old growth stand shown in the previous pie charts would be developed, but with less area occupied by cull trees and trees of low value.

SUMMARY

The following points summarize the discussions presented in this article:

1. Cut-over forest stands are not bare, tree-less tracts of land that are incapable of reproducing valuable timber. Contrary to popular belief, cut-over forests are rather well-covered with potentially valuable forest trees, saplings and seedlings which can grow into future timber crops. The Zamboanga inventory shows that on the average, there are 134 dipterocarp trees per hectare on cut-over stands that are 5 cms. in diameter or larger.

2. Large-scale planting of cut-over areas is not a requirement for re-establishing forests for future timber utilization. Inventory measurements show that an average of 123 dipterocarp saplings and small poles are found in a hectare of cut-over forest. Also, there is an average of 202 saplings and small poles of other species per hectare. These do not include the thousands of seedlings present in a hectare of cut-over forest. The average total of 325 trees per hectare of cut-over forest is an abundant source of future stocking and leaves very little need for artificial planting.

3. The value of the cut-over forests could be increased even more by applying timber stand improvement treatments, the nature and intensity of which depends on the requirements of specific stands.

PROTECTION TO CUT-OVER FORESTS INDISPENSABLE

However, these facts alone will not assure us of valuable timber crops in the future unless the cut-over forests are pro-

tected from being cleared and burned by land squatters or kaingineros. Once burned and destroyed, the natural capacity to regenerate another timber stand is lost. Only expensive and sustained reforestation plantings can bring back those forests. Protecting the residual trees in cut-over forests and allowing Nature to take its course surely is a lot less expensive and less involved than re-planting cleared areas by artificial means. When the virgin forests are all cut and gone, the multi-million peso logging and lumbering industries will have to depend upon the reestablished forest stands on cut-over areas. These industries have to face the fact that there can be no other source for the world-renowned Philippine mahogany logs and lumber. The future of these revenue-producing industries hinges on how well we can safeguard our cut-over forests from destruction.

Increased efforts toward rigid forest protection should be exerted to allow the valuable residual trees which are substantially composed of dipterocarp species to develop into future Philippine mahogany timber. Without really adequate protection, the potential timber harvests contained in our cut-over forests are lost. It is to the credit of the many responsible timber producers in the country for keeping faith with the Bureau of Forestry's efforts at forest protection. The government must go all out in preventing the destruction of cut-over forests now or stand to lose a large contribution to the national economy when loggers, running out of virgin forests would have no second-growth stands to fall back on. Forest protection is indispensable to conservation.

REFERENCES

1. Instructions for field data collection in the forest inventory of the Philippines. Bureau of Forestry — AID Forest Development Project-September, 1962
2. Permanent sample plot records, Forest Research Division, Bureau of Forestry, 1962.

Worm Scars¹

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Much rotary cut Philippine mahogany veneer is completely wasted or seriously degraded by a defect that is variously referred to as "worm scar" and "vine scar." As the scar appears in the veneer it is sometimes a distortion and sometimes a channel filled with resin and powder which has probably led to such expression in certain grading rules as "live vine scars" and "dead vine scars." Although it is not expected that knowing the cause of these scars can in any way help us minimize the damage they do to veneer the question of their origin does stimulate curiosity and the purpose of this essay is to discuss some observation that illuminate, at least partially, the answer to that question.

The scars, as they appear in veneer, are predominantly solid wood with the grain distorted to varying degrees and, much less frequently, grooves varying from about 1/8 inch to 3/16 inch wide that are filled with resin, usually dark—sometimes almost black—but occasionally quite light in color, or resin that is apparently compounded with powder. Observation at the lathe while veneer is being peeled reveals that whenever a faint scar is encountered it continues to grow more conspicuous as the knife advances into the log for sometimes more than an inch and finally, without exception, terminates in the resin filled groove. Assuming that 1/16 inch veneer is being peeled and that the distance along

the radius from the point where the scar is encountered to the resin filled groove is one inch—and it could be more than that—there would be sixteen pieces of veneer with scars of solid wood to one or two with the groove so it is easy to understand the prevalence of the former.

The scars are found any place between the surface and pith of the log. Sometimes they will be confined to one or more narrow bands and sometimes they are scattered throughout the block. The resin filled grooves wander considerably in directions parallel, diagonal, and perpendicular to the vertical axis of the tree but never appear to deviate in a radial direction except and to the extent that the log is not a true cylinder. They always stay in a plane that could have been, at one time, the cambium layer.

Scars are found in several of the species generally classified as "Philippine Mahogany" and this writer has observed them in conspicuous quantities in Red Lauan, White Lauan, Bagtikan, and Almon.

Having noted the intensification of the scar, or the increase in the amount of distortion of the wood which constitutes the scar, on a radial line progressing toward the heart of the log and its invariable termination in a resin and/or powder filled groove it is also noted that immediately under the groove, in the direction of the heart, the wood is perfectly normal. It is also noteworthy that the groove commonly terminates in a knot and the scar in a knot or a burl.

¹ It is recognized that this title may be a misnomer since the actual injury may have been made by a beetle.

In order to explore these phenomena somewhat more precisely, the writer removed several blocks from the lathe when faint scars were beginning to appear and carefully traced them down to the resin-filled groove by removing the wood with a carpenter's chisel. Several facts of considerable significance became apparent.

First, there were no exceptions to rule that the grooves (or "tunnels" as they can properly be called) run up and down and around the tree but never leave the plane of the growth ring in which they occur, or, to express it otherwise, from what was, at one time, the cambium layer of the tree.

Another is that a cross section of this tunnel is almost always elliptical and of approximately constant size (commonly 1/8 inch to 3/16 inch wide and about one half that in depth).¹ It is also noteworthy that the depth (the short dimension) of the tunnel is always along the radius of the tree.

Finally, the tunnels are positively *cut* into the wood. In all cases the fibers of the wood are severed at the walls of the tunnels. It is only the fibers that apparently grew after the tunnel was formed that show the distortion we refer to as the "scar".

With the foregoing observations as evidence we are justified in theorizing on the probable cause of this phenomenon. A quick run-down of the facts reveal nothing

to support the notion that the scars are caused by vines. Vines could not cut tunnels but would have to exert their influence by compression; if they could cut tunnels, vine tunnels would be of various sizes since vines vary widely in diameter; vines would not be likely to squeeze violently for one reason—thus producing a groove of constant depth—and then cease to exert influence and leave the tree limb provided a port of entry to the cambium layer; the distorted wood forming the scar can be easily understood to be nature's way of bridging the gap made by the organism as the tree continued to grow.

Since none of the facts about these scars can be explained by the vine theory, that notion must be rejected. On the other hand, since all the characteristics of these defects are consistent with an assumption of worm or beetle activity, there is good reason to accept that theory¹, although we do not now know exactly what animal did the work.²

Worm scars are generally objectionable in the face grades of plywood, but sometimes the distortion of the wood is slight, even to the point of being hardly noticeable; and some face grades, for one rea-

¹ Dr. Frederick F Wangaard, Professor of Forest Products at Yale University, who kindly reviewed this paper, wrote on October 6, 1961:

"I recall examining these same scars and discussing their possible origin with several people at Los Baños. I have looked at the samples and photographs that you sent with your letter and agree completely with you as to the nature of this injury undoubtedly results from the activity of some sort of beetle or borer working directly beneath the bark of the living tree."

² R. J. Newall, writing on September 18, 1961 for Officer-in-Charge, Composite Wood Section, Department of Scientific & Industrial Research, Forest Products Laboratory, Princes Risborough, Aylesburg, Bucks, England, comments in part as follows:

"Our entomology section, which has examined the samples of *Parashorea* veneer, agrees with you that 'the defect is caused by insect attack to the growing tree.' Although there is no clue to the identity of the insect responsible, it appears to be a 'borer' in the bark or cambium, and is probably a beetle, possibly of the family Buprestida (jewel beetles) or Cerambycidae (longhorn beetles)."

¹ Dr. Theo. C. Scheffer, Pathologist United States Forest Products Laboratory, with whom the writer discussed the subject matter of this paper, wrote in a letter under date of August 22, 1961, as follows:

"According to Glen Esenther, the entomologist to whom I have been referring, the insect works only in the cambial region and cuts into the wood but very slightly. - - -"

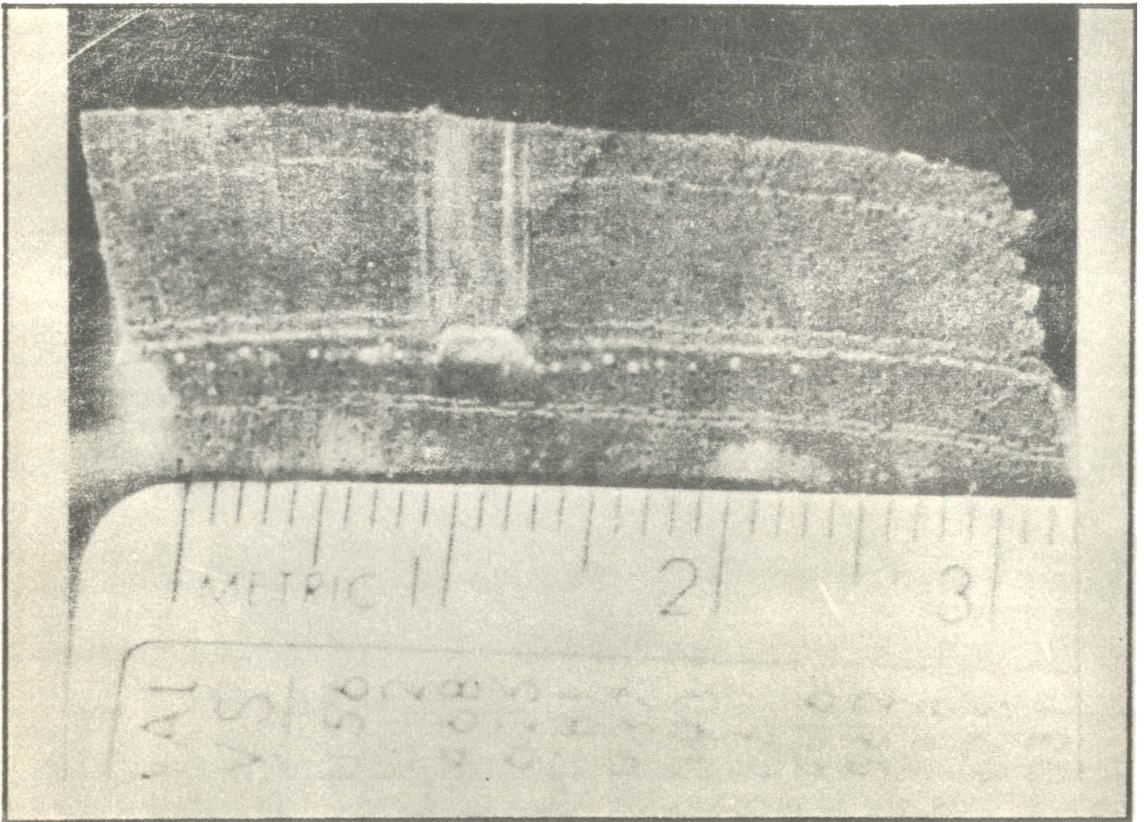
Glen noted that the galleries are of comparatively uniform width. From this he concluded that the insect must have reached its final larval stage in the bark. Otherwise the galleries would have been of different diameter, representing more than one stage of larval development. Also one might expect to find remnants of a larval 'skin' which is shed as the insect progresses from one stage to the next."



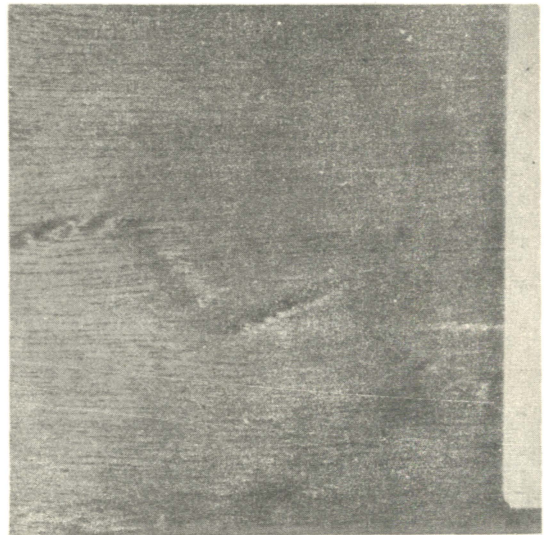
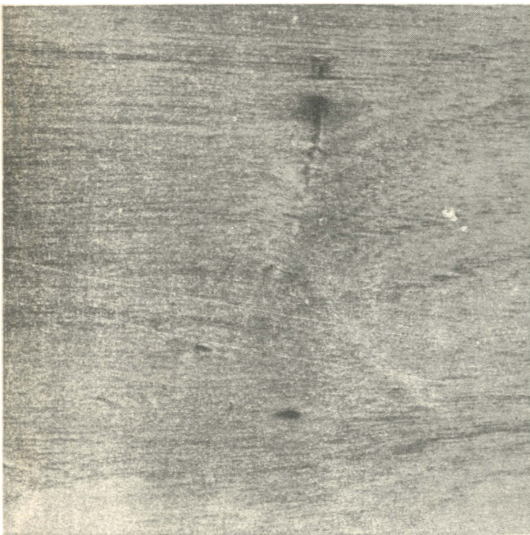
Scars, even though peeled smooth are often spectacularly conspicuous and could not be considered acceptable in any export grade where appearance is a factor. Sometimes one of these scars will run straight across the face of a panel and apparently meet the definition of "cross-bar" as given in the glossary of U.S. Commercial Standards CS-35-56. In these cases it is common for the fibers to be bent out (toward the bark) so that in peeling they are severed and end grain is exposed. Light reflection from this end grain contributes to making the scar conspicuous; the presence of a continuous band of such end grain no doubt complicates the application of finishes; and certainly this type of grain distortion greatly weakens the veneer. Note that in this particular instance the scar is associated with small burls.



Beneath every scar of the type shown in Photo 1 is the resin and/or powder filled tunnel of what probably a worm or beetle that bored his way up and down and around under the bark of the tree. The tunnel is the wound; the resin is nature's first aid application; and the distorted wood developing over this wound is the scar. It is doubtful that even a small amount of these exposed tunnels would be acceptable in any export grade.



This is a photograph enlarged to approximately three times normal size of a piece of wood showing a cross section of one of the resin filled tunnels and the distorted grain of the wood directly over the tunnel. Note also that the tunnel is clearly cut into the wood. From the metric scale it will be seen that the tunnel is about 4 millimeters wide (approximately 5/32 inches) and roughly half that in depth. This cross section is quite typical of the tunnels commonly encountered. They are almost always elliptical; always cut through the wood fibers; and the scar tissue develops over the tunnel in a radial direction toward the bark of the tree.



Wood fibers that constitute the scars are often violently distorted, particularly close to the tunnel, and are frequently as dense and hard as the substance of a knot. It is not uncommon for concentration of these dense fibers to develop the appearance of knots. Scars of this sort are almost invariably rough when they occur in veneer and it is not probable that they will be found acceptable in any face grade.

son or another, are less exacting than others; so in the specifications for grading Philippine mahogany face veneers a means must be found for determining what and how much of the worm scars, if any, is acceptable in a given grade and how to express it in grading rules in such a manner that reasonably capable graders can understand and apply them.

The actual resin filled channels can, it is reasonable to believe, be disposed of by ruling them completely out from any export face grade. It is difficult to justify even a small segment of one of the resin

¹ Cross-bar: Type of figure or irregularity of grain resembling a dip in the grain, running at right angles, or nearly so to the length of the veneer.

and powder-filled worm tunnels in any export grade because they present a surface that is not wood but a brittle and highly variable resin that is unsightly; certainly not suitable for a natural finish; and likely to cause trouble if used for print grade or even for a paint finish. On the other hand, the distorted wood that forms over the actual tunnel and which constitutes by far the bulk of all "worm scars" appearing in Philippine mahogany varies from conspicuous to barely noticeable and from excessively rough to acceptably smooth. It is in this category that worm scars which would be acceptable in at least some export grades can be found.

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"Phil-Bast Hat"

By

F. N. TAMOLANG, F. R. LOPEZ,

I. ZAMUCO AND LAMBERTO VERSOZA

For the first time, the Forest Products Research Institute introduces to the public the "Phil-bast hat", a captivatingly attractive and stylish hit of the year. So far, this is considered to be the most elegant of all Philippine hats of the elite class, the development of which has sprung up with the viable spirit of Filipino initiative in this "new era" of the Republic of the Philippines.

The Phil-bast hat is exceptionally handsome, novel, appealing, featherweight, nationalistic, and patently a utility model. It could be made available to most people because the cottage industry could boost its production to reasonable prices, provided its eventual commercial production does not fall into the control of the unscrupulous "economic-wizards-that-be" who have dislocated the good prestige enjoyed by the buntal hat industry. Envisioned to be nationalistic, it must, therefore, be nationally produced, i.e. by Filipino citizens only, for the benefit of the country and as a modern national Filipino hat. Every Filipino must be proud to wear it. It is Filipino-made and generally useful.

STYLE AND MAKE-UP

The Phil-bast hat is versatile in its form and use. For men, it is produced to fit all occasions and weather. There are hats which could be used for special occasions, others for work, and recreation during the hot season, as in golf, tennis and other sports, and the latest ones, which are wa-

terproof, for the wet season. The form can be adjusted to the various modern styles, such as *Madison*, *Nu-knob-telescope*, and *Nu-center-crease*, to fit every shape of the head, the facial features and complexion of the user. The brim of the hat can either be narrow or broad to give that proper balance to maintain handsomeness and attractive bearing. But, above all these, the head-cover or crown could be ventilated as one wishes it. This is a style which is locally conceived to suit local conditions.

For the women, the Phil-bast hat can be a valuable asset to enhance their beauty and charm. Various styles are modernistic to give them that valuable "it-iveness". To match this hat, are handbags which are very attractive and could equal foreign-made handbags. In other words, hats and handbags to women are equally important and complementary. This latest craze on the Phil-bast hat answers this traditional need for feminine fashion.

The striking features of the Phil-bast hat are its lightness which is comparatively featherweight, its silky and finely-latticed woven structure which is genuinely natural, and its strength which is an index of its durability. When crumpled, it can be rejuvenated to its original form or shape. This is good economy in its favor.

PRODUCTION AND COST

Phil-bast hats are available in three kinds, namely: (a) the bleached, (b) plain



Mr. Ricardo Portillo, wholesaler and "hat king" of the Philippines, displays different styles of high-quality gasha hats.



Mrs. Casimira Flores, retailer and owner of "Cas-Flor" Hat Store, displays gasha hats.



A layer of malabuh bast is passed through a crude wooden block with protruding blades known as "agpang", dividing the strips smoothly and equally.



Forestry personnel of Lucena Forestry District and the F.P.R.I. search team luckily found Mr. Aranilla and did not waste time to recognize the commercial prospects of the new bast-fiber hat industry.

color, and (c) two tones. Because of their high quality, versatility, and elegance, they command handsome prices. At the Escolta, a bleached hat costs ₱14.00. The "Cas-Flor", located at Herran, Manila, retails it at ₱7.50.

With the mass production of the Phil-bast hat by the Portillo Hat Store, located at Taft Avenue, Manila, the prices are lower. The wholesale prices per dozen are ₱66.00 for bleached and two-tone men's hats, and ₱60.00 for the plain-colored ones. Women's hats are sold for ₱70.00 per dozen.

The Phil-bast hat is gaining popularity in Manila; especially, among golfers, hat fanciers, and the tourists. It has reached the far corners of the Philippines such as Zamboanga, Baguio, the Ilocos region, the Bicol region, Quezon, and Cebu where the bulk of sale has increased. Recently, San Miguel Brewery is proving its sale in Australia with the first batch of 36 hats.

Investment in this new hat industry has a good start. Portillo's investment alone since May, 1962 has amounted to about ₱28,000.00 which solely covers the braided raw materials. Of course, the home industry is concentrated in Quezon province where the fibers are produced and woven into standard braided straps of 3/4 inch in width. A bundle of braided strap, 60 feet long, is sold by the barrio producers for ₱3.30. Out of this bundle, two big hats or three medium bags can be manufactured.

Portillo Hat Factory manufactures at least 100 hats a day. A special hat-sewing machine of the overlap type is used to sew and form the hat. The production is done according to the assembly-line system as follows:

A. For the bleached hat

1. *Sewing and forming.*—The braided straps of fine-quality is sewn with

an overlap sewing machine. The end of the strap is first coiled and, along its outer edge, the inner edge of the trailing strap is mounted to form an overlap of about 1/8 to 1/4 inch. The coil is enlarged as the sewing progresses. The preliminary shape of the hat is obtained by necessary adjustments in the sewing machine. The sewn hat is then fitted to a hat-last to attain the desired form.

2. *Bleaching.*—To make the hat white, it is bleached by a commercial bleaching agent. To attain economy, this operation is done for a number of hats in a galvanized-iron container for at least overnight. When the desired whiteness is attained, the hats are rinsed thoroughly and dried under shade by air-drying.

3. *Shaping and ironing.*—Next, the hat is placed carefully over a hat-last. An ordinary electric iron is used for ironing. The hot plate of the iron is first rubbed on a gelatin medium, then pressed on the hat as in the ironing of ordinary clothes. The gelatin medium gives the desired luster to the hat.

4. *Finishing.*—This consists of the placing of (a) a lace or ribbon around the base of the crown of the hat and (b) the hat-band along the inside perimeter of the crown. The lace is made of bast-fiber-braided strap while the hat-band is made of thin strip of leather or artificial leather.

B. For the plain-colored and 2-tone hats

1. *Dyeing.*—The coarse-quality braided strap is dyed with the desired color, using a fast dye. Dyeing is accomplished in accordance with the specified procedures of the type of dye being used.

2. *Sewing and forming.*—As previously described.

3. *Shaping and ironing*.—As previously described.

4. *Finishing*.—As previously described.

C. For waterproof hat

1. Either steps A-1 to 4 or B-1 to 4.

2. *Spraying*.—The hat is finally sprayed with either enamel and Dutch Boy paints, Valspar varnish or any waterproofing medium to keep it lasting and impervious to rain water.

SAGA OF THE PHIL-BAST HAT

The Phil-bast hat was first brought to the attention of the Forest Products Research Institute by Foresters Segundo Fernandez and Egmidio Visperas of the Bureau of Forestry early in March, 1961. They just came from Quezon province and were sporting their hats elegantly but were puzzled as to the identity of the tree from which the bast fibers came from. On March, 16, 1961, the authors searched for an old man from whom their hats were bought.

In this interesting search, Forester Orlando Ordoñez and his staff in the Forest District in Lucena luckily brought the search team to Alfonso Aranilla, an old man who resides at No. 49, Wakas, Tayabas, Quezon province. He is the pioneer of the new business on the bast-fiber hat industry of that province. Surprisingly, it was discovered that this industry has been his means of livelihood, but it did not progress like the other local hat industries. The reason was, he made no attempt to expand his business. It was also probable that he did not like others to participate in his business because apparently he wanted a monopoly of the business.

In 1939, Aranilla started weaving bast-fiber hats and bags, the source of which is malabuho (*Sterculia oblongata* R. Br.) of the Sterculiaceae. The tree is popularly known in Tayabas as "*malagasha*". His

knowledge about this tree is confined within the coconut plantations where it is found in limited quantity. Only three malabuho trees, 15 to 25 centimeters in diameter, were found along the roadside towards Tayabas, from which botanical materials were collected and definitely identified as malabuho by the search team.

Aranilla's discovery of the tree was by accident. He had an itchy scalp which doctors failed to cure. Out of pity, an *Aeta* friend told him to wear a hat made of bast fibers of this tree to relieve him of his ailment. As he recalled, he followed the advice and since then he no longer has the disease.

He found, by experience, that the hat made of malabuho bast fibers, was elegant and extraordinary in nature compared to the common woven buntal hats. His first customer, just after the liberation, was one Major Garcia. He recalled, too, that he bartered a hat for a sack of rice during the Japanese occupation and still lived to tell the saga of his bast-fiber hats.

To date, this new hat is gaining recognition. The hat looks like it is made of silky materials. The secret lies in the choice of the basts. It is the innermost layers of the extracted basts that appear silky.

In May, 1962, this bast-fiber hat caught the fancy of Mr. Picardo Portillo, the "hat king" of the Philippines. With his experience with high-quality hats, he conceived the development of this hat into a profitable business. He designed several hats according to the latest styles in the international trade. Customers flocked to him and flooded him with wholesale purchase orders. The business boomed with profits like a gold strike! The gold nuggets are these bast-fiber hats which he loves to call *Gasha*, an abridged form of *malagasha*. For want of a better name because *gasha* connotes a Japanese word which would im-

ply that the hat is not Philippine made, he later conceived to call it "Philippine wood fiber hat". The authors, however, desire to clarify this because the material for the hat is not made of wood fibers but bast fibers or simply "bast". The name "*Phil-bast hat*" is, therefore, appropriate because it means Philippine bast hat which Mr. Portillo really wanted it to be called.

PROSPECT FOR EXPORT

Phil-bast hat has a bright prospect for export preferably not in its finished form but as braided straps. Mr. Portillo revealed that he received orders from New York to supply at least 2,000 bundles of braided straps a week but then he lamented that he could only supply 1,000 bundles a month. This means that this new industry has to be developed and that the bast-fiber producing trees have to be conserved wisely by harvesting them on a sustained-yield basis. Also, it becomes a "must" that they should be reared in plantations to maintain a steady supply of bast fibers for the braiding of straps.

RESULTS OF STUDY BY F.P.R.I.

The Forest Products Research Institute anticipated in 1961 the bright promise of the bast-fiber hat for development into a profitable cottage industry. So, it conducted a search for bast-fiber plants for hat making, the objects of which were: (a) to obtain information on some species that will yield bast fibers suitable for the manufacture of hats; (b) to study the properties and other characteristics of the bast fibers of the different species; and (c) to evaluate the suitability of these species for the making of hats. Two trees, malabuhu (*Sterculia oblongata*) and mountain tapinag (*S. montana*), were the subject of the study. The results of the study indicated the following:

1. Complete retting of bark of mountain tapinag was attained in 26 days while that of malabuhu was 28 days.

2. Malabuhu with a butt diameter of 15 centimeters gave a bast-fiber yield of 10 percent; mountain tapinag with a butt diameter of 20 centimeters yielded 6 percent.
3. The tensile strength of the bast fibers of malabuhu (60.5 lb. for a 6.5 mm. strip) was about twice that of mountain tapinag (35.0 lb. for a 6.5 mm. strip).
4. Malabuhu basts were exceedingly flexible than those of mountain tapinag. However, the elongation or stretch of the latter (0.17 inch) was slightly greater than the former (0.15 inch).
5. The basts of malabuhu and mountain tapinag were bleached completely by the two-stage-hypochlorite-peroxide and two-stage-hydrosulfite processes. The single-stage-peroxide bleached the basts of malabuhu completely but not those of mountain tapinag. The basts of mountain tapinag turned cartridge-buff and ivory yellow.
6. The fine-textured, silky inner-bast layers of malabuhu were found excellent raw materials for the production of high-quality hats. The basts of mountain tapinag and malabuhu, when bleached by the two-stage process, were found promising for hat making.
7. Excluding the costs of materials and of bleaching them, the cost of producing one hat from the basts of mountain tapinag and malabuhu was ₱2.79 and ₱2.56, respectively, based on the current daily wage of ₱4.00 (8-hour) or ₱0.50 per hour. It is anticipated that, as proficiency is attained, especially in the weaving and fashioning aspects of processing, the unit cost will be appreciably reduced.

8. Mountain tapinag yielded 80 yards of braided straps or 10 ordinary-sized hats per tree while malabuho yielded 65 yards or 8 hats per tree.
9. Bast-fiber strips of both species were available from several layers of the bark, which varied in quality. This situation requires the sorting of the fiber strips into proper grades in order to have a uniform quality of hats.
10. Overlap sewing of the hats was observed to reduce the utility of the braided straps by at least 25 to 30 percent. It is imperative, therefore, that braided straps be produced of uniform width in order to fit them for side-stitching which is known to utilize the braided straps by 100 percent.
11. It is interesting to note that the fibers obtained from the wood of malabuho, after peeling its bark, are promising for pulp and paper-making. The fibers have an average length (L) of 1.52 mm; average cell-wall thickness (w) of 0.0045 mm; and average lumen width (l) of 0.017 mm. Based on the Runkel ra-

tio (2w/l) of 0.53, the fibers would be good materials for the production of fine papers such as writing papers, and other types of paper which do not require high tearing resistance.

Because of the unfavorable news in Quezon that malabuho trees cannot be grown from seeds, the Institute made preliminary plantings. It was found that malabuho can be successfully propagated by seeds. This is an encouraging news for the citizens of Quezon province, who are gladly welcome to the Institute to see the technique of planting.

In the light of these findings, the development of hat making as a potential industry in rural areas where malabuho and mountain tapinag abound offers some promise. As a cottage industry, it may contribute in a small measure to the administration's socio-economic program of providing employment and substantial income for some Filipinos. However, to meet the future needs for raw materials of the Phil-bast hat, the planting of malabuho and mountain tapinag should be seriously considered in the planning of reforestation in the Philippines.

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FIG. 1. Layers of malabuho basts, which like mining gold by special process, could be easily stripped through the process called retting.



FIG. 2. A beautiful handbag mounted on an oval place-mat, both made of malabuho bast fibers or basts. Place-mats are either oval or round and either plain-edged or tufted-edge. A piece costs about ₱1.80—₱2.00.



FIG. 3. A malabuho tree (*Sterculia oblongata*) is the source of bast fibers to be manufactured into Phil-bast hats, handbags, place-mats, and other useful items.



FIG. 4. A botanical specimen of malabuho, showing the fruits.

Some Aspects of Reforestation in Japan

A Forests Build the Nation Series

(RADIO PROGRAM BROADCAST OVER DZBB (580))

Interview conducted by Prof. Domingo V. Jacalne of the Department of Public Information, U.P. College of Forestry

Speaker—Forester Regulo D. Bala,
Reforestation Administration

QUESTIONS:

1. *When did you leave for Japan and under whose sponsorship?*

I left on June 8, 1962 under the sponsorship of the Japanese government.

2. *What were your specific lines of study?*

Under forest management, some of my most important specific lines of study were reforestation, private forestry, flood and erosion control, watershed management, tree breeding and nursery practice, and photogrammetry.

3. *Will you please enlighten us on the flood and erosion control as applied by the Japanese government?*

Flood and erosion control in Japan involve activities of two agencies, reforestation and engineering works under the Ministry of Agriculture and Forestry and the Ministry of Constructions, respectively.

All reforestation projects and minor engineering works such as construction of check dams, river bank casing or abutment, terracing on slopes, etc. are done by the Ministry of Agriculture and Forestry. All

major engineering works such as the construction of multi-purpose dams for hydro-electric plant, irrigation and water supply for domestic use, etc. are done by the Ministry of Construction. The Japanese government spends annually an average of about 74.6 billion yen or equivalent to about 746 million pesos for flood and erosion control. They have a 10-year program on these projects which calls for staggering appropriation of 1050 billion yen or about 10.5 billion pesos.

4. *What about their watershed management?*

Watershed management in Japan allows exploitation under sustained yield. This seems to be foreign to our old concept that watersheds are for protection only and that exploitation of the forest is prohibited.

Under their system, clear cutting by sub-compartments is practiced especially on natural forest which is mostly of broad leaf species. Fast growing pine trees are then planted in cut-over areas.

Watershed management in Japan aims at timber production which is urgently needed in order to augment their timber supply and to insure the steady water supply of all their streams and rivers for industrial, agricultural and domestic use.

In my field study tour in almost all of Honshu island, I have not seen a major river that is not being harnessed for electricity. From the smallest hamlet in the hinterland of those places I visited to the biggest industrial plant in Tokyo, electricity is a cheap commodity, which phenomenon was possible thru proper watershed management.

Japan's meteoric economic growth hinges primarily on cheap electricity which is abundantly available there.

5. *How did you find the reforestation program in Japan?*

Reforestation is the number 1 policy of the Ministry of Agriculture and Forestry in the administration of Japan's natural resources. It is one of the major government national policies for its economic growth because on it hinges the production of cheap electricity for the industrial plants.

Reforestation seems to be everybody's business in Japan. From a 6-year old child to the Emperor of Japan, tree planting is a duty. I saw a movie showing the Emperor and Empress of Japan leading the nation in the mass planting of denuded areas during the arbor day celebration last April. In that same picture I saw a 6-year old child and an old man of about 60 years old planting trees. The Ministers were also there planting trees.

This love of tree planting in Japan accounts for the existence of forests in 62% of its land area. Of course, the secret lies in the harmonized balance of trees and agricultural crops planted around or near the Japanese country home. They plant trees

even in flat lands and even in the cities. I saw an exploitation forest—the "Kitayama Sugi forest" within city limit of Kyoto City.

Reforestation in Japan has a glorious past dating as early as the 15th century. Since then, in the Tokugawa age in 1601-1867 reforestation became a major project of the feudal lords and was responsible for the excellent forest today.

So intensive is the reforestation program in Japan that in 1961 it reached its peak when about 470,000 hectares were reforested, 400,000 hectares of which is in private forest and only 40,000 hectares in national forest. They now reforest an average of 420,000 hectares per year, requiring about 1.6 billion seedlings; 1.3 billion is privately owned.

With this staggering amount of seedlings, to raise seedlings is a lucrative business. There are about 20,000 professional seedling operators in Japan or about 80,000 people raise seedlings if we were to include those other individuals who do not sell seedlings but raise them for their use; 600,000 laborers are employed annually in reforestation project throughout Japan.

So that reforestation in Japan is as routinary as planting rice.

6. *Are there some good silvicultural practices in Japan that you deem fit for adoption in the Philippines?*

Yes, there are such as seed selection and storage, establishment of seed orchard raised from Elite Trees, cross breeding to produce new varieties, fertilization on nurseries, selection of plus or elite trees, and most fascinating is the establishment of an Elite

7. *How do the Japanese people look upon forestry in general, reforestation in particular?*

The Japanese people seem to look upon the tree as a symbol of life and upon reforestation as its cradle. As early as the 15th century as I said previously, they had already practiced reforestation or tree planting even in fertile soil.

I think it is only in Japan that the science and art of dwarfing trees or "Bundai" is a national hobby side from tree planting. I have not seen a house in the countryside in Japan without trees planted around it.

The Japanese thinking seems to follow on this sequence—"Trees-water-electricity-industry" or for short "Trees-water-life."

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Destructive Insect Pests of Benguet Pine (*Pinus Insularis Endl.*)

ARTEMIO A. CALEDA AND
VICENTE P. VERACION

Benguet pine is host of a number of destructive insects and fungi. The known pests, are the Heoop pine weevil, Hump-back pine weevil, *Aesiotus notabilis* Pasc., Benguet pine longicorn (*Megopsis sanchezi* Bay.), a species of Lasiocampid moth, two Cerambycid beetles — *Acolesthes induta* Newn and *Baralipon sanchezi* Schultze. The larvae of these insects bore through the bark and wood causing minor injuries. The pine needle measuring-worm (*Milionia coronifera* Swinhoe) is so far known to be the greatest and most destructive of them all, for its larvae are capable of totally defoliating large areas of plantation.

The common diseases are damping-off of nursery seedlings caused by certain species of *Rhizoctonia* and *Fusarium* and wood rot caused by *Trametes* and *Fomes* spp.

Recent pest discoveries were the *Ips interstitialis* Eichhoff.—a beetle bark borer—and a lepidopterous “pine-shoot moth” which is still unidentified. The former was observed attacking pine trees in plantations in Baguio and its vicinities and the latter at Malatada Sub-Forest Nursery, Sallapadan District, Abra.

Description, development and occurrence of the insects:

Ips interstitialis Eichhoff is originally found in Central America. How this species was introduced into and apparently became established in the Mt Province is not known.

This beetle is a very small one, its adult being about 5-6 mm. long only. The elytra

which are hard and hairy are 3-4 mm. long while the inner wings are 5-6 mm. long, transparent, delicate and spotted with a golden whitish brown hue.

The larvae are about 4-5 mm. in length each possessing a pair of black hardy mandibles and are segmented, each segment bearing tiny hairs. The eggs hatch into larvae and develop into adults in a matter of from 15-17 days.

Infestation lasting from about five months was observed to occur during February which is about the beginning of the dry season in the region and continues up to June, which is about the start of the rainy season. Infested trees show signs of yellowing of the needles and exudation of resin at the point of oviposition on the bark.

The “pine-shoot moth” is likewise a tiny insect. The adult's body is from 12-15 mm. long. The wings are spotted with light black and golden white colors. Its larvae measure from 9-16 mm. The larval stage lasts from 6-10 days and the pupal, from 17-21 days.

Infestation from this moth occurred in the later part of December and lasted up to May which coincidentally was the dry season in the province of Abra. Infested shoots turn yellow, defoliate, then dry up and die.

Nature of Attack:

The adult of the *Ips interstitialis* bore through the bark only and lay its eggs

there. Upon emergence, the larvae feed on the cambium and the inner bark causing damage throughout the entire bark even up to the tip of the tree. On reaching adult stage, the insects leave the tree and begin to attack again other sound trees.

The adult "pine-shoot moth" on the other hand lays its eggs on the tip or on the young shoot. The larvae upon emerging from the eggs bore through the tender portion of the pine shoots feeding on the phloem and mining through the pith downward to the hard portion of the pith. Pupation takes place in the hollowed pith, and the resulting adults abandon the host tree upon emergence.

Importance of the insects:

Beetles of the genus *Ips* are all bark borers. They are reported to cause widespread infestation and killing of pine stands because of their capability to develop large population. They can also breed readily in the stumps of recently felled trees and in slash.

The nature of damage caused by the "pine-shoot moth" can cause on the other

hand, a serious drawback in the development of long, straight and clear boles of trees. Several big branches are formed at the point where the tip dried up because of the attack. This is aside from the retardation of height growth and malformation of the crowns of the infested trees.

Control measures:

For *Ips interstitialis* the recommended measures are: (1) cutting and burning infested trees, (2) proper disposal of slash especially the tops of felled trees after logging and thinning, and (3) chemical spray before the outbreak of infestation.

The suggested control measures for the "pine-shoot moth" are: (1) cutting the affected shoots or branches and burning them, (2) under nursery conditions, spraying the young shoots of the seedlings with DDT at the rate of 9.5 ml of the 25% emulsified concentrate per gallon of water or 10 grams of the 50% DDT wettable powder per gallon of water every two weeks for the duration of the infestation, and (3) light trapping of the adult moths.

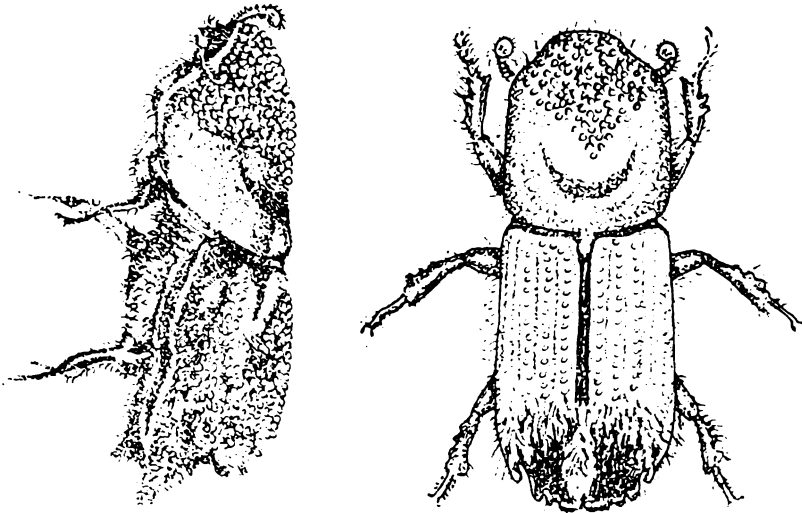


PLATE 1

Dorsal and Side views of Ips interstitialis Eichhoff (greatly enlarged)

The 5-Year Socio-Economic Program and the P.W.O.

By
VICENTE DE LA CRUZ
Director

President Macapagal's Socio-Economic Program indicates in broad outline what the government and the people should do over a period of time to promote an orderly expansion of the production of foods and services. It is geared to solve the critical socio-economic problems which our country is facing today.

The Parks and Wildlife Office is destined to play an important role in the socio-economic program of the President. The recreation and conservation phase in the maintenance of national parks and conservation of wildlife fall squarely within the program and demand of the Parks and Wildlife Office to contribute considerably to the successful implementation of the socio-economic program.

The parks and wildlife resources of the Philippines are a great source of income and government revenue aside from the recreational and educational benefits which the people derive from them. Aside from food and clothing, outdoor recreation is necessary and essential to the life and health of every person. It is in this wise that the Parks and Wildlife Office will play a major role in the socio-economic program of the government.

The Philippines is abundant in scenic and historic spots, 40 of which were already established as national parks. Development and improvement of national parks and conservation of wildlife promote tourism, generate industries, stimulate busi-

ness and provide enjoyment for the people. The preservation of the resources in the national parks, particularly, their vegetative cover, contribute to the fertility of the surrounding agricultural lands, minimize erosion, provide watershed protection and regulate stream flow for better crop production.

The Philippines has tremendous wildlife resources consisting of 850 to 860 bird forms and 225 mammal forms. We have unique and beautiful birds which are in great demand both at home and abroad, like the monkey-eating eagles and the Palawan peacock pheasants. We also have rare interesting mammals like the mouse deer and tamaraw. We have reptiles, whose skins are manufactured into novelties like bags, belts and shoes. We have abundant monkeys, "pithecus philippensis", which are exported for the manufacture of salk vaccine for the prevention of polio or infantile paralysis. Our records show that the Philippines exported from 1955 to 1961, \$2,892,452.65 worth of wildlife mostly monkeys, birds and reptiles' skin. In the business of wildlife export no less than 2,000 persons were directly benefited in the form of employment which can be considered the second major role of the Parks and Wildlife Office in the Socio-Economic Program of the Administration.

Aside from the important part which wildlife plays in the natural control of pests, disease-carrying organisms and other

intangible benefits which men get, wildlife provides food, clothing and medicine. National Parks and Wildlife provide enjoyment for outdoor recreation. With increased interest in outdoor recreation and the desire for enjoyment of the natural wonders in our national parks, as well as, in the enjoyment of our wildlife, the importance of national parks and wildlife in our socio-economic development cannot be underestimated.

To carry out the proper implementation of the program and projects of the Parks and Wildlife Office in line with the Socio-Economic Program of the government, it is necessary that the office must be provided with adequate funds. The office needs sufficient amount of money for the development and improvement of the national parks. In the development of the national parks, it is imperative that the wonders in the parks must be made acces-

sible. The natural beauty of the landscape must be enhanced and improved. Recreation facilities and conveniences must be constructed hand in hand with the conservation of the natural features in the parks for the use and enjoyment of the people. The conservation of wildlife needs sustained research work. Sufficient appropriation is needed to maintain a well equipped laboratory and to pay for the technical know-how, both of which are essential in research work on wildlife. The office needs sufficient funds for its information and education drive on national parks and wildlife to make the people conservative-conscious. Money spent in the maintenance of national parks and in the conservation of wildlife is a government investment that will give a priceless return both tangible and intangible essential and important in the upliftment of the social and economic condition of the people.

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The Forest Policy of the Philippines and its Conservation Program as Viewed by a Student

By

VALERIO B. MENDOZA

Public forest ownership has proved the most stable and effective in the execution of long-range planning of forest management and all forestry practices, hence, it is the most productive way of attaining technical advances. The government has the sole responsibility of carrying out its policy and there are no conflicts (as it is supposed to be here in the Philippines) in the execution of work. The law of 1916 in Section 1816 of Act No. 2711 of the Revised Administrative Code otherwise known as the Forestry Law states: "The Bureau of Forestry shall have jurisdiction and authority over the demarcation, protection, management, reproduction, reforestation, occupancy, and use of all public forests and forest reserves and over the granting of licenses for the taking of Forest products, including stone and earth therefrom." This law is very specific in its meaning. It gives the Bureau of Forestry the sole responsibility as the guardian of the entire forest of the Philippines. Few years ago, because the Philippine government realized that the Bureau of Forestry alone is inadequate in performing the tasks assigned to it pertaining to forestry practices, the reforestation administration was organized to assist the Bureau of Forestry among other things on reproduction of forest stand and reforestation.

With these two government agencies working together, can we practice forestry

in its real meaning? In my opinion the Philippine government in its effort to be forestry-conscious is not yet halfway to the goal. Before we can have forest stand like those of the Scandinavian countries, Europe, and the Americas, we still have many things to accomplish. As a forestry student I know some of the most difficult tasks of the government that should be undertaken.

First, as it is mentioned, demarcation of forest zones is a serious problem of the government. This should be undertaken to know which is forest land and which is alienable and disposable. Second, is protection of the forest from hazards like fire, insect attack, fungi, and the worst agent of forest destruction in the Philippines, man. Third, is occupancy and trespassing of forest areas by squatters. In order to conserve our forest the Bureau of Forestry should not indiscriminately issue licenses. Aside from these, illegal cutting and illegal occupancy of public forests should be checked as soon as possible. As observed in Zambales, Bataan, Pangasinan, and Quezon provinces the ordinary timber licenses which are indiscriminately issued are the ones paving the way for the *kainginers* to illegally occupy public forests, as well as licensed areas.

Kaingin problem calls much attention of the government and should be dealt with seriously. In my point of view and

within my knowledge I understand *kaingin* problem is neither a political nor forestry technical problem but it is social in nature and it involves the economic side. Time and again I hear from government agency personnel that there are many people apprehended because of *kaingin* making or other forestry offenses. I don't think that putting these people in jail (leaving the poor families behind without support) will solve the problem. I think it only helps solve the problem for a while but not permanently. Instead of jailing these people they should be placed in a NARRA resettlement area and be given something to start with rather than imprisoning them.

Considering the fact that the lumber industry as estimated directly employs 75,000 heads of families and if an average Filipino have six members of the family; $75,000 \times 6$ equals 450,000 people solely dependent on the lumber industry. This shows that the lumber industry which is also dependent on the forest helps very much in the unemployment problem of the nation. Looking deeper into the *kaingin* problem, if this continues there will come a time that the Philippine economy, security, and our society will be very much affected. What then is the main cause of the *kaingin* problem? Land problem is usually mentioned but generally it revolves around a very serious cause—no source of income among a great percentage of our people. From this point of view, then, it is not only the Bureau of Forestry and the Reforestation Administration alone which should tackle the problem but the whole government machinery. If the lumber industry plays a great deal in the betterment of the conservation program and the general economy of the nation then it calls for a considerable amount of attention. Aside from the *kaingineros* the lumbermen are also to blame in the forest denudation in our country for the following reasons:

First, in the Philippines we have only very few big lumber companies and only these companies are efficient, that is to say, they have higher percentage of utilization hence very small percentage of waste. For instance, the Nasipit Lumber Company and some of the big companies produce more goods of better quality from very much less number of logs because their equipment are better than those of the small companies. As these big lumber companies operate at small cost and produce good quality products at the maximum quantity then we expect moderate prices which benefit the public. Again, as these are expected to earn considerable profit they are expected to practice sustained-yield management and they are more careful in their logging, milling, and every processing they undertake hence they help conserve our forest. On the other hand O.T. licensees and operators of small lumber companies do not have the necessary equipment. During the logging operations they only fell trees along the river banks (violating the law that at least 20 meters away from both sides of the river banks should be uncut), because they have only the winch of the truck for yarding and loading. In the milling process they have nothing to do with tree tops and the great bulk of slabs, edgings, and trimmings. Those logs not good for veneer and lumber but still sound go to waste. In this connection, I suggest that there should be a policy of the government that only businessmen who are able to utilize lumber residue be allowed to engage in the lumber industry.

Second, lumbermen are permitted by the government to export logs and lumber when in fact in the Philippines only few can afford to buy lumber within their earning capacity due to the artificial scarcity of lumber locally. The sad thing is that the logs being exported to other countries especially to Japan, are of the best quality logs, usually, highest grade veneer logs and sawn logs. The funny thing is,

Japan considers that it is cheaper to import logs from the Philippines than to harvest from her forest at home. Japan is a highly industrialized country and for all we know she easily makes much better finished products out of the raw materials she imports. Such finished products are produced at a cheaper cost of production. Then these finished products are sold in the same market where our products are sold. How can we expect then to compete with the Japanese products of much bet-

ter quality and which are very much cheaper? On this phase of the analysis I suggest that the government should enforce strictly its policy that log and lumber exportation should be allowed only when local demands are fully met. This policy, for one thing sure if ever taken into consideration and fully implemented, will help very much in the forest conservation program of the government and accelerate the industrialization of the Philippines at a faster rate.

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FPRI Technical Notes

THE STRUCTURE OF PAPERMAKING FIBERS

Generally speaking, paper products are made up of pulps produced from woods. The physical characteristics of paper products are, in turn, dependent upon the general appearance and morphology of the fibers that constitute the pulps. This relationship is important to bear in mind in determining the various types and grades of paper in order to prevent substitution or misrepresentation.

Basically, fibers contain cellulose which is indispensable in the make-up of paper. As part of the wood, fibers and other wood elements, such as vessels or pores and parenchyma or soft tissues, are held together by a cementing substances known as lignin. Other substances like resins, gums, fats, minerals, and others may also be found in wood. Cellulose fibers can be freed from the lignin and other wood elements by cooking wood chips in a huge vat called the digester. They are there processed and manufactured into paper and other related products.

The structure of fibers can be better analyzed by considering the general structure of the plant from which they come. Plants from which commercial fibers are obtained may be divided into two general classes: (a) *Monocotyledons* or plants with parallel-veined leaves, which are typically represented by grasses, lilies and palms; and (b) *Dicotyledons* or plants with net-veined leaves, which are exemplified by flax and the common broad-leaved trees.

According to location in the plant, fibers used in papermaking may be grouped as follows: (a) seed hairs such as cotton and kapok floss; (b) bast fibers such as those from jute and ramie; (c) leaf fibers such as abaca and sisal; (c) stem fibers such as sugar cane bagasse and bamboo; and (e) wood fibers such as those from coniferous woods or softwoods and deciduous woods or hardwoods.

Wood fibers are a boon to commercial pulp and papermaking because they are relatively abundant. While the term wood fiber has often been applied generally to all woody tissues, there are many types of woody cells which are, in no way, fibrous and cannot be classified strictly as such. In the pulp and paper industry, "fibers" which are referred to in conifers are tracheids; in hardwoods, "fibers" are the heterogeneous mixture of all kinds of cells be-

cause numerous vessel segments and parenchymatous elements are found in a hardwood pulp. All these wood elements are readily seen only with the aid of a microscope.

To understand better the structure of papermaking fibers, it is important to familiarize oneself with the different wood elements that are present in paper.

WOOD ELEMENTS PRESENT IN PAPER *Softwoods*

Coniferous woods or softwoods have few cell types which are relatively simple in structure. The principal cell types include the fiber tracheids, ray tracheids, and the wood parenchyma.

1. *Fiber tracheids* make up the greater part of softwoods. They are usually very long (up to 7 mm. or over). A fiber tracheid is commonly an elongated element with either pointed or rounded ends, thin or thick walls, and prominent bordered pits on the radial walls. The bordered pits are recesses or openings with over hanging margins. They vary in shape, ranging from circular to oval or polygonal, elliptical, and linear.¹ In the vertical tracheids, the bordered pits may occur in one vertical row (uniseriate), in vertical rows (biseriate), in three vertical rows (triseriate), or in four or more rows (multiseriate). They may either be in opposite or in alternate series with one, another.

In certain tracheids, spiral thickening may sometimes be present. It may or may not be present throughout their entire lengths. On the other hand, some tracheids have thin transverse walls across the lumen. These tracheids are referred to as *septate fiber tracheids*.

The pitted area on the walls of a longitudinal tracheid, where rays are originally in contact with it, is known as the ray-contact-area pitting. There are five types of ray-contact-area pitting, namely:

- a. Large, simple or almost simple, *window-like pits*.
- b. *Pinoid*, i.e., fairly small pits, simple, or at most, very narrowly-bordered and variable in shape.

¹ Linear means a pit with a great elongated, usually transversely oriented orifice (opening).

- c. *Piceoid*, i.e., small bordered pits with a narrow, often somewhat extended mouth.
- d. *Cupressoid*, i.e., small bordered or partially bordered pits with fairly elliptical wide mouth which is included but which may extend to the border along its long axis.
- e. *Taxoid*, i.e., small pits which, superficially, may resemble the cupressoid type. The mouth is larger than the border in most parts of the pit, i.e., the walls slope outwards to the mouth, not inwards as in the cupressoid type.

2. *Ray tracheids* may or may not be present in a coniferous ray. These are comparatively short cells that are provided with bordered pits which are smaller than the bordered pits of the vertical tracheids. The walls of the ray tracheids may be smooth, dentate, or reticulate. Ray tracheids which exhibit tooth-like projection in the walls are called *dentate* and those which appear fused are known as *reticulate*.

3. *Wood parenchyma* of softwoods, like those of the hardwoods, are of two types: the longitudinal or vertical parenchyma and the ray (transverse or horizontal) parenchyma. In the vertical parenchyma, the cells occur in the form of strands. They are not abundant in softwoods; they are abundant in hardwoods; but, sometimes, they may be absent in either softwoods or hardwoods. The pitting in the walls of these cells are simple. *Ray parenchyma* cells are equipped with simple pits, if a secondary wall is present. The nature of the pitting, serving for communication laterally from the ray parenchyma to the longitudinal tracheids in contact with it, is termed as the ray-contact-area pitting. Ray cells may have at their corners depressions which are referred to as indentures.

Hardwoods

A hardwood consists of four types of elements: vessels, tracheids, fibers, and parenchyma.

1. *Vessels* are mature perforated elements which have several segments. Vessel segment varies in shape and size, ranging from drum or barrel-shaped to short-or-long-oblong and linear, with or without tapering or ligulate² extensions at one or both ends.

The opening (or openings) between two vessel segments is known as perforation. The area of the wall, which is involved in the coalescence of two members of a vessel to form a plate that is perforated, is known as perforation plate. Perforation plates vary in type. They may be simple, scalariform, reticulate or foraminat. A simple perforation plate

has only one aperture in evidence. A scalariform perforation plate has a number of parallel, transversely-oriented apertures present. In the formation of scalariform plates, the rod-shaped remnants of the plate, which are left between perforations, are called bars. The number, thickness, and spacing of such bars vary in different hardwoods and are of diagnostic significance.

The pitting on the wall of a vessel segment varies greatly in nature and extent. In general, intervessel pitting or pit pairs between a vessel and another parenchymatous cell are usually bordered, half-bordered, or simple. These are frequently of diagnostic significance in identification. Intervessel pits are usually close to each other. They vary in arrangement, shape, and size, depending on the species. In alternate pitting, the shape of the pit ranges from circular to oval if the pits are not crowded; otherwise, they are polygonal, and frequently hexagonal. In opposite pitting, the pits are often rectangular. When the pits are linear, with their long axis directed across the vessel, the arrangement is called scalariform pitting.

Spiral thickenings which are helical or spiral ridges on the inner face of the secondary wall, may be present in vessel segments. These thickenings may be considered a "spot feature" in the identification of hardwoods.

2. *Tracheids* in hardwoods are fibrous cells which are shorter than the fibers, and have bordered pits and imperforate³ ends. Two types of tracheids in the hardwood are recognized, namely: the vascular and vasicentric. Vascular tracheids are similar to the small vessel segment in size and arrangement. Vascular tracheids, however, are imperforate at the ends. The lateral walls are profusely pitted and are frequently equipped with spiral thickening. Vasicentric tracheids, on the other hand, are irregularly shaped fibrous cells with conspicuous bordered pits. They are different in shape from the vessel segments which they accompany and they are not arranged in definite longitudinal series.

3. *Fibers* in hardwoods are of two types—the libriform and the fiber tracheid. Libriform fibers have simple pits. They have smaller diameter and narrower lumen than the fiber tracheids. Fiber tracheids, in contrast, are commonly thick-walled, and with small bordered pits.

4. The *wood parenchyma* are the soft tissues of wood, which consist of short and relatively thin-walled cells that generally have simple pits. The *wood parenchyma* of hardwoods are of two types:

² Ligulate means tail-like.

³ Imperforate means without perforations or openings.

longitudinal and transverse. The longitudinal parenchyma are arranged in vertical series in a standing tree. The most common type of longitudinal parenchyma is the strand parenchyma, the cells of which are horizontally oriented in the wood. They vary widely in shape and size, in the thickness of their walls, and in the nature of their pittings. Their end walls may be vertical, oblique or bowed. They are usually rectangular (brick-shaped) in shape but, sometimes, they are enlarged near the middle or even irregular in form.

In general, the pits of ray parenchyma are simple and minutes. In some cases, they are bordered and relatively large.

REFERENCES

1. Anonymous. 1957. Technology of papermaking fibers. Chicago, Illinois. Fritz Publications, Inc.
2. Brown, H.P., et al. 1949. Textbook of Wood Technology. Vol. I. New York. McGraw-Hill Book Co., Inc.
3. Cooke, D.C. 1959. How paper is made. USA. Dodd Mead & Company.
4. Heyn, A.N.J. 1954. Fiber Microscopy. New York. Interscenci Publishers, Inc.
5. Jane, F.W. 1956. The structure of wood. New York. MacMillan Company.
6. Stoves, J.L. 1957. Fiber microscopy. London. National Trade Press.
7. Teiman, H.D. Wood Technology. 3rd edition. New York, Toronto. Pitman Publishing Corp.
8. Woods, H.J. 1955. Physics of fibers. London. The Institute of Physics.

* * *

PULPING AND BLEACHING OF COLD-SODA PULPS FROM PHILIPPINE WOODS

The cold-soda pulping process consists essentially of the mild treatment of any fibrous material (wood, bamboo or agricultural) with sodium hydroxide solution at room temperature using either atmospheric pressure, followed by defiberization of the softened chips in a disk attrition mill. This pulping process was developed at the Forest Products Laboratory in Madison, Wisconsin, U.S.A. The attractive features of the cold-soda process are: (a) simplicity of operation, (b) its wide applicability on various fibrous materials, (c) high pulp yield, (d) the wide utility of the pulp for making a variety of papers and pulp products, (e) the possibility of using the spent liquor in the process, and (f) its adaptability to continuous operation.

If pulpwood is used in cold-soda pulping, it is first debarked and chipped. The chips are then screened to segregate the fine and oversized chips that are normally undesirable for pulping. Chemical treatments are made with caustic soda solutions in concentrations of 5 to 100 grams of sodium hydroxide for every liter of solution depending on the species. In general, the denser species require higher concentrations of the caustic soda solution for efficient defiberization of the chips with a minimum of fiber damage. The penetration of the pulping liquor into the chips can be hastened by any of the following methods: pre-evacuation, hydrostatic pressure, mechanical compression and impregnation by vacuum-pressure or compression-decompression. Desirable time for liquor-chip contact varies from 5 minutes to 5 hours at room temperature. In some instances, raising the temperature to about 90°C also helps increase liquor penetration into the chips. Cold-soda pulping yields for wood, without conventional screening, range from 85% to 95%, depending on the raw material and the pulping condition but, with pulp screening, the pulp yields (accepts plus rejects)¹ are lower due to the loss of fines that pass through the screened-bottom box that is used in collecting the pulp accepts.

High density woods cannot be fed into the conventional wood grinder to produce acceptable commercial pulps, but by the cold-soda process dense hardwoods can be utilized to produce pulps which may meet the demand for newsprint. The pulp, produced from a wood species by this process, is stronger than groundwood pulp that is produced from same, and has a higher freeness which means that it is easier to drain the water from the cold-soda pulp when it is run on the paper machine. Consequently, the paper machine can be run at faster speeds to increase production. Cold-soda pulps, however, produce less opaque papers than groundwood pulp.

In the standardized cold-soda pulping² at the Institute, the chips that pass through the 1-inch holes and are retained in 1/2-inch holes of the chip screen are used in the process. After steeping, the residual chemical (sodium hydroxide) is determined. The softened chips are passed twice between the plates of an 8-inch Bauer mill at about 4 per-

¹ "Accepts" refers to the pulp that passes through the pulp screen and is retained on the screened-bottom box which collects the screened pulp. "Rejects" refers to the pulp which is retained on the pulp screen.

² Standardized cold-soda pulping:

Chemical applied	sodium hydroxide
Concentration, grams per liter of solution	50
Ratio of liquor to wood	6:1
Duration of steeping of chips in liquor, hours	3
Temperature, °C.	(25 to 29)
Pressure	atmospheric

cent stock consistency. The pulp is then screened and passed through an 8-cut pulp screen, with .008-inch slot openings.

The cold-soda treatment of the wood chips reduced the brightness of the pulp by about 5 units. This lowering of the brightness was adversely increased at higher temperatures during the impregnation. Cold-soda pulps, produced from local materials, varied in color from yellow to dark brown, depending on the species and the treating conditions. For making printing grades or other fine papers, the screened cold-soda pulp should be bleached. Any of the following bleaching processes may be used on the bleaching of cold-soda pulps: (a) single-stage hypochlorite, (b) single-stage peroxide, and (c) two-stage hypochlorite-peroxide or peroxide-hydrosulfite. The pulp, bleached with the single-stage hypochlorite, is yellowish while the pulps that are bleached with the other three methods range in color from light yellow to almost white, depending on the species and the amount of bleaching chemicals used. Bleached Philippine hardwood cold-soda pulps range in brightness from 40 to about 70 percent G.E., depending on the species and the bleaching method used.

Cold-soda pulps are used in the manufacture of: (a) newsprint, (b) printing and writing papers, (c) toweling paper, (d) tissue paper, (e) corrugating board, (f) insulating and building boards, (g) food and other bleached boards, and (h) molded-pulp products.

In so far as it is known, the cold-soda pulping process may be used on any fibrous material but it is more suitable for hardwoods (broad-leaved woods) than either the softwoods (pines, spruce, etc.) or the bamboos. Since Philippine forests consist mostly of hardwood species, the application of the cold-soda pulping method seems very promising.

REFERENCES

1. Bamer, B. H. and H. Miller. 1959. Cold caustic pulping of mixed hardwoods. TAPPI 42: 164A-168A.
2. Brown, N. J. 1958. Special considerations toward improvement of cold-soda pulping process. Paper Industry 39:844-850.
3. ——— and J. N. McGovern. 1953. High yield cold-soda pulps and products from several woods. Paper Industry 35:66-69.
4. Bugg, E. J. and A. J. Pearson, 1958. Manufacture of cold-soda pulp from eucalypt woods. Paper Trade Journal 142:18-24.
5. Nicolas, P. M. 1960. Standard cold-soda pulping evaluation of Philippine woods and bamboos. (Unpublished). Progress Report, F.P.R.I. Library, College, Laguna.
6. ——— and N. F. Banaag. 1960. Bleaching of cold-soda pulps of some Philippine woods. The Lumberman 6(3): 5-6, 36.
7. Premo, R. 1962. Successful hardwood utilization realized by Gould Paper Company. TAPPI 45 (12):142A-144A.
8. Snyder, K. L. and R. A. Premo. 1957. Mechanical pulp from hardwood chips for use in book papers. TAPPI 40:901-904.

POINTERS IN THE CONTROL OF FUNGAL STAIN IN "BAKYA"

"Bakya" or wooden shoes are a common footwear among many Filipinos. To make pair of "bakya," wooden blocks of about 3-½ inches by 3-½ inches by 10 inches are cut and shaped into wooden shoes. A piece of cloth or plastic strap is then nailed properly to each of them to hold the feet. This makes a relatively inexpensive footwear, a very practical and comfortable one, especially during the rainy season.

The production of this type of footwear has developed into flourishing industry in some of the towns of the Philippines. However, the industry in general is confronted with the increasing prevalence of fungal stains on the wooden portion of the "bakya." Many manufacturers have already expressed fear and concern; if the problem is not given attention, it may pose a serious threat in the growth and development of the "bakya" industry. Wholesalers, retailers, and ultimate buyers and users refuse or avoid buying stained-wooden shoes. This has forced the producers to dispose of their stained goods at lower prices than those which are obtained for wooden shoes that are free from discolorations.

Although it would be difficult to control staining of the wooden shoes already in the hands of end-users, the real concern of the industry lies in the ways and means of controlling the fungal infection of logs in the woods after cutting, during collection, and during the processing of the wooden blanks.

Sapwood of all species of woods are susceptible to the attack of blue stain fungus when green or when the moisture content is above 20 per cent, based on oven-dry weight. It is unfortunate that the species commonly used for "bakya" manufacture are mostly dita (*Alstonia scholaris* [L.] R. Br.), gubas (*Endospermum peltatum* Merr.), kupang (*Parkia javanica* [Lam.] Merr.), and lumbang (*Aleurites moluccana* [L.] Willd.), which do not show distinct demarcation line between the sapwood and the heartwood portion in the logs. These species are all susceptible to the attack by staining fungi that give off soluble pigments which are taken up by the cells

of the substrate¹ or which may scatter colored hyphae² in the wood.

Diplodia sp. and *Ceratocystis* sp. are reportedly the fungi which cause discolorations in wooden shoes. When the fungus is still young in wood, the hyphae are colorless. After 5 to 7 days, the hyphae mature, become colored, and stain the wood. During this process of growth, the dark-colored hyphae penetrate deeply into the wood. Thereafter, nothing else could be done to remove the stain.

Fungal discolorations differ according to the species of fungi which produce the pigmentation. Some are bluish to dark blue, others are sooty black, and the rest are dark brown to brownish purple.

SUGGESTED PREVENTIVE MEASURES

A. *Prevention of staining in logs*

1. In logging the species for wooden shoe manufacture, the common practice is to leave the fallen and bucked logs in the forest for periods ranging from a few days to several weeks without anti-stain treatment. This practice provides an ideal set of conditions favorable to the growth of staining fungi. Fungi, causing stains in logs and in some other forest products such as rattan, begin to develop growth after 24 hours. If immediate utilization of logs is not possible within 24 hours after felling and bucking, chemical spray treatment of the freshly-cut logs in the forest with Dovicide G³ solution (21 pounds to 100 gallons of water) mixed with three per cent lindane⁴ (15 gallons to 100 gallons of anti-stain solution) or other chemicals of equivalent toxic elements, must be applied especially if the logs have to be left in the forest for long periods.

2. Spraying with anti-stains should be made on the logs as thorough as possible and with special attention to the cut-ends. Moreover, the logs should be protected from the rain after spraying to prevent the washing off of the chemicals, otherwise, the effectiveness of the treatment may be reduced.

3. Logs should be transported to the factory as soon as possible even if they have been sprayed with chemicals in the forest after felling and bucking. Treated logs can be better protected from the rain in the factory yard than in the forest. Depend-

ing upon the mode of handling the logs before immediate loading into trucks, it may be necessary to retreat the logs before delivery is made to the factory.

B. *Prevention of stain in short blocks, wood sole and heel blanks*

1. Assuming that the logs are properly handled and treated before their delivery to the factory, any subsequent bucking, made thereafter, must be followed by treating the freshly-cut portions and fresh bruises, either by spraying or by brushing with the prepared anti-stain chemical.

2. The practice of cutting the logs immediately after felling and bucking, into "banhai" (short blocks about 3-½ x 3-½ x 10 inches) in the forest should be followed immediately by dipping the blocks in Dovicide G solution (7 pounds to 100 gallons of water) or other chemicals with equivalent toxic elements for about one to two minutes before transporting them to the factory for final processing.

Likewise, wooden blanks, formed afterwards, must be dipped momentarily into the prepared solution and allowed to dry before handling again. Moreover, soles that are completed subsequently must be treated with the chemical before drying (20 per cent or less) and shipment. Before the soles are fitted with straps, they must be sanded thoroughly to remove the chemical crystals or dusts that were formed during drying.

3. All finished soles, after drying, must be stored in a well-ventilated place and kept dry.

The purpose of the treatment is to protect the wood from infection by the staining fungi while the logs are in storage in the forest or yard and while the finished products are being dried. Although, good handling and piling practices also contribute to the making of a good product, they cannot, under current practices, be considered as a substitute for the chemical pre-treatment already suggested.

If the above suggestions are followed strictly, "bakya" manufacturer can be reasonably sure of maintaining a satisfactory control of the quality of their products.

REFERENCES

1. Krause, R.L. 1950. Reducing blue stain losses in lumber. Southern Lumberman 181:45-54.
2. Lopez, F.R. and P.S. Mayol. 1958. Survey of the stain problems confronting local wooden shoe producers. (Unpublished report). FPRI Project No. 74-3-2.
3. Roldan, E.F. 1958. Stain discoloration in native wooden footwear popularly known as "bakya". Lumberman, August-September issue.
4. Schaffer, T.C. and R.M. Lindgren. 1940. Stains of sapwood products and their control. Tech. Bul. No. 714. U.S.D.A.

¹ Substrate refers to wood in this case.

² Hyphae are the vegetative parts of fungi which are often referred to as absorbing organs.

³ Dovicide G is said to contain 75 per cent sodium pentachlorophenate, 13 per cent sodium salts of other chlorophenols and 12 per cent inerts. This chemical solution is said to be quite irritating to the eyes and nasal tissues, therefore should be handled with care. The recommended concentration for spraying logs left in the forest for long periods is three times that recommended for lumber or other wood products.

⁴ Lindane is an insecticide said to contain 20 per cent of the 99 per cent gamma isomer of benzene hexachloride. It is reported to be very effective against attack of ambrosia beetles on freshly-cut logs. These beetles are known to be vectors (carriers) of staining fungi.

PHILIPPINE WOODS FOR BASEBALL BATS

Among the properties of wood, which are required in the manufacture of good baseball bats, are moderate weight (about 0.55 to 0.65 sp. gr. at 12 percent moisture content), straight grain, hardness (not brittle), good machining behavior and high shock resistance. Incidentally, the qualities that make certain wood species suitable for bats are similar to those required for tool handles.

Aside from the properties mentioned above, two other criteria must be considered in selecting native species for bats as substitutes for the imported "ash" (*Fraxinus* sp.) bats. The most important of these is the availability of the wood in sufficient quantity and at a reasonable price. Next, is the performance by field tests in actual games, to which the aforementioned wood properties may be correlated.

On the basis of all the above criteria, six native woods may be considered promising substitutes for "ash," namely: balakat [*Ziziphus talanai* (Blanco) Merr.], (*Pterospermum diversifolium* Blume), bolon [*Alphonsea arborea* (Blanco) Merr.], magabuyo [*Celtis luzonica* Warb.], palosapis [*Anisoptera thurifera* (Blanco) Blume] and Vidal lanutan [*Bombycidendron vidalianum* (Naves) Merr. & Rolfe].

Some distinguishing botanical and wood characteristics of these six species, including supply and distribution are:

Balakat.—This is a large tree with a diameter at breast height up to 123 centimeters. The bole is cylindrical, 12 to 18 meters long. The sapwood is narrow and scarcely distinguishable from the light red heartwood. The grain is straight and the texture is moderately fine or moderately coarse. It is comparatively light to comparatively heavy, weighing 610 kilograms per cubic meter when air-dry, moderately hard and moderately strong.

Balakat is widely distributed throughout the Philippines, but the supply is small and often reaches the market as "white miscellaneous."

Bayok.—This tree attains about 50 centimeters in diameter. The trunk is usually straight and cylindrical. The sapwood is somewhat lighter in color and not sharply marked off from the light drab or purplish heartwood. The grain is slightly crossed and the texture is moderately fine. The wood is comparatively heavy (sp. gr. 0.665, air-dry), moderately strong and hard and tough. It seasons well with little degrade and can be worked easily and finished very highly.

Bayok is found in many provinces and islands in the Philippines. It is common in forests at low and medium altitudes. The supply is limited.

Bolon.—It is a medium-sized tree, reaching a diameter at breast height of 70 centimeters and a height of 35 meters. The trunk is straight, cylindrical and without buttress. The sapwood is light buff, of medium thickness, not sharply marked off from the buff-colored heartwood. The grain is straight and the texture is moderately fine. The wood is not glossy, heavy (sp. gr. 0.834 air-dry), hard and strong. It seasons well and can be worked with ease.

Bolon can be found in forest at low and medium altitudes of Rizal, Laguna, Tayabas, Camarines, Mindoro, Masbate, Ticao, Leyte, Cebu and Mindanao but is not abundant anywhere.

Magabuyo.—This tree reaches up to 80 centimeters in diameter at breast height, with a cylindrical trunk 8 to 12 meters high and a distinct buttress. The wood is straw-colored or pale white (pinkish buff). In large, mature trees, a small coffee-colored (warm sepia) heartwood is sometimes found. The grain of magabuyo wood is slightly crossed or wavy, and the texture is moderately coarse. It is heavy (sp. gr. 0.825 air-dry), moderately hard and strong, fairly tough, but not glossy. Relatively, it is hard to work, owing to crystalline deposits which dull tools readily.

Magabuyo is widely distributed from northern Luzon to Mindanao and Palawan. It is common in thickets and open forest at low altitudes. The supply is fairly abundant.

Palosapis.—This very large tree attains a diameter at breast height of 180 centimeters and a height of 20 meters up to the first branch. The sapwood is light-colored, 5 to 8 centimeters thick and not sharply marked off from the buff heartwood which turns yellowish or light yellow with age. Occasionally, rose or pink streaks are present, which fade out upon drying or upon exposure to the sun. The grain is generally straight but sometimes it is crossed or wavy. The texture is moderately coarse. The wood is moderately hard and heavy, weighing about 640 kilograms per cubic meter, air-dry.

Palosapis is widely distributed in Luzon, Mindoro, Ticao, Masbate, Sibuyan, Panay, and Negros, in primary forests at low altitudes and also streams in some secondary forests. It is available in large quantities.

Vidal lanutan.—This medium-sized tree reaches up to 60 centimeters in diameter at breast height. The trunk is generally crooked and short. The sap-

wood is narrow (1.5 to 5 cm. thick), light-colored, sharply marked off from the heartwood which is brownish drab or purplish, including intermediate colors. The grain is crossed and the texture is moderately fine. The wood is fairly glossy, comparatively light (sp. gr. 0.598, air-dry), comparatively hard, tough, and flexible. It seasons well with little degrade, can be worked with ease and takes a high finish.

Vidal lanutan is widely distributed from northern to southern Luzon, southward to Mindoro, Coron, and Palawan. It is common in forested ravines and in secondary forests at low and medium altitudes, ascending to 1,200 meters. The supply is limited.

REFERENCES

1. Heck, G.E. 1950. Laminated baseball bats. Reprint from Wood, October.
2. Lauricio, F.M. and S.B. Bellosillo. 1962. Mechanical and related properties of Philippine woods. (2nd Progress Report). The Lumberman, Dec. 1962-Jan. 1963, vol. 9(1): 60-64.
3. Reyes, L.J. 1938. Philippine Woods, Tech. Bull. No. 7, Dept. of Agri| & Com., Bureau of Printing, Manila.
4. Tamesis, F. and L. Aguilar. 1951. Important commercial timbers of the Philippines, their properties and uses. Bull. No. 32, DANR, Bureau of Printing Manila.

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Food and Agriculture Organization of the United Nations
Rome, Italy

March 1963

A NEW PLANTING GUN

The variety of forms in which the planting hoe, spade and dibble have been designed attests to a general dissatisfaction with the hand-planting tools available. The introduction of the tree-planting machine was an important advance in forestry practice. The wide gap between the efficiency of the tree-planting machine and the dibble, hoe and spade is tolerated for reasons usually associated with topography and logging debris. However, attempts to improve planting techniques have continued at a casual rate by individual workers and have been concerned largely with modifications to facilitate ball-planting of tree seedlings. Suggested improvements are exemplified by briquettes, sandwich planting and polyethylene tubes.

Preoccupation with the ball-planting method exists for good reason. A most important point in planting is to reduce the interruption of growth to a minimum, so that the plants may quickly adapt themselves to their new environment. The ball-planting method most clearly satisfies the basic requirement, but has had little application in large-scale planting programs because of prohibitive costs.

This paper describes a new tree-planting technique based on an improved model of a prototype planting gun and bullet for use in field planting of small (1-10) seedlings.

The planting gun and planting bullet are complementary devices so designed as to plant tree seedlings at a rate greatly in excess of the rates permitted by contemporary techniques on areas unsuitable for tree-planting machines. To accomplish this,

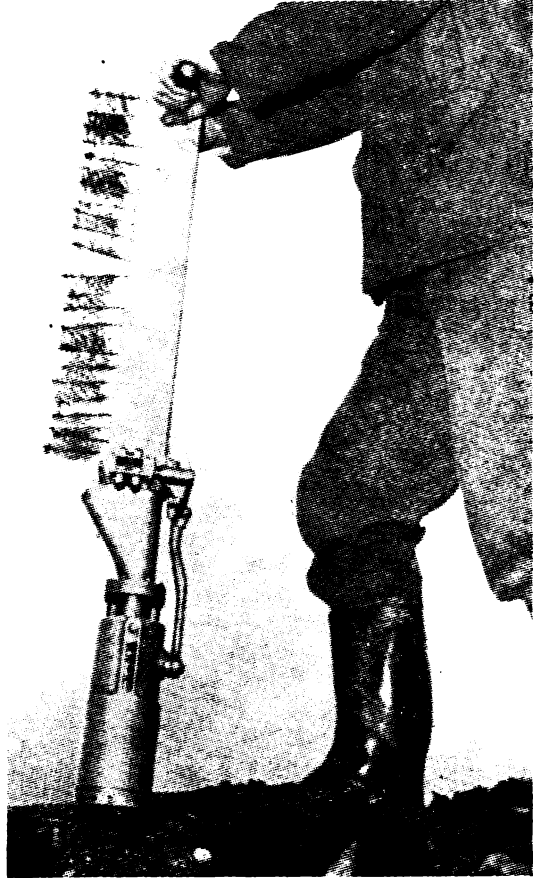


Fig. 1

the planting gun and bullet use a novel method that should be superior to present practice in seedling survival, juvenile growth, and length of the planting period. Specifically, the gun and bullet were designed to supersede the dibble, spade and hoe and make use of the ball-planting technique. Both gun and bullet were designed in 1950 by the author. The claims on their behalf are based on field tests made from 1957 to 1962.

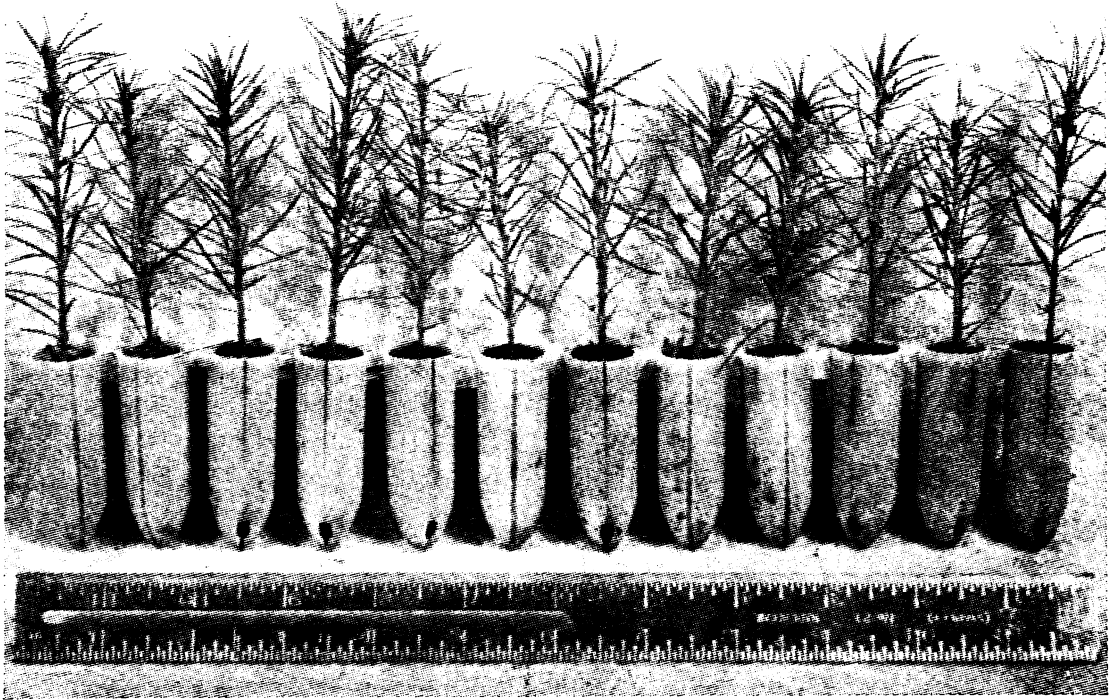


Fig. 2

The planting gun (Fig. 1) is a tabular device, which inserts a planting bullet-shaped receptacle (Fig. 2) containing a tree seedling, into the ground when a downward force is applied manually to the gun handle. When the downward force is discontinued, a second bullet drops to the muzzle of the gun, where it is held by spring-loaded steel balls ready for planting.

Tree seeds are sown and germinated individually in the bullets. The bullets are molded of styrene plastic, so designed to withstand sufficient force to drive the bullets into the ground and yet provide complete freedom for the growing seedling. The bullets are $2\frac{1}{2}$ in. (6.35 cm) in length, are $\frac{7}{8}$ in. (2.2 cm) in outside diameter, and have walls $\frac{1}{16}$ in. (0.16 cm) in thickness.

The walls are weakened by a narrow slit extending longitudinally from the rim to a hole near the point of each bullet. The hole is $\frac{1}{2}$ in. (1.27 cm) long and $\frac{3}{8}$ in. (0.95 cm) wide, and is offset from the point to permit passage of the roots while preserving the essential profile and strength of the bullet. The bullets are molded in groups or sticks of 12 (Fig. 2). Tests during 1957-60 proved that the bullets are shattered by the diametral growth of the seedlings. Douglas-fir and Scots pine seedlings shattered the bullets after three or four growing seasons without any apparent injury or confinement.

In preliminary field tests on level ground, a planting rate of 1,500 seedlings per hour was attained at a spacing of 8 feet

(2.44 m.). In addition to the rapidity of planting, other advantages expected are increased seedling survival and juvenile growth, a uniformly high standard of planting, extension of the planting season, and reduced planting costs.

The system is still in the experimental stage and the devices illustrated and described are merely prototypes. The modified planting gun and bullet described here are believed to be extremely practical devices which can, with slight alteration, accommodate larger seedlings than those shown in Fig. 2. In addition to mechanical refinements, the problems that will arise in further development of the system are concerned mainly with nursery practice and the logistics of supplying the planting crew with trees at a rate that will utilize the full

capacity of the planting gun. The development of a suitable nursery technique for raising seedlings in bullets in large numbers represents a complex subject. Nevertheless, the system promises many advantages, and is, perhaps, a practical solution to the problem of high speed (and low cost) planting on difficult terrain.

The gun is constructed of aluminum, except for brass guides for the cutting knives, the cutting knives being of carbide steel, and a steel spring.

The bullets are injection-molded of styrene plastic and in mass production cost about 4 dollars (Canadian) per thousand.

Source: *John Walters, Research Forester, University of British Columbia Research Forest, Haney, B. C., Canada.*

SENILE DELINQUENCY

A group of oldtimers were discussing their pending retirement from active duty. Most of them were in tune with the current philosophy that retired people must be eternal busybodies or they will shrivel on the vine. One man planned to operate a truck garden; another had a wood-working shop that would keep him occupied; still another intended to sell real estate; a fourth was going to raise orchids; and so on down the line. Everyone expressed himself except old Jeff, a forty-year veteran who had scarcely taken a day's vacation during the entire period.

"What are you planning to do, Jeff?" someone asked.

Jeff stroked his chin. "Believe it or not," he said, "I aim to fish, hunt, loaf, and play pinochle. Guess maybe I'm just plumb no good."—SID TURELL



CONVOCATION SPEAKER

Director Manuel R. Monsalud was the guest speaker during the convocation of the College of Forestry Student Body Organization, University of the Philippines held last September 4, 1963.

Director Monsalud spoke briefly on some impressions he gathered during his recent study and observation tours in Thailand, Spain, Italy, Sweden, West Germany, England, France and Austria under the sponsorship of FAO and in Australia under the Colombo Plan, where he visited forest products laboratories, pulp and paper mills, veneer and plywood plants, sawmills, logging concessions and other wood using industries. The director also made the observation that the Philippines is, by and large, comparable to, if not better than, many of the countries he visited, e.g., in natural resources, climate, and man-power resources, except that we, in the Philippines, are losing fast our forest due to *kaingin* and illegal logging or log smuggling.

He advised the students to be always serious in their studies, to make the best out of their stay in college, for it may be for most of them their first and last time to study in the university; that is their duty to develop their physique so that they will not be frail and sickly, to keep themselves always in good health by utilizing the knowledge of proper nutrition, hygiene and sanitation, physical exercises, and good sleeping habits; giving up smoking and alcoholic drinks and other habits that are expensive and inimical to health. Director Monsalud also mentioned the fact that it is a "must" for students, so as to prepare themselves adequately for the future, to read widely and voraciously and to study thoroughly and conscientiously and above all, to be self-reliant.

The director reminded the students that they are the future hope of the Fatherland and in their hands lie our destiny as a nation, our hope for progress and a bright future in science, industry and in other phases of economic development and, therefore, they must do their best in preparing themselves to become the future leaders. He concluded that we, as a people, must learn to stand on our feet, to forego luxuries and life's frivolities, and to

take life seriously. In this way, he said, we can surely progress.

* * *

PUBLICATION

The FPRI has published articles in technical journals and magazines, such as: Properties of Hardboard from Sugar Cane Bagasse by B. Lumen, L. Villanueva, and P. W. Bawagan, Philippine Agriculturist, February, 1963; Pulping and papermaking of naturally Occuring Mixtures of Philippine Hardwoods by P. W. Bawagan and J. Escolano, the Lumberman, January, 1962; Fungus Deterioration of Wood; the Lumberman, March, 1963; *Mayapis*—Veneer Cutting, Drying Gluing Properties, FPRI Industrial Reports, the Lumberman, January, 1963; Some Recent Technological Development in Veneer and Plywood Manufacture by E. Jaranilla, The Lumberman, January, 1963; Mechanical and Related Properties of Philippine Wood by F. Lauricio and S. Bellosillo, the Lumberman, January, 1963; Paper Anyone by J. Gonzales, Sunday Magazine, April, 1963.

Technical Notes published are as follows: "Almaciga Resin," September, 1962; "Suggested Pointers in Controlling Fungal Discoloration in Rattan," October, 1962; "The Effect of Moisture Control on the Strength of Wood," November, 1962; "Relative Durability of Some Philippine Woods When Exposed Under Conditions That Favor Decay and Termite Attack," December, 1962; "The Structure of Paper-making Fiber," January, 1963; Pointers in the Control of Fungal Strain in "Bakya", February, 1963; Pulping and Bleaching of Cold-Soda Pulp from Philippine Wood," March, 1963; "Distinct Advantage of Plywood over Solid Woods," April, 1963; "Fiber Identification for the Philippine Pulp and Paper Industry," May, 1963; "Pulp and Paper-making from Hardwood," June, 1963; and Pulp and their Methods of Production for Newsprint Manufacture," July, 1963.

* * *

VISITING VIP'S

Dr. Thomas C. Allen, Entomologist, Wisconsin University; Dr. Knut Mikaelson, Technical Office

Atomic Energy Branch, UNFAO, Rome, Italy; Mr. Andy Stashoveski Research Officer and Dr. A. B. Wardrop, Principal Officer (Chief) of Wood and Fiber Structure, CSIRO, Melbourne, Australia, Major General Vichian Sutan-Ta-Nan, Director, Government Thai Plywood Company, Bangkok, Thailand; Mr. Chambers, Export Manager, Dr. Wolamn, GmbH, Germany; Mr. Pom Rosanontha, Department of Rural Education, Kasetsart University, Bangkok, Thailand; Mr. Macid Gulcur, Consultant, FAO, Turkey; Mr. Anthony Johnston, FAO Regional Officer, Bangkok, Thailand; Dr. W. Meijer, Botanist, North Borneo.

Illustrative talks were given by Dr. Thomas Allen and Dr. W. Meijer on termites and flora of Borneo, respectively in the FPRI's conference room.

* * *

DEPARTURES AND ARRIVALS

Drs. William B. Stern, Wood Technologist, and Arthur B. Anderson, Wood Chemist, arrived at the beginning of the fiscal year 1963-64. Mr. Ricardo Casin, Senior Forest Products Technologist, Wood Preservation Division, returned to his post here after a year's training under the Colombo Plan on wood seasoning at the Forest Products Division, CSIRO, Melbourne, Australia.

Mr. Exequiel Mendoza, Senior Forest Products Technologist, Industrial Investigation Division, arrived after completing one year training on Wood Processing at Princes Risborough, England, also under the Colombo Plan.

Mr. Emilio Jaranilla, Assistant Chief Forest Products Technologist, Industrial Investigation Division, arrived from an International Consultant Conference on Plywood and other Wood-Base Panel Products held in Rome recently.

Director Emeritus Eugenio de la Cruz and Assistant Director Francisco Tamolang were designated Philippine delegates to the 5th FAO Wood Technology Conference held in Madison, Wisconsin, USA, September 11-27, 1963.

* * *

MARRIAGES AND ARRIVALS VIA STORK

New members by pair of the "Pa and Ma" club as of June 1963 were as follows: Mr. & Mrs. Resty B. Dimasapit; Mr. & Mrs. Romeo Caparas; Mr. & Mrs. Felino Siriban; Mr. & Mrs. Isidro Zamuco; Mr. & Mrs. Fernando Manas; Mr. & Mrs. Alfredo Gruela and Mr. & Mrs. Vicente Tagle, Jr.

Stork recipient as of June 1963, were Mr. & Mrs. Jose Laranang; Mr. & Mrs. Arsenio Tongacan; Mr. & Mrs. Santos Lantican; Mr. & Mrs. Rodrigo Valbuena; Mr. & Mrs. Toradio Cuaresma; and Mr. & Mrs. Dolfo Morales.

* * *

TRAINING COURSES COMPLETED

Messrs. Feliciano Lauricio, of the Timber Physics and Engineering Division, Felizardo Virtucio, Industrial Investigation Division, Carlito Virtudes, of the Wood Preservation Division, underwent two months training in Log and Lumber Grading recently in the Bureau of Forestry in Davao City.

Mr. Isidro Zamuco of the Wood Technology Division and Melecio Avanzado, Timber Physics and Engineering Division, were trained on Radioisotopes for six weeks at the Philippine Atomic Energy Commission, Manila.

Mr. Benigno Lomibao, Wood Technology Division underwent four weeks training on the Fundamental Operation and Use of Electron Microscope at the Philippine Atomic Research Center, Diliman, Quezon City.

Messrs. Luciano P. Mercado of the Wood Technology Division and Eulalio Calvelo, trained on Manipulation of EDPM (Electronic Processing Machines), IBM, Inc., Manila.

Messrs. Eduardo Villanueva, Chemical Investigation Division, Emmanuel Bello, Wood Preservation Division and Romualdo Miciano, Timber Physics and Engineering Division, underwent training in Statistics at the UP Padre Faura, Manila.

Sixteen employees of the FPRI and one from the U.P. College of Forestry, College, Laguna, finished the Instructor's Course on First Aid and Accident Prevention. Coordinated by Dr. B. B. Gesmundo, Training Officer, FPRI, the course was conducted by the Philippine National Red Cross personnel.

* * *

BIOLOGICAL MEETING

Dr. A. B. Anderson, Consultant, and Mr. Lauro Ynalves were speakers on the Role of Chemistry in Understanding Trees Durability and Decay, and Potential Use of Coconut Husk, a raw materials for other industries, respectively, in a recent Los Baños Biological Meeting.

The discussion that ensued was actively participated in by FPRI employees.

* * *



JOB AWAITS FORESTER AT NPC

A wonderful opportunity for an ambitious and hard-working forester awaits at the NPC according to Professor Jacalne, head of the College of Forestry Extension Department, who has just returned from a trip from Mt. Province with Professors James Davis and Benito Lim.

Engineer Leonardo Marzan, assistant plant superintendent told the trio that the National Power Corporation is interested in hiring a full-time forester to supervise the reforestation of the denuded areas around the power plant and to draw out plans for the prevention of forest fires during the summer season. The forester will be given an office and a free hand in the selection of his staff, with free housing facilities and other fringe benefits.

* * *

NURSERY AND PLANTATION HANDBOOK OFF THE PRESS SOON

The first textbook by a faculty member to be printed entitled "Forest Nursery and Plantation Handbook for the Philippines", of value and interest to forestry students and personnel of the Bureau of Forestry, Reforestation Administration, Parks and Wildlife Office and private lumber companies will be off the press soon. Professor Teodoro Delizo and Dean Gregorio Zamuco collaborated in the preparation and writing of the handbook.

Professor Delizo who has also contributed several articles on forestry nursery practices to various forestry journals such as the *Philippine Journal of Forestry*, *Filipino Forester*, *The Pacific Science Congress* and *Forestry Leaves* is at present conducting research on the germination and storage of thirty different forest tree seeds.

* * *

MOLE ASSURES B.I.R. HELP TO COLLEGE

At the open forum following his speech before the Forestry Student Body Organization, Forestry Supervisor Mole assured the help of his office to the College in the collection of ₱0.10 for every

cubic meter of timber cut for commercial use from public forests and forest reserves as provided for in RA 3523, for the exclusive use of the College for carrying out a nationwide program of public education and information in forestry and other purposes.

In his speech before the Faculty and Student Body he stressed the foremost requirement of honesty and dedication in BIR employee, to steel himself against the various temptations to which he is often exposed.

"You will be treated to all kind of drinks, refreshments, cigars, cigarettes, and during the night, the fixer will invite you to the movies, night clubs and motels. The fixer will explore your weakness thence satisfy you to the maximum. It will be only upon your recovery from this enchantment that you will find how you have sold yourself and the government for a pittance," he said.

He congratulated the "incorruptible" forestry graduates, who, in the "Operations Collections" of the BIR last year, topped the whole Regional District No. 3, by collecting more than 80% of the taxes throughout the Philippines.

* * *

CORNELL U DONATES FUNGI COLLECTION

The College of Forestry is the recipient of a collection of about 4,000 species of fungi, through Dr. Richard P. Korp, professor of microbiology of the Department of Plant Pathology, Cornell University.

The fungi donation collected from South America will form the nucleus of a fungal herbarium which is being planned, according to Forester Enriqueito de Guzman of the Department of Arts and Sciences.

* * *

COSTLY BOTANY AND PATHOLOGY SLIDES FROM N.Y. STATE U.

Over one hundred boxes of mounted microscope slides for botany and pathology worth

₱10,500 arrived recently from the State University of New York.

According to Dean Zamuco, the slides representing one of the most expensive sets of botanical specimens found in the world and are available only in larger universities will provide forestry students the opportunity to study for the first time specimens which are usually described or photographed in textbooks.

William Webb, project leader of the State University of New York visiting professors, said that some of the slides were selected from the most representative of the larger groups of plant kingdom and that a thorough knowledge of these forms should give the forestry student a suitable working idea of plant relationships, structures and general functions.

* * *

GENERAL FORESTRY COMMITTEE APPROVES "KAINGIN" CONFERENCE

The first major attempt by the different major forestry agencies in a cooperative study of the *kaingin* problem scheduled for March 13-14 has been approved by the General Forestry Committee, according to Dean Gregorio Zamuco.

The four major aims of the conference are: (1) the bringing together of key people from organizations and agencies whose functions are affected by *kaingin*; (2) broadening the general area of thought on *kaingin* as a socio-economic problem; (3) stimulating free exchange of ideas on *kaingin* problems so as to provide proposal for solutions to the problem on a national scale; and (4) calling attention of the public to the besetting dangers brought about by *kaingin*-making in order to enlist the people's support for any proposed measure that might lead to its solution.

The following agencies will sponsor the conference: U.P. College of Forestry, Bureau of Forestry, Reforestation Administration, Parks and Wildlife Office, Forest Products Research Institute, Society of Filipino Foresters; Agricultural Information Division and Private Lumber Industries.

Invited to participate are the following: Philippine Chamber of Wood Industries; National Cottage Industries Development Administration; Philippine Lumber Producers Association; Pulp and Paper Manufacturers Association; Plywood and Veneer Manufacturers Association; Barrio Captains Association of the Philippines; Philippine Constabulary; Department of Justice, U.P. College of Agriculture, (Depts. of Rural Sociology, Agricultural Engineering & Agricultural Economics); League of Provincial

Governors and City Mayors; Bureau of Public Schools, Bureau of Private Schools; Boy-Girl Scout National Council; National Power Corporation; Philippine Permanent Forest Association, Incorporated; National Waterworks and Sewerage Authority; National Bankers Association; Rural Bankers Association; Bureau of Soils; Executive Secretary on Local Government; Presidential Assistant on Community Development; Agency for International Development, USOM/Manila (Agriculture Division, Program Office, Community Development Division, Public Administration Division & Public Works Engineering Division); Discipline of Sociology, Division of Social Sciences, U.P.; Sociology Department, Silliman University; National 4-H Club Advisory Council of the Philippines, Inc.; Bureau of Forestry; Reforestation Administration; Forest Products Research Institute; Parks & Wildlife Office; U.P. College of Forestry; Agricultural Information Division, DANR; Commission on Agricultural Productivity (formerly BAE); Land Authority (formerly NARRA); Presidential Committee on Administrative Performance Efficiency (PCAPE); Presidential Anti-Graft Command (PAG-COM); National Press Club (President & Teodoro Locsin); Society of Filipino Foresters; Radio Club; Emergency Employment Administration; Bureau of Public Highways; Bureau of Mines; Araneta University (President Araneta); and National Economic Council.

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COLLEGE TEXTBOOKS FOR SALE AND RENT

With AID funds, college textbooks purchased direct from the States at reduced government prices are now available to students. This has been made

possible through the indefatigable efforts of Dr. William L. Webb, Project Leader of the U.P.-State University of New York Contract in Forestry.

Income derived from the rental or sale of textbooks on forest economics, forest management, forest engineering, statistics and others will serve as a revolving fund to insure continuing availability of textbooks to



Dr. William L. Webb

students, according to Professor Filiberto Pollisco, chairman of the college library committee.

* * *

SEMINAR ON "KAINGIN"

The Department of Forest Resources Management of the College of Forestry held a seminar on *kaingin* agriculture in the Philippines last August 15, 1963 in the conference room of the technology building. The seminar featured the reports of the *Kaingin* Research Team of the College of Forestry. Members of the team are Professor Napoleon Vergara of the U.P.C.F., Mr. William W. Allison, Council on Economics and Cultural Affairs, and Mr. Felipe V. Cagampang of the U.P.C.A.

In the introductory remarks, Prof. Vergara pointed out reasons why *kaingin* problem in the Philippines has not yet been solved. He said, that the people, are not giving particular attention to the details of the problem and secondly, they are not analyzing whether *kaingin* agriculture is profitable or not.

The research was conducted in Mindanao especially in Bukidnon where *kaingin* is most rampant. The team approached the problem in three aspects: the sociological, agricultural and economic aspects.

Mr. Allison, the sociologist of the team met two general groups of *kaingineros*. They are the pagans represented by the *Manobos* and the christians who came mostly from the Visayan Islands. The *Manobos* are the most destructive group. *Kaingin* agriculture is their way of life. Their culture and traditions are integrated with it. They go from one place to another making *kaingin* but will return to their former *kaingin* again after a few years, thus making a sort of cycle of operation and therefore have not gone in virgin forest destruction. But, with the coming of the christians settlers, that sort of a cycle was altered. When the *Manobos* went back to their former *kaingins*, they found out that it was already occupied by the christians who had either purchased their right to occupy the land from other *Manobos* or had just squatted there also. So the *Manobos* were forced to make *kaingin* again in the virgin forest. The interaction between these two groups of people has aggravated the *kaingin* problem.

The economic aspect was presented from two points of view. One from the agriculturist and the other from the forester. Mr. Cagampang, the agriculturist, claimed that cultivating the land through *kaingin* system is more profitable than when it remains as a forest. He came out with a figure of yearly family incomes from all sources arising from *kaingin* cultivation for both *Manobos* and christians. He gave a figure of ₱456.00 for *Manobo* family cultivating 2.9 hectares and ₱619.00 for christian family cultivating 2.4 hectares.

Prof. Vergara, in his analysis gave also a figure of ₱626.00 per hectare per year on the basis of 287 cu. m. as average volume per hectare and ₱73.77 as stumpage value per cubic meter. This means that each hectare of forest land will yield an income of ₱626.00 per year by merely selling the standing merchantable timber. Thus in the final analysis it was proven that the forest is more profitable when it remains as a forest than when it is cultivated by *kaingin* system. More money is derived besides the intangible benefits obtainable from it.

To prevent the further denudation of the forest, two methods of control had been suggested by the team. First is through resettlement. *Kaingineros* who have no land of their own should be guided to resettle in agricultural land which lie idle waiting for cultivation. The second method proposed is employment. *Kaingineros* should be given employment and this can be done by the establishment of pilot projects which call for manual labor.

—by Anacleto Duldulao

* * *

TRIO ON PLANT DISEASE TOUR

Dr. Savel Silverborg, and Foresters Enriqueito de Guzman and Bernardo Sinues, of the Department of Arts and Sciences visited Abra and Agusan to study some plant diseases occurring in these regions during the early part of November.

The object of the tour was to study the diseases killing the benguet pine plantation at the Lagangilang Reforestation Project in Abra, the twig blight which causes the untimely falling of eucalyptus leaves in Agusan, as well as *anthracnose* and the lumban root rot which affect the lumbang leaves and roots respectively.

The team also visited some coconut plantations in the bicolor region to make further observation on *cadang-cadang*, a perennial plague of the coconut industry in that region. According to Dr. Silverborg the *Cadang-Cadang* Research Team at Guinobatan, has finally isolated different fungi from the diseased roots suspected to be the cause of the disease.

* * *

LUMBERING CLASS VISITS DINGALAN

The lumbering class composed of twenty-seven students under Forester Angelo Mordeno had a four-day trip from October 3 to 6, inclusive to Dingalan, Quezon, where they made first hand observations on the various methods of logging and

sawmilling employed by the Dingalan Forest Products Corporation.

Professor Agustin Pascua, Professor of Logging and Lumbering joined the field trip.

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DEAN MAJUL IS CONVOCATION SPEAKER

Dean Cesar Majul of the U.P. University College spoke on the new approach in reading Rizal's *Fili* and *Noli* at a convocation before the Faculty and Student Body.

The two novels, according to the Dean, not only presented the problems of the Philippines during his time but also showed what he considered as the wrong solutions to such problems.

He also explained the purposes of the *Liga Filipina* which Rizal sought to organize as a foundation of the Filipino nation.

"National sentiment is the essence of a nation," the Dean said, "A state can be born overnight, but it takes time to build a nation."

* * *

COLLEGE LIBRARY COMMITTEE PROPOSALS APPROVED

Miss Marina Dayrit, University Librarian approved the College Committee's proposal to increase the number of library hours and request for the detailing of a cataloguer from the Main library at Diliman to catalogue College of Forestry news.

* * *

COLLEGE OF FORESTRY OBSERVES ARBOR WEEK

The Faculty and the College studentry shared in the job of observing this year's Arbor Week celebration by planting seedlings in the abandoned clearings on Mount Makiling, on August 3, 1963.

Professor Domingo Jacalne spoke on the significance of the celebration before the students assembled at the basketball court at 7 o'clock a.m. He also recounted the plantings done by the pioneer and former students of the College in what was once a *cogonal* and transformed it into the beautiful campus that it is now.

Mr. Ireneo Domingo a member of the Silviculture Staff urged the students to observe Arbor Day with the proper spirit, by proper planting methods to ensure greater percentage of survival of the seedlings to be planted. Previous years' plantings were observed to have yielded very poor results due to improper and careless planting.

Albizzia falcata, mahogany, and narra seedlings were planted under efficient faculty supervision on abandoned clearings near the mudspring and above Camp Eldrige, the whole morning. After the planting, fresh *bucos* donated by the Pensionado Club were served at lunchtime.

Fresh *bucos* donated by the Pensionado Club were served at lunchtime.

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LOOK WITHIN

One day Gutzon Borglum, the famous sculptor, was working in his studio on a statue of Abraham Lincoln. He had finished the head, the shoulders, and was working on an arm when the cleaning woman came in to sweep up the pieces of stone he had chipped off that morning. When she finished her task, she stopped to look at the statue.

"Mr. Borglum," she said, "how did you know Mr. Lincoln was in the hunk of stone?"

Like the cleaning woman, few of us would have seen Abraham Lincoln in that crude block of stone. The sculptor, however, looked through the rough exterior of the stone and saw the great emancipator there.

In this same manner, most of us fail to recognize potential greatness in the people around us. All too often we judge people from their outer appearance and thereby overlook the spark of divinity within them. Who would ever have recognized a St. Francis of Assisi in the wayward youth he was at one time? Who would have seen a David Livingston in that awkward weaver's apprentice he was when a boy? Who would ever have seen an Abraham Lincoln in the gangling rail-splitter he was at eighteen?

A philosopher once said, "How little do they see of what really is who frame their hasty judgment upon that which seems to be."—WORRAL G. SONASTINE

Forestry in the News

FORESTRY MAN GOES TO U.S.

Forester Bernardo B. Jasmin left recently for the United States for a one-year study on forest research methods in Michigan University, Ann Arbor, Director of Forestry Estanislao Bernal announced.

Bernal said Forester Jasmin will visit different forest experiment stations and research centers in the United States. Jasmin is acting Forester-in-charge of Magat Forest Experiment Station in Diadi, Bagabag, Nueva Vizcaya.

(*Manila Times*,—Aug.14, 1963)

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BERNAL WARNS FOREST FOES

The Bureau of Forestry will wage an all-out campaign against *kaingineros*, fly-by-night loggers and squatters in public forests as part of the government forest conservation program, Director Estanislao R. Bernal said yesterday.

All forestry field personnel have been instructed to enforce all forest laws, including the newly approved legislation, RA 3701, which increased the penalties for unlawful occupation and destruction of the public forests.

Other forestry entities and police agencies all over the country, Bernal said, will participate in the nation-wide forest conservation campaign.

The forestry director said that *kaingineros* and squatters are two factors which hasten the denudation of the country's resources. He said fly-by-night loggers and occasional wild fires also contribute to forest depletion.

Bernal created a committee charged with the detection and investigation of *kaingin*, land classification and squatting cases in public forests.

The committee is composed of three forestry investigators. Celestino Sabalo is chairman.

(*Manila Times*—August 29, 1963)

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TIMBER PERMIT PROBE ORDERED

Forestry director Estanislao R. Bernal instructed the district forester here to look into the complaint

of Atty. Sisenando Villaruz about alleged commercial exploitation of a communal forest in Hinatuan.

Bernal said the grant of a license within communal forests is conditioned on the favorite recommendation of the municipal council. He assured that he will take the necessary action on the complaint as soon as the facts are properly ascertained.

All forest laws and regulations will be strictly enforced. Bernal stressed, not only to protect and conserve but also to keep productive our forests.

(*Manila Times*—July 24, 1963)

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FIREWOOD PROJECT IN LA UNION

Residents of three barrios in Agoo, La Union, recently launched Operation Firewood to solve the critical shortage of firewood for domestic use and Virginia tobacco flue-curing in that municipality.

The pilot project was first launched in Barrio San Agustin by Agoo municipal officials headed by Mayor Antonio Melanes. They led in planting *ipil-ipil* seedlings, which were furnished by the Reforestation Administration.

Also present at the launching of the planting project was Forester Primo P. Andres, regional supervisor of the Reforestation Administration with headquarters in this city. He sold the idea of reforesting the barren areas in the barrios of Agoo to solve the firewood problem in that town.

The San Agustin barrio cooperators were Francisco Fronda, Macario Fronda, Pascual Fortes, Nicasio Cabalitagan, Pantaleon Galban, Felizardo Rivera and Bernardo Estoesta.

The barrio cooperators had signified their intention to set out *ipil-ipil* seedlings in their private lots with the Reforestation Administration providing the planting materials and the technical know-how.

Officials of the San Agustin barrio council headed by Cirilo Gali were also present; namely, Juan Silin, first vice barrio lieutenant; Prudencio Madriaga, second barrio lieutenant; and Eusebio Padilla, rural council legal adviser.

(*Manila Times*, August 7, 1963)

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FISCAL BACKS LOGGERS FEE ORDINANCE

Provincial Fiscal Alfredo I. Gonzales has upheld the legality of an ordinance passed by the UPI municipal council, imposing an inspection fee of ₱2 on every truckload of logs taken out of the municipality by concessionaires and loggers.

The provincial board earlier sought the opinion of the fiscal, after the loggers urged the board to revoke the ordinance.

The loggers claimed that the law prohibits municipal governments from levying taxes on forest products and forest concessions.

Gonzales strongly condemned the attitude of the loggers, and said the inspection fee does not transgress the provisions of any law.

(*Manila Times*—Sept. 21, 1963)

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PC GOES AFTER "KAINGINEROS"

Col. Alfonso Palencia, III PC zone commander, has launched a campaign against the wanton destruction of forests within the region.

The drive was spurred by the recent seizure of 17 newly built *bancas* of 39 "kaingineros" by the Negros PC command and forestry agents.

The Negros PC commander reported to Third PC zone headquarters that in barrio Palagpay, Tanjay, 17 *bancas* were confiscated from Zosimo Bandoquillo, Filemon Dael and Catalino Dael, for their alleged failure to produce permits to cut timber from the area.

The three men claimed they bought their *bancas* from Julian Torante, Pablo Acmas and Alfonso Casile.

In the reserves between Bais and Tanjay, the following farmers were apprehended for illegal kaingin:

Apolinario Maonsong, Evasio Abasan, Genaro Nillas, Domingo Padira, Severino Cutib, Liberato Cutib, Rufo Rodriguez, Pedro Torres, Ireneo Gomez, Federico Gomez, Santiago Gomez, Zacarias Seres, Gregorio Inal, Santos Lindayo, Mauro Miguio;

Filemon Ejercito, Hilario Romano, Victor Andres, Mateo Balansang, Enrique Lindayao, Manuel Impal, Cristino Garsola, Roman Amancio, Vicente Babor, Francisco Babor, Valentin Aboso, Edilberto Daylas, Primitivo Garsola, Zabarias Lindayao;

Anselmo Romano, Eugenio Cadenes, Vicente Paunillan, Rizalino Bohol, Lorenzo Argao, Pedro Flores, Bienvenido Lastomoso, Honorato Amaona, Emilio Gacas, and Alberto Aboso.

All these arrested were turned over to the Bureau of Forestry authorities for criminal prosecution.

(*Manila Times*—Aug. 1, 1963)

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BAGUIO PLANS BIRD PARADISE

A novel project to convert city parks and forests here into a paradise for birds is seriously being considered by city and parks and wildlife authorities.

Dr. Vicente de la Cruz, parks and wildlife director, conferred with Mayor Luis L. Lardizabal last week on the proposed project.

It was gathered that, while the city parks and forests are heavily wooded, the predominant species is that of pine trees, which does not provide feed for birds, except worms and other insects attacking the trees.

The lack of feed for birds will be remedied by planting suitable upland species, which will bear fruits for the birds to eat, it was said.

Lardizabal has requested Dr. De la Cruz and Primo I. Andres, regional supervisor of the Reforestation Administration, to secure or raise seedlings of fruit-bearing trees which must survive local climate and elevation when planted in city parks and other barren areas within the forest zone.

Aside from introducing fruit-bearing trees, Lardizabal said he would also like to introduce wild birds, which would multiply under the prevailing climate in the city and remain in the parks and forests permanently.

Another complementary approach to the realization of this project is the ban on the use of slingshots and air rifles for bird-hunting within the city.

Oseo C. Hamada, president of the Baguio-Benguet council, Boy Scouts of the Philippines, and member of the city forestry council, had denounced to Mayor Lardizabal the use of slingshots and air rifles by irresponsible boys in city parks, driving away birds which migrate during summer.

Lardizabal had directed Col. Leopoldo L. Nievera, police chief, to detail one of his men in the campaign against the use of slingshots and air rifles for bird-hunting within the city.

(*Manila Times*—July 19, 1963)

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COLLECTION OF FEES PRESSED BY DIRECTOR

Forestry Director Estanislao R. Bernal ordered the other day his division chiefs to press collection of payable accounts from delinquent forest concessionaires.

Citing the report submitted to him by Antonio A. Quejado, chief of the bureau's accounting division, Bernal disclosed that many special permit holders have not yet settled their accounts.

Bernal said Quejado's report showed a total collection of ₱26,933,180.83 of forestry revenue for the fiscal year ending June 30, 1963. According to Bernal, the collection represents an increase of over ₱10 million over that of the previous year's income.

If the collectible accounts are paid by the concessionaires, Bernal said, the grand total forestry income would be even much more. He said there was no reason why licensees could not pay on time their accounts when they were raking in greater profits from the utilization of the forests.

Bernal also bared that he inspected logs in sawmills in Northern Luzon last week to find out whether scaling work was being done accurately by bureau scalers. He urged forest officers to prevent the smuggling of logs from the cutting area to the sawmill without first being properly scaled. To preclude the possibility of non-payment of forest charges, Bernal said he would require scalers to do scaling work immediately after the timber has been felled.

Meanwhile, forestry information chief Amador J. Evangelista requested those who have personal knowledge of any anomaly practiced by bureau employes to make the report directly with the director.

(*Sunday Times*—Aug. 11, 1963)

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TRANSIT SURVEYS OF LOG AREAS SET

Acting Forestry Director Estanislao R. Bernal ordered the continuous transit surveys of the boundaries and monumenting corners of established timberlands.

Established timberlands, Bernal said, will be proclaimed as forest reserves under the Permanent Forest Law (RA 3092) providing permanency of status to the country's public forests.

Bernal said the transit survey of the boundaries of permanent forests started last year in Camarines

Norte as a pilot project. Already surveyed in that province were 11,710 hectares. The goal for this fiscal year is 200,000 hectares. He added that with 50 transit survey parties to survey 200,000 hectares per year, it is estimated that the 11,206,068 hectares can be completed in 56 years.

Bernal stressed that the proclamation and the precise survey of the boundaries of the forest reserves must be expedited in order to place all forest areas under sustained yield management. Also to be surveyed soon, he said, are the boundaries of the proposed permanent forests in Agusan, Cotabato, Davao, Lanao, Surigao, Bukidnon, Zamboanga del Sur and Norte, Camarines Sur, Quezon, Cagayan, Mountain Province, Isabela and Samar which are now covered by ordinary timber licenses.

Bernal said that of the more than 29 million hectares of total land area of the country, more than 12 million hectares are intended to be declared forest reserves. Under the socio-economic program of President Macapagal, the nation's forest resources will play a vital role, he pointed out.

(*Sunday Times*—July 14, 1963)

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FORESTRY MONTHLY DUE FOR RELEASE

Acting Forestry Director Estanislao R. Bernal has announced the bureau official monthly publication will soon be printed.

Editing the publication is Amador J. Evangelista assisted by associate editor Felipe B. Chicano Jr.

Other staff members are Ninfa Jerus, Mel Gascosin, B. Arteche, A. Nigos, B. Sildo, R. Maraña, C. Corres, A. Orden, A. Lindayag, J. Cruz, E. Santos, V. Samson, M. Sabiniano, A. Reyes and C. Lacsamana.

(*Sunday Times*—July 14, 1963)

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ILLEGAL LOGGING COST: ₱7 M A YEAR

Indiscriminate logging is causing ₱7 million damage on the country's forest lands every year.

Officials of the Reforestation Administration disclosed this yearly toll as they stepped up their campaign against indiscriminate logging and kaingin.

Honorato A. Baja, chief of the reforestation extension section said that over 50,000 hectares of

forest lands were being denuded annually by loggers and kaingineros.

He said 1.4 million hectares worth ₱30 million had been laid bare to the elements as a result of indiscriminate felling of logs and clearing of mountainsides by farmers.

REFORESTATION SLOW

Of the denuded areas, Baja said, only 75,000 hectares had been reforested. He said squatters, limited funds, and unscrupulous loggers were hampering reforestation work.

According to the RA official, squatters have defied government orders to get out of their kaingin farms and resisted attempts by the foresters to conduct reforestation work.

Baja said it was impractical to take ejection action in court against the squatters because prolonged litigation would set back reforestation work for months or years.

He said provincial and municipal officials had been requested to help convince squatters of the need and importance of cooperating with the reforestation administration.

NOT ENOUGH FUNDS

For its reforestation projects, according to Baja, the RA gets ₱7 million annually. He said the amount was enough to cover only 30,000 hectares, less than one-half of the area denuded every year.

He said an annual appropriation of ₱14 million would be enough for reforestation work to offset destruction of forest lands by loggers and *kaingineros*.

(*Manila Times*—July 15, 1963)

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2ND FORESTRY PROJECT OPENS

The 3,200 young reforesters of the Emergency Administration assigned to plant trees in the country's denuded areas left their mountain camps Monday after completing their tour of duty.

They formed the first batch of the unemployed and out-of-school youths with ages from 16 to 24 recruited by the agency's reforestation project.

For six months they lived in 16 EEA reforestation camps located in various parts of the country. Reforestation project director Jorge P. Tan Jr., said that another set of 200 boys for each camp are now being recruited.

The camps, where those interested youths may apply, are located in Mt. Province, Nueva Ecija, Nueva Vizcaya, Rizal, Bulacan, Albay, Samar, Cebu, Negros Oriental, Quezon City, Zambales, Cotabato and Bukidnon.

Tan said that besides the reforestation work, the EEA enrollees had been given vocational and citizenship training while in camp.

Some who were found to be deserving he said, were given regular positions in the agency's forest conservation project as forest guards and scalers.

Tan said once the country's denuded hills are covered with trees again, these camps will be converted into trades and vocational centers, tourist spots, agricultural experimental stations and youth training schools.

Governors Eduardo Joson and Corazon Espino of Nueva Ecija and Nueva Vizcaya, respectively, and Rep. Ricardo Ladrado of Iloilo led local officials in the graduation rites in their respective provinces.

(*Manila Times*—July 18, 1963)

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WATER POLLUTION DISCUSSED AT MEET

(*Special to the Manila Times*)

The city government has acted to prevent pollution of the springs at Busol forest reserve from which the city gets a major supply of potable water.

The Baguio City forestry council, headed by Mayor Luis L. Lardizabal, met recently with a group of squatters at Ambiong Elementary School and discussed measures, to prevent pollution of the creeks.

Lardizabal told the squatters that according to analysis made by experts, the water supply coming from the Busol forest reserve is "most unsanitary" on account of pollution resulting from the illegal occupation of areas within the watershed.

It was agreed that a team composed of representatives of the Bureau of Forestry, Reforestation Administration, city forestry council and the office of the city mayor will inspect all the *kaingin* clearings and other cultivations made by the definite course of action to be taken by individual squatters.

To prevent pollution, cultivations will not be made on slopes, which drain toward the springs. The *kaingineros* will be given another area to cultivate.

The squatters, whose camote or vegetable patches are located on flat areas were cautioned against enlarging their cultivation areas and building residential shacks on them.

(*Manila Times*,—Aug. 30, 1963)

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GS REFORESTATION WORK CITED

Talibon girl scout troop No. 129 was awarded a service trophy for its outstanding community accomplishments.

The troop, led by Mrs. Rosalita Dellota, won the national award for converting a barren hill overlooking Talibon town into a reforested area. It is the site of these girl scouts camp.

Behind the undertaking is Bohol girl scout executive Brigida Garay, supervisor Gregorio Dellota, municipal scout commissioner Celedonio Salazar and the Talibon district teachers association headed by Mrs. Irene Abuan.

Another entry to the Bohol girl scout council—GS troop No. 1 of the Bohol National Agricultural School under Mrs. Valeriana Alforque—has been awarded a plaque of service recognition by the Girl Scouts of the Philippines. Other runners-up were Senior Troops Nos. 1, 8, and 11 of Camarines Sur, and Senior Troop 1 of Sulu.

Earlier, the Bohol girl scout council copped the Marina Yulo-Vargas trophy for being the most outstanding council in the Visayas region and several commendatory plaques for its various projects that drew public attention.

The Bohol GS council is headed by Mrs. Gertrudis Derekito, president and GS executive Brigida Garay.

(*Manila Times*—July 13, 1963)

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STRICT FORESTRY MEASURES SOUGHT

Owners of sawmills in Laguna, especially those in the upland towns sought the help of the government in preventing the discriminate use of forest areas and establishment of *kaingins*, fearing that the gradual decrease of timber will lead to closing of their industry due to lack of materials.

Rep. Wenceslao R. Lagumbay (N, Laguna) was asked by sawmills owners to introduce measures where release of public forest in Laguna would not affect the wood industry and will not decrease the supply of materials used by factories now in operations.

The sawmill owners said that illegal *kaingin* cases and squatting should be handled by the bureau concerned, and prevent the intervention of outside influence.

The last report showed that Laguna has an estimated area of 120, 800 hectares where 25,500 hectares are productive forest and 15,000 hectares protection forest while the rest are agricultural lands.

In Laguna there are some 100 wooden shoe factories, 15 sash factories, 15 furniture shops and wood curving shops with an approximate capital investment of ₱250,000 and employment of 1,000 persons with some 5,000 dependents.

If the forest areas in the province will be neglected, the sawmill owners feared the closing of their establishments and may cause unemployment to thousands people.

The Laguna solon promised to look into the case and to make steps for the protection and utilization of forests in a practical way.

(*Manila Times*—Aug. 13, 1963)

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FORESTERS GROUP DECRIES DESTRUCTION OF TREES

Four stately "Sampaloc" tree lining Sampaloc ave. at Quezon City were cut down to afford an "unobstructed view" to a gasoline station being put up.

The place of slaughter was at the intersection of Sampaloc ave. and Don Alejandro Roces ave.

Here another gasoline station is abuilding and as has been the experience in many cases in Quezon City, innocent roadside trees that took years and years to grow had been done away with.

"Why can't the gasoline station keep the trees?" the Society of Filipino Foresters asked. "These trees beautify the premises of the station. But no, the mentality seems to be against trees. In other countries the citizens would be horrified to see such beautiful trees sacrificed. With us instead of planting some more, we kill what we have already planted," the society said.

Alarmed by this barbaric practice not only of gasoline station builders but also by other business establishments, the forestry society took it upon itself to do something about it. Quezon City Mayor Amoranto was contacted and he gave assurance that the trees that give much color and beauty to

the drab roads and highways of the city would henceforth be saved.

As a test case, the mayor picked out the proposed gasoline station site at the Sampaloc-Roces intersection. Last March he ordered the city engineer that any permit should be issued to put up the station shall be on condition that no roadside trees would be cut down.

But despite all this, the trees were cut down. And on a Sunday—when nobody was looking!

The responsibility for this destruction was being passed on to someone in the public highways commission who seems to have the idea that he has jurisdiction over trees of roadsides. Evidently, he has not heard of the law (RA No. 2649) which prohibits such destruction and which gives to the director of parks and wildlife the sole authority to permit cutting down roadside trees and only when "necessary for public safety."

Parks and Wildlife Director Vicente de la Cruz says he was never consulted about the cutting. He would not have allowed it had he been consulted.

(*Manila Times*—Sept. 15, 1963)

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REFORESTATION AGENCY MARKS ITS 3RD YEAR

The Reforestation Administration marks its third anniversary today, Sept. 15.

Administrator Jose Viado said there will be a simple observance in keeping with President Macapagal's appeal to do away with pompous celebrations.

Thanksgiving mass to be officiated by Fr. Vicente San Juan, S.J., will be followed by a convocation on the theme: "Honesty and Morality in the Government Service" at the Visayas ave.

A feature of this year's anniversary is a three-day seminar at the RA research center in Montalban, Rizal. Scheduled from Sept. 16 to 18, the conference aims to acquaint the agency's regional supervisors and foresters-in-charge with the new policies of the government on management, auditing, and budgetary functions.

The Reforestation Administration was created in 1960 as a separate office under the department of agriculture and natural resources.

Forester Viado was appointed administrator with Carlos Cunanan as deputy administrator. Other exe-

cutive line officials are Roman B. Valera, technical services; Cornelio R. Besinga, administrative; Paciano Rimando, reforestation management; Rosario T. Jaramillo, legal staff; Emilio Gaguasi Jr., accounting; Vicente Caguioa, statistics and extension; Eufemio P. Dacanay, executive assistant; Dolores Santillan, budget and fiscal unit; and Pacita Mabalot, management analyst.

(*Sunday Times*—Sept. 15, 1963)

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BERNAL TO FREEZE NEW APPLICATIONS

The bureau of forestry will ban applications for new timber concessions areas until after a complete inventory of commercial forests throughout the country, Director Estanislao R. Bernal announced the other day.

The inventory of forests is being speeded up by the bureau with the assistance of the AID-NEC program. Three American experts on aerial photogrammetry were detailed in the bureau.

Bernal stressed the importance of accurate data on the volume and quality of timber stands in the public forests in the formulation of an effective scientific forest management program.

Bernal also bared that the decentralization of the functions of the bureau would start with the reassignment of regional directors who were grounded for almost two years. In a special order approved by former Secretary Benjamin M. Gozon, Bernal reassigned the following regional directors:

Valeriano Suarez, Region 1, Dagupan City; Pedro B. Cagalawan, Region 2, Tuguegarao, Cagayan; Rufino A. Sabado, Region 3, Manila; Higinio D. Rebosura, Region 4, Naga City; Justino A. Ybañez, Region 5, Iloilo City; Vicente G. Gobuyan, Region 6, Cebu City; Jose R. Claveria, Region 7, Zamboanga City; and Ceferino S. Abella, Region 8, Davao City.

Bernal said the regional directors will hold office in the forest district headquarters and will coordinate and supervise the activities of the personnel within their respective jurisdiction.

Meanwhile, Amador J. Evangelista, forestry information chief, said Bernal had decided to postpone after the election the annual foresters' convention originally set for Oct. 7-12.

(*Sunday Times*—Sept. 15, 1963)

* * *

LONGER LIFE URGED FOR TIMBER LICENSE

Forest conservation cited as problem

Antonio de las Alas, president of the Philippine Lumber Producers Association urged yesterday the grant of longer periods for forest concessions to insure the conservation of forest resources.

In a conference of log and lumber producers and exporters called by Secretary of Commerce and Industry Cornelio Balmaceda, the problem of forest conservation was presented by De las Alas as one of the most pressing problems faced by the industry.

The secretary has been meeting separately with the various business groups in the country to find out how his department could help them in the solution of their problems.

According to De las Alas, the conservation of forests could be effected if only the basic rules of conservation laid down by the bureau of forestry were observed by concessioners and the bureau itself had the men and resources to carry out these rules.

The bureau, he pointed out, was sorely undermanned and lacked the necessary facilities to enforce the elementary rules of conservation.

Private concessioners, he said, could help in the conservation of Philippine forests if more incentives were given to them such as longer periods for concessions.

While most members of the association had concessions of from 10 to 20 years, they were renewed by the bureau of forestry on a yearly basis or at times for periods of two or three years, he added.

Under these conditions the concessioners were likely to take undue advantage of the concession and undertake unlimited cutting of timber, thus resulting in rapid depletion of forest areas, he said.

The loggers and wood processors also asked Secretary Balmaceda to help them get the government to delimit forest areas. The indiscriminate release and opening of known forest areas to agricultural farming, it was emphasized, would seriously affect the timber resources of the country.

With regard to wood processing and the export of finished products rather than logs, the representatives of the industry proposed:

1. Gradual restriction of log exportation, especially to Japan, Taiwan and Korea.

2. Government assistance for wood processors, specially in the acquisitions of machineries.

3. Assistance in financing, specifically for more liberal credit facilities.

While Secretary Balmaceda pledged support and assistance to the log and wood processing industry, he asked the various representatives to exert greater efforts in attaining higher targets in line with the socio-economic goals of the administration.

Among those who attended the conference were Undersecretary of Commerce Medina Lacson de Leon, Aurelio Lagman of the Plywood Manufacturers Association, Jesus Razon of the Central Bank and Edmundo Maningas of the PIA.

(Manila Times—Sept. 2, 1963)

* * *

USE OF TWO WOODS URGED

The use of Philippine mahogany and apitong for paneling and flooring of the Philippine pavilion in the NY World's Fair in 1965 was urged by Antonio de las Alas, president of the Philippine Lumber Producers Association.

He requested Commerce Secretary Cornelio Balmaceda and Domingo Arcega, president of the Chamber of Commerce of the Philippines to use the two types of wood instead of narra.

Alas pointed out that narra is not available in commercial quantity, while Philippine mahogany and apitong represent the species of Philippine woods available sufficiently in commercial quantities, constituting a major export of the Philippines. The two types should be given preferential advertisement in the United States and world markets.

(Sunday Times—Aug. 25, 1963)

* * *

MASS INFORMATION CAMPAIGN LAUNCHED

A massive and coordinated information campaign by all government forestry agencies is a program that should be given priority if we hope to make the people appreciate the importance of forest resources in the national economy, Forestry Director Estanislao R. Bernal said the other day.

According to Bernal, no punitive measures can stop forest destruction unless the people have realized the value of the country's natural wealth in their daily lives. People usually destroy what they do not value, he said. Bernal explained that forest

destruction adversely affects not only this generation but also the future ones. It takes only a few minutes, he said, to destroy what took years to grow.

Bernal said he had directed Segundo P. Fernandez, acting administrative services division, and Amador J. Evangelista, forestry information chief, to spur the information campaign.

Bernal conferred recently with James E. Davis, US visiting professors in the UP College of Forestry, on information problems and techniques.

The American expert acts as adviser to the joint committee on public information and education in forestry which held its meeting last week at the bureau. Prof. Domingo V. Jacalne is the chairman of the committee. The members are Amador J. Evangelista, Teofilo Agtani of Reforestation Administration, Guillermo Valeña of UP College of Forestry, Amando Singson of DANR, Almeida Javier of Parks and Wildlife Office, Felipe B. Chicano Jr. and Antonio Nigos of the forestry bureau, and a representative of the Forest Products Research Institute.

(*Sunday Times*—Aug. 25, 1963)

* * *

VIADO HITS CRITICS FOR REFORESTATION

The Reforestation Administration chief has denied having said that artificial reforestation is cheaper than natural regeneration.

According to Administrator Jose Viado no right-thinking forester will favor artificial reforestation.

The administrator's statement was in reply to some quarters charging the reforestation administration with "deliberately causing intrigues against another office just to win support for its unquenchable clamor for more funds."

"The claim that the Reforestation Administration was resorting to intrigues to get more funds is entirely false and baseless. We have never employed such tactics and we will never do so under any circumstances," the administrator said.

Besides, to allege that the reforestation is causing intrigues against another office to get more funds is to indirectly insult those who authorized a bigger budgetary expenditure for reforestation, he said.

"We got more funds from the new administration because President Macapagal and Congress saw

fit to give us what we urgently need for reforestation," Viado concluded.

(*Sunday Times*—Aug. 25, 1963)

* * *

DANR ADOPTS PILIPINO FOR VARIOUS BUREAUS

Secretary Benjamin M. Gozon of agriculture and natural resources has taken steps to adopt Pilipino as one of the official languages of his department.

He required the training of employes and stenographers in Pilipino with particular reference to writing and answering official correspondence and Pilipino stenography; sign boards identifying bureaus and corporations in Pilipino with English equivalent in parenthesis; and group singing of the Philippine national anthem.

Jesus C. Berte, DANR chief training officer, was assigned to make necessary arrangements for Pilipino correspondence and stenography.

(*Sunday Times*—Aug. 25, 1963)

* * *

ASST. DIRECTOR STRESSES SELECTIVE LOGGING SYSTEM

Assistant forestry director Juan L. Utleg underscored the importance of selective logging practice in the commercial forests of the country.

Dubbed in the Bureau as a "forestry moralist," Utleg said that the mechanics of the so-called "forest management" is the placing of all remaining forests as permanent sources of forest goods and services.

Utleg explained that under the concept of sound forest management, selective logging is the method of cutting matured and over matured trees and leaving enough healthy younger trees for future harvests as well as for the conservation of soil, water and protection of other products of the forests from destruction.

Tree marking is one of the important tools of the system, he said. Foresters mark the trees which the loggers will cut and the trees that are to be left as future stock to be harvested later.

Utleg said that the Bureau sees to it that the method is strictly followed by the loggers. In fact, he went on, Director Bernal ordered supervisors to conduct on-the-spot check of the work being done

in the logging areas. Through residual inventory, the forester can determine whether the logger has cut marked trees that should not be felled or has damaged trees in the course of felling.

Penalty for violations, Utleg said, is payment of a fine four times the regular forest charges for every cubic meter. He said Bernal has warned licenses with suspension or cancellation of the licenses if they commit serious violations of forest laws and regulations.

(*The Manila Chronicle*—July 26, 1963)

* * *

ASIDDAO CITES IMPORTANCE OF MINOR PRODUCTS

Timber is the major product of the forests. But it is not the only economically valuable item in the forests. The so-called minor forest products are actually and potentially marketable and even exportable.

Forestry project coordinator Florencio Asiddao, called by his colleagues as the "dean of foresters in the bureau," said that minor forest products are the raw materials constantly used by the rural people in their household industries.

The Bureau of Forestry, he said, issues licenses for the gathering and collection of minor products in the forest. Among the most sought for minor products are firewood, almaciga, bamboo, rattan, tan bark, nipa, gogo, lumbang, diliman, beeswax charcoal and round table tops.

Almaciga and bamboo are exported. The industries that get most of their materials from the forests are wood carving, basket making, furniture, sawali making and sash factory. Several other minor forest products can be made into marketable and exportable items if only proper incentives are provided.

Asiddao also said that the forest land itself is gainfully used by the people. The most important uses are pasture, fishpond, tree farm, right of way, residence, hotel site and others. He bared that in the report submitted by chief Jorge Miranda of the forest land uses division to Director Bernal there are more than 7,000 permits for special uses covering an area of more than 62,000 hectares.

(*The Manila Chronicle*—July 26, 1963)

* * *

NOTE FORESTRY AGENCIES' ROLE IN DM's 5-YR. PLAN

There are several government forestry agencies that are engaged in the task of protecting, conserving, managing and promoting the productivity of forest resources.

These are the Bureau of Forestry, the Reforestation Administration, the Parks and Wildlife Office, the Forest Products Research Institute and the UP College of Forestry.

The Bureau of Forestry is charged with the protection, conservation and management of the forests. The Reforestation Administration is charged with bringing back forest vegetation on barren areas. The Parks and Wildlife Office sees to it that the game and wildlife and the scenic national parks of the country are preserved for posterity. The Forest Products Research Institute conducts experiments and studies on how to improve quality of timber species and discover other uses of woods. The UP College of Forestry supplies the much needed technical people for these agencies and for the wood-using industries.

Each has a very vital role to play in the success of the President's socio-economic program. The forestry bureau is headed by Director Estanislao R. Bernal. The Reforestation Administration is administered by Jose Viado. Dr. Vicente de la Cruz heads the Parks and Wildlife Office. The Forest Products Research Institute is steered by Manuel Monsalud. Prof. Gregorio Zamuco is the dean of the UP College of Forestry.

(*The Manila Chronicle*—July 26, 1963)

* * *

UN MANAGEMENT EXPERT JOINS FORESTRY BUREAU

Forestry director Estanislao R. Bernal announced recently the arrival of watershed management expert Macid Yasar Gulcur of the UN Expanded Technical Assistance Program who will join the staff of the forestry bureau as adviser on watershed management.

Bernal said Gulcur is an expert on flood control, watershed management, afforestation, range management, forest research and soil conservation.

The UN official, Bernal said, handled various forestry jobs in his home country of Turkey before his assignment in the Philippines. He had been a forest supervisor, forest research station incharge, planning board of forest service chief and incharge

of Turkey's Forest Research Institute in Ankara, Turkey.

A holder of a bachelor's degree in forestry from Istanbul University, Gulcur also studied specialized forestry subjects in the United States and in India.

Gulcur was assistant undersecretary of the ministry of agriculture of Turkey before the FAO nominated him UN watershed management expert for the Philippines.

(The Manila Chronicle—July 26, 1963)

* * *

BERNAL HALTS INTER-BUREAU CONTROVERSIES

Forestry Director Estanislao Bernal called for a halt of inter-bureau controversies on the government's reforestation program.

Bernal stressed that the Bureau will not pick issue with any other government agency as it is devoting its full resources to the attainment of the objectives of forest conservation.

Bernal told the Bureau employes that the "New Era" under President Macapagal is more interested in results. He said the President and Congress saw the urgent need for forest conservation, protection and reforestation in the socio-economic development of the country. The importance of forestry, Bernal pointed out transcends political considerations, personal ambitions and loyalties.

(The Sunday Times—September 8, 1963)

* * *

BERNAL TO STOP GRANT OF MORE TIMBER LANDS

Forestry Director Estanislao Bernal said he would look into the possibilities of stopping the grant of additional forest concession areas to already established timber licenses.

Many timber concessionaires, Bernal said, have been logging large areas of commercial forests. He explained that while he was not for depriving existing concessionaires of big areas of forest because of their contribution to the economy, he wanted to adopt the policy of enabling as many qualified citizens as there are to enjoy the benefits of forest resources.

Bernal, however, stressed that no timber licenses would be issued in areas already deficient of forest resources.

(The Sunday Times—September 1, 1963)

* * *

FOREST SURVEY BY AIR RUSHED

The forest survey of the country with the use of aerial photo which started early last year has been intensified to speed up the collection of basic forest data necessary in the implementation of the sustained yield management program of the bureau of forestry.

Forestry Director Estanislao R. Bernal said the forest survey program is assisted by the NEC-AID. The program is likewise boosted by a three-man team of forestry specialists from the United States who act as advisers to the local inventory group, he said.

In a report to Director Estanislao R. Bernal, Longino N. Espinosa, forestry inventory in-charge, said that the inventory of the forest resources in Mindanao and Basilan are almost completed.

Bernal bared that field sampling operations here already covered regions of Western and Central Mindanao with almost 85 per cent of Eastern Mindanao completed. An estimated total of 9.3 million hectares have already been covered by five survey parties of the bureau. These sampling crews are now in Northern Davao and the southern portion of Agusan and Surigao.

The forestry director said modern techniques have been utilized to accelerate the collection of the needed data. The forest resources inventory survey uses aerial photos flown and processed by the Philippine Air Force under the cooperative arrangement between the DANR and the Department of National Defense, Bernal said.

* * *

BENGUET PINES FOR PLANTING

Full-scale reforestation program stressing Benguet pines for major planting materials has been launched by the reforestation administration.

Administrator Jose Viado said Benguet pines will be used extensively in places where they will thrive. Another significant factor that the administrator will implement in pursuing the planting program is the use of earth-balled seedlings. It has been served that seedlings survive much better than the bareroot plants in the projects, he said.

Director Herbert Hesmer of West Germany's Bonn University had earlier explained that Turkey gets a much higher rate of survival by using earth-balled seedlings in spite of its arid soil and hot climate.

At present the government has more than 98,000 hectares of established forest plantations and is re-

forestry around 35,000 hectares of barren forest lands annually, according to the administrator.

* * *

RP LUMBER EXPORTS INCREASE IN 1963

Philippines increased its lumber exports in September 1963 compared to previous months this year.

Antonio de las Alas, president of the Philippine Lumber Producers' Association, bared that the Philippines exported to 13 countries 184.1 million board feet of logs and lumber or 2.6 million board feet more than the preceding month of 181.4 million.

Exports to Japan slightly increased by 2,721,674 bd. ft., from 141,611,261 bd. ft. in August to 144,332,95 bd. ft. in September.

Exports to US greatly decreased by 3,959,108 bd. ft. from 5,685,622 bd. ft. in August to 1,726,514 bd. ft. in September. Exports to other countries increased by 3,891,590 bd. ft., from 34,175,754

bd. ft. in August to 38,067,144 bd. ft. in September, 1963.

Summary of exports during September, 1963, arranged by countries of destination in the order of volume of shipments to each country.

Countries of Destination	Lumber (Bd. Ft.)	Logs (Bd. Ft.)
Japan		144,332,935
Taiwan		18,954,986
Italy		9,439,472
Korea		8,557,046
United States	1,554,768	149,874
South Africa	389,264	
Guam	267,453	
Okinawa	250,000	
Denmark	159,303	9,984
Australia	34,308	
Canada	21,872	
Hongkong	5,353	
Germany		175
	* * *	

A SENSIBLE DETOUR

Some years ago, a friend of mine retired to the country and bought a few acres of rather unpromising land. When he mentioned to a local merchant that he was tilling the tract, the surprised tradesman exclaimed, "Good gosh, man! How did you ever get rid of all those stumps?" Leaning confidentially across the counter, my friend whispered, "If you'll promise not to tell, I'll let you in on a secret: I plowed around them!"

If you simply cannot uproot an unhappiness, then plow around it. Do not brood upon or build upon your sorrow. We all can and must sublimate certain disappointments.



From the Mail Bag

Letters on the Pioneer Years of Philippine Forestry



PIONEER FORESTRY STUDENTS

1004 N.W. 179th Place
Seattle 33, Washington
October 14, 1963

Mr. Florencio Tamesis
Nasipit Lumber Co., Inc.
205 Juan Luna
Manila

Dear Mr. Tamesis: —

An early American forester to work in the Philippines (1905-1909) was a man named Melvin L. Merritt. He went to the Philippines soon after graduating from college at Ames, Iowa. After leaving the Philippines he transferred to the U.S. Forest Service where he continued until his retirement. He is now dead but in 1955 he prepared for his family a detailed history of his work in the Philip-

ppines. It is in typewritten form with several original photographs.

Through the courtesy of a good forester friend of mine I have been permitted to read and make notes from this paper and find many interesting things about Philippine forests and forestry of that period. You will be interested in the following paragraph which relates to an event at the end of 1908 or early in 1909:

“At Baguio, Curran had assembled about twenty young Filipinos, all under 20 years of age, who wanted to be foresters. They had been carefully selected from the best students the American schools and were a fine, earnest lot. We conducted a field forestry training school for them for about a month, taught them tree identifica-

tion, methods of botanical collection, rough surveying and many other things. No one could have asked for more cooperative students. One of this group of young men, Florencio Tamesis, has since been Chief of the Philippine Bureau of Forestry for many years. Several others are in top Bureau or Industrial positions."

Inclosed is a copy I made of a photograph of the group of young foresters. The names are not given in Mr. Merritt's paper and I would greatly appreciate if you could tell me the names of some of them. I have superimposed a sheet of tracing paper with numbers that fall on each man and have kept an identical copy so if you can give me the names by number I can have them properly identified in my notes. (Please see cut on page 53).

I greatly enjoy hearing from my good friends in the Philippines and it would be a pleasure to hear from you also.

Best personal regards,

Gus N. Arneson

October 16, 1963

Mr. Florencio Tamesis
c/o Philippine Wallboard Corporation
R-311 Maritima Bldg.
119 Dasmariñas, Manila

S i r :

Enclosed are copies of the letter dated September 11, 1963 of Mr. Robert Rosenbluth, Assistant Director, Cook County Department of Public Aid, 318 W. Adams Street, Chicago 6, Illinois, and its enclosures, for your information. As you already know, Mr. Rosenbluth was one of the first American foresters assigned to work in this country.

To use the recollections of Mr. Rosenbluth about his experience during the pioneering days of forestry in the Philippines are very interesting. We believe that you who was then with him feel the same. Your letter dated January 19, 1963 and his letter dated October 19, 1961 to Mr. J. W. Stokes make the recollections more colorful.

Mr. Rosenbluth is asking as to whether we can secure for him transportation for his visit here to deliver lectures. In our reply of September 18, 1963, a copy also enclosed, we mentioned that we will refer this matter to persons or offices which can assist us. In this connection, we believe that you can favor us with your suggestions, taking into account the lack of funds from this Bureau for the purpose.

We will be very grateful for your attention and early reply.

Very truly yours,

J. L. UTLEG
*Acting Assistant Director
of Forestry*

* * *

September 18, 1963

Mr. Robert Rosenbluth
Assistant Director
Cook County Department of Public Aid
318 W. Adams Street, Chicago 6, Illinois

S i r :

We are indeed most grateful to receive your letter of September 11, 1963, together with its enclosures.

During this latter years of forestry in this country, it is of great interest to most of us, specially the young foresters and other employees, to read about your pioneering days on our land. If you do not object, we plan to have your letter (minus the third paragraph regarding fraudulent claim) and inclosure published in the College of Forestry Journal, "Forestry Leaves", and other forestry journals in order that your acquaintances here who have already retired from the public service and are residing in different places could read about you.

There are really big changes which took place in the economic, social, and political life of the Philippines as compared to conditions existing 52 years ago when you were here. Our population alone has increased from 7 million in 1903 to about 30 million today. You will be surprised to see that the wilds you had traversed are maybe the sites of some of the present cities now.

You will be most welcome to give us your interesting lectures, but we are not sure whether we can obtain your transportation. However, we are referring this to the persons or offices which can assist us on this matter. You will be informed of the outcome of whatever arrangements arrived at regarding your transportation.

We are looking forward to the day when you can make your visit here.

Very truly yours,

(Sgd.) ESTANISLAO R. BERNAL
Acting Director of Forestry

* * *

Cook Country Department of
Public Aid
318 W. Adams Street,
Chicago 6, Illinois
Telephone Andover 3-4004
September 11, 1963

Director, Bureau of Forestry
Manila, Philippine Islands

Dear Sir:

I recently heard from Wallace T. Hutchinson, 365 Warwick Avenue, Oakland, California, that he had stopped at Manila and saw some of the forestry men. He, myself and Royal Nash, at 39 Alamo Avenue, Berkeley, California, are the only American old-timers still alive.

I am enclosing some notes in which I refer to my old days in the Philippines, together with a letter from Tamesis who accompanied me throughout. If you have not already done so, I think you ought to secure from all of them, records of their early days in the Bureau. If the enclosed notes are of any interest to you, perhaps you might want to copy them and publish them in the Philippine Journal of Forestry and also leave them in the library of the Forest School, besides your own files.

By a strange co-incidence, a neighbor of mine was considering a forestry deal in the Philippines based on what evidently was a fraudulent claim, filed in one of the small villages in Camarines. I helped to persuade him not to go further, but am wondering whether many such false claims have been filed.

I often wondered whether if the Philippine Bureau of Forestry asked for it, whether transportation, either by sea or air, on a military transport, cannot be provided for me to deliver some lectures on the early days of the Philippine Forestry, and to go over some of the work we did. I had forgotten to mention in "The Many Lives of Robert Rosenbluth," that we also approved thousands of homesteads, which today must be the main support of many good citizens.

In the recollections of my past experiences I greet you, and wish you every success. Please convey my best wishes also to all the many Philippine Foresters that I have known over the years.

With best personal regards, I am.

Sincerely,

(Sgd.) Robert Rosenbluth
Assistant Director

P.S. I could also talk on welfare, delinquency, etc., if transportation were provided.

* * *

Quezon City
Manila, Philippines
January 19, 1963

Dear Mr. Rosenbluth:

Among my Christmas mails came your letter of December 19th written in San Diego and I was certainly very glad to read again a note from an old friend.

I am glad hearing of your visit to Mrs. Fischer. It is indeed a hard blow for her to lose her husband, but of course we people on the downgrade are resigned to accept those as part of our daily existence, and I hope Mrs. Fischer will take the same attitude. One consolation to her, of course, is the fact that her children are grown ups and well off in their professions. I suppose the best thing for her to do now is to be content with her grandchildren, as she has several of them. To this, we old fellows have to amuse ourselves with.

It is indeed 52 years ago since you and I have troded the mountains of Tayabas and Camarines and other far-flung places. One experience which I can never forget, and which I had related to the younger foresters time and again, was the one that happened to me in Tagkawayan, Tayabas when you sent me out to follow Kinatakutan River with the instruction that when that river turns east, I should leave the river and take a straight line bearing and I to meet your party in the valley in the evening. The river never turned east, except in the middle of the day it had a short change of direction. From there on I took the bearing given as per your instructions. Not recording the distance, I overshot the mark and we did not see each other until 3 days after. Two days and four nights without food, travelling most of the time under rain, but luckily I had as a guide a more matured man in the person of the boy we used to call "Brown", a house-boy of a former American Forester, who very coolly guided me in the trip. Every time I had an urge to eat, I took small drink of water in the river. I never remember having been so hungry in my life as when I saw the Aetas (Negritos) when we came from the forest into a "kaingin" early in the morning after the 4th night, eating broiled green bananas. That made me so hungry that in about one-half kilometer hike to the nearest Christian house, I had to stop 4 to 5 times to rest as I could hardly carry my body and "Brown" had to help me crawl, pushing me over the logs in the Kaingin. The hunger was bad enough but the torture due to "alipunga" was terrible. The telling

effect on my feet kept me itchy and in pain several days, after, unable to put on my shoes as it had swollen due to the hard acidic water of the upper Kabibian River.

This little incident had always become my favorite story, recollecting that in the early days we have to trod the dense forests measuring every step from Lucena down to Sorsogon and back again to Lucena on foot, but no complaints, unlike our present-day foresters who can go from one place to another by rail, car, bus, airplane, etc. Those were the hard days, indeed, but we performed our work gladly.

Yes, indeed, it is a long time since then. You said you are now 76. This year I am 75 and also still working for my rice. However, I had the satisfaction that I could look back with pride and honor all those years of hardships and deprivations, the fruits of those hard honest years we were to render for the government are now giving dividends.

I hear that you have grown up children and now famous in their own chosen lines. We too have 8 of them—4 girls and 4 boys who are now all collegians—completing all their university work in different lines. Two boys are Doctors of Medicine—one an Orthopedist and the other one an EENT Specialist.—both high in their own medical field and are international figures in their profession. Of the other two boys, one is a Jesuit priest now in New York taking up his Doctorate degree in Philosophy after having completed his Divinity degree, and other other boy left last week for the Univ. of Texas to take up his Doctorate degree, majoring in Oil Geology. This younger boy is a member of the faculty of the University of the Philippines and is now on an ICA-NEC scholarship grant for his Doctorate degree. The four girls are also all collegians—one is a professor in Music; one is a Pharmacy graduate (but devoting to Girl Scouting); one is a H.E. teacher and the other one is a Doctor of Dental Medicine. You can see that many things could happen within 52 years. Now I am enjoying the privilege of playing with my grandchildren who generally gather in the house on Sunday afternoons, some 15 of them.

In my present work (logging business), after leaving the government some 10 years ago, I find myself very much engrossed in professional work that I wish I have another 20 years more to live to see the realization of what I have planned and instituted in the organization I am now connected with. I am rather fortunate that my people are sympathetic to the cause of forestry conservation and forest products utilization that from our early

humble beginning when I first organized the present company, with mediocre operations, has to this time grown up to one of the largest, if not the largest, integrated lumber industry operator in the Philippines. We also embarked on forest conservation programs along with our lumber exploitation, carrying out reforestation of economic plants to feed our factory. For the present, we are operating a large-scale sawmill, cutting lumber at a minimum of 2 million board ft. per month, supported by 8 batteries of Moore dry kiln which take care of drying all our lumber production. We are just completing this month the installation of a finishing plant to manufacture panel stocks, mouldings and other dimension lumber for our export trade including jointing. Along with this we have our hardboard plant, the only one in the Philippines, where we use our sawmill and logging waste as raw material to full advantage. Because of the acceptance of our product under the trade name "LAWANIT," we are installing the second line which, when completed, will give us at least 180 tons production of hardboard per day. Also along with this operation, we maintain a wood preservation unit where we have creosoting with retort of 6' x 110 long and a Boliden treatment plant for lumber of 6' x 80". We have just brought into the market a parquet flooring made of Philippine hardwood, under the trade name "NASIPIT TILE-WOOD." The machineries were acquired from Germany. Now it is enjoying a valuable goodwill in the market. In this connection, we have just acquired the license and machinery from Germany of another unit, manufacturing hollow flush doors and louvre doors. This we expect to be in operation about the middle of the year.

All told, from our humble beginning when we started in 1946 with a capital of about 1 million, today we now have an asset of over 30 million. You can just imagine the steady growth of this company. We maintain a rather conservative movement, but at the same time turning back whatever profit we realize for the expansion work. This is somewhat little different from the many mushrooming factories in the Philippines engaged in the industrial development plans of the country. We go slow but we feel very sure of our future.

It is unfortunate that I was not able to contact you when I was in Chicago in 1949 and 1956. I was always then travelling under a very tight schedule that I did not have a chance to see you. Moreover, I did not then have your address, but I can assure you that where I have another occasion to go abroad, I will make it a point to see

you. This, I hope, is not too far if the proposed FAO convention in Rome this year, where I had the honor to serving in one of its Working Committees, will materialize. I hope I will see you then to reminisce our good old days. I was twice in the U.S. in 1959 and 1960.

Well it is getting too long now so I must close and with a very sincere love and warm regards to the Rosenbluths from the Tamesis.

Very sincerely,

Florencio Tamesis

Mr. Robert Rosenbluth
2608 Lake View
Chicago, Illinois
U. S. A.

* * *

2608 Lakeview Avenue
Chicago 14, Illinois
October 19, 1961

Mr. J. W. Stokes
2432 Van Buren Avenue
Ogden, Utah

Dear Friend Stokes:

Thank you for your appreciative letter. It is too bad about your sight but you obviously do not let it stop you. As you said, there were others on the Kaibab survey than those I mentioned, but off-hand I do not remember their names. One of the men who had Rocky Mountain fever worse than the others of us, suffered a mental collapse and to the best of my knowledge, never recovered. There were other hardships, but we carried through, and it is a pleasure to hear from you that it was considered a very good job.

There was one other interesting incident on the trip, namely; that on the branch line from Salt Lake City to Marrayville, at the noon stop for dinner, (there were no diners) we had a most wonderful lunch consisting of chicken, beef, other meats, all kinds of vegetables, relishes and several kinds of dessert, coffee and milk, all served by the ladies of the area, and the overall cost was twenty-five cents. People might appreciate the difference from those days to now, more by this than they would appreciate the hardships which were then entailed, as against the comforts now available.

You asked if I know Arthur Fischer, who after my time, was head of the Bureau of Forestry of the Philippines; I do know him, and he is now living in San Diego and I generally do see him, although this last trip, he was not well. (now dead 1963)

How I went to the Philippines needs to be told—After graduation from the YALE Forestry School in 1907, as a result of a civil service examination, I was appointed a Forestry Assistant in the United States Forestry Service. To my disgust, I was stationed in Washington with the assignment to organize a Forest Products and Wood Utilization Division and stayed in Washington one summer. My ideal, for which I had made many sacrifices, was to be in the woods, so to escape the assignment, when a private letter was circulated asking for volunteers to join Curran to explore the Philippine Forests in the interior. I immediately signed up. Curran's reputation as a "slave driver" was such that when one was assigned to him, the usual customs was to write two letters, one asking for a transfer, and another of resignation. I was the only volunteer.

However, I was in the Philippines (1907-1910) before Arthur Fischer's time and as you asked, was there during the days when Ahern was chief, but not bodily present much of the time. He left for vacation on the boat which brought me to Manila. Actually, he would not allow foresters to explore the interior because it was too dangerous on account of wild tribes, etc. The Spaniards during their long regime had never explored the interior, and actually, little was known of the interior of most tropical forests in the Far East. Hugh Curran was a man of tremendous vigor and sound thinking, and he reasoned that if you had a hot climate, abundant rain-fall and good soil drainage, such as you would find on the mountain slopes of the interior, you would get a relatively homogeneous, dense stand of big trees, and of relatively few species—a completely revolutionary idea of tropical forests.

Everett was acting chief of the Bureau of Forests and had arranged, in Ahern's absence, to divide the entire Philippines into four areas for exploration of the interior. Everett took one, Curran took one, another forester, Merritt took one, and I had the fourth, including two of the wildest islands in the Philippines. We started out together in the Bataan Peninsula so that we would use the same terms and learn to identify the trees in a common language. We also encountered the wild men who dwelled in the interior hills.

The Bataan Peninsula during World War II, became famous because McArthur ordered the American troops to retreat there, where, had he learned what we knew years before, there was no way for subsistence and they would have to surrender because of starvation.

Everett was killed by wild people on his exploration, and I was nearly killed in exactly the same way in the interior of another island, Mindoro. As we proceeded, we knew we were being followed by the wild natives because of their signals, but we never saw them until suddenly we were surrounded by about twenty very excited wild men—dwarf Negritos—who in this instance had their poisoned arrows drawn taut and aimed at us. My one companion on the whole trip and I knew a very few primitive words, but mostly by signs. I gathered that we must get out of there, so we backed slowly, smiling and gesturing all the time, until finally, when we had backed enough, the natives no longer had their poisoned arrows pointed at us.

I then stopped and cooked the rice we were carrying and also opened one of the three cans of food which was all we carried for very special occasions. While eating, I discovered the natives were quite interested in the empty can, and I figured out they could see their image on the can, so I traded the empty can for poisoned arrows.

This exploration, when for months I had no contact, with any civilized person, involved much hardship, mostly because of natural phenomena, such as typhoons, jungles, etc., but also tropical diseases, starvation, etc., I was reduced from my normal weight of 165 pounds to 95 pounds.

In the first year of my exploration, not counting any work in areas-previously mapped, I had 3,000 miles of trail mapping notes, and because of forest classification, studies etc., the work fully confirmed Curran's theory, and he correlated and developed exploration results, to the great advantage of knowledge and industry. Curran's was a truly great idea!

My only constant companion for two years, Florencio Tamesis, was at that time an untrained Filipino, who went on to become in later years, the Director of the Philippine Bureau of Forestry, and today, he is very rich lumberman in the Philippines.

At the end of my Philippine days, I made a trip to the interior of China to discover their potential markets and resources and, actually, awakened the Chinese regime to the need of forestry, and was offered the job to create a forest service there. Instead, I returned to the States.

If I were going to make the story more complete, I would have to go back some years at least to 1903, or even before that. Whether it was Teddy Roosevelt or Gifford Pinchot, or others who had first inspired me, I do not exactly remember. I was

firmly determined on a forestry career early in life, despite an entirely different youthful environment, activities and associations.

Suffice it to say, that before I left high school I was assured the possibility of a successful career. My mother was a doctor, and many doctors were family friends. My father was superintendent of a large and fine hospital, which was part of a group of several institutions. Our family quarters were in a home for the aged, and I often said that I was the only person known who entered a home for the aged at the age of 8 and left at the age of 16.

It might be interesting as a basis of comparison to the rest of my life to know that during that period, besides the fine quarters and a family servant, we had the best food prepared in a central kitchen, which had a meat chef, a pastry chef, a soup and vegetables chef and other help, so that our meals were always the best.

In those days, even though I was only 16 when I left, I already had worked in all parts of the hospital and this knowledge and skill was most useful in later life. (Today, in a hospital, this would be impossible.) I might add that I had a fine liberal arts education in what is universally considered to be one of the finest schools in the country, (Central High School in Philadelphia) which I entered when I was 11. Although I lost one year, because of prolonged sickness, I graduated at 16 and was always the youngest in my classes.

During those years I was an excellent tennis player and an outstanding violinist for a youngster, as evidenced by the fact that the famous violinist, Kneisel, took me as one of his very few pupils. All of this is background for the strange determination I had to go into forestry and leave "civilization" behind. Also, a prominent banker, an old bachelor, who owned a National Bank, wanted to train me to be his successor, with the hint that I might be his heir. I worked one summer in his bank. To induce me to stay, he even offered to lend me the money to buy a thousand shares of United States Steel, at the very bargain price of \$7 in 1903, which would be worth a million dollars. But I would have none of these and went instead to Penn State in agriculture, which in those days had only 40 students. The agricultural college was in an old barn so rickety it had to be bolstered up with wooden props.

After one year there I went to the Pennsylvania Forestry Academy at Mount Alto in 1904. This was the prototype of the Civilian Conservation Corps of the 1930's. This Forestry Academy was the

dream of Dr. J. T. Rothrock a very famous surgeon and one of the greatest and first American Conservationists (also a friend of Pinchot and both Roosevelts). Rothrock's dream was to bring all kinds of youths to live together and work at forestry and conservation. You can well believe, that among thirty students, there were no two alike, and at the beginning there were no set patterns of education, or of "educators." We did have to have our own horses which we used mostly as rangers and to get to forest fires, but we also had cavalry drill. A year or two ago, I revisited the head of the academy and at that time he said what he remembered most about me was the number of times I fell off my horse, who bolted for home from the trail, but would come walking in some hours later. We broke stones for roads, as well as laid them out; we cut logs; we grew and planted trees; we fought forest fires and built fire lanes—all real work with school fitted in on rainy days, etc.

I will only mention three of the schoolmates; Bill Kraft, whose mother was a chorus girl and whose father was a jockey, but whom he never knew. He had a case of arrested tuberculosis and with his sunken cheeks he could blow air into the hollows and completely change his appearance while you were looking at him. He also could tell stories, mostly dirty ones, without interruption and without end—I never heard him repeat the same story twice—so that even to this day, after a lapse of early sixty years, I have never heard a dirty story which I had not heard as a youth.

The second person was my roommate, George Phillip Bard, who knew the Bible so well that one could mention any word, and would go on with the quotation and tell the chapter and verse and where it came from. This was the result of the very strict upbringing in the Lutheran League—so strict that he decided to turn Buddhist, and he would use his knowledge of the Bible to quote and prove that Buddhism was the only true religion, this guaranteeing to make enemies of every one in the "Bible Belt."

The third class mate was Ben Branklin Heintzman who followed to the Yale Forestry School and later became Forester and then Governor of Alaska and is a leading developer of its resources. The point is that this Mount Alto training, was good and constructive and was followed on a "grand scale" in the CCC.

Subsequently, we got a Yale Forestry School graduate, J. Fred Baker, as a teacher at Mount Alto and he induced me to go there to study. The question of my age did not come up until a considerable time after I entered the school in mid-

year and thus I was able to graduate at twenty in 1907, several years younger than any other graduates of the school.

So much—together with my last letter—for my entire career in forestry. There is one other incident that grew out of my work in prisons with forestry camps, which might be interesting. To escape service at the Port of New York during World War I, (for which I was requested for appointment as a Major) and to serve on the front in France (which was my desire) only by devious ways was I added to a list of lieutenants to go to France and left on 12 hours notice. Shortly after arrival in France, I was detailed to a Corps School of field officers, although I was a Lieutenant then. When the Germans broke the allied line so completely (in the spring of 1918) that they could have gone through had they pursued vigorously, a call was sent out for every available American. I was given a company of Americans who were in military prison for various offenses, and we were sent up twenty miles beyond the last retreating Englishmen, to establish a new front line. I never saw men perform more faithfully and bravely than these men did under the most terrifying bombardment—the worse in World War I. I doubt whether I was given them because of my experience in handling prisoners, but this experience, with my previous and subsequent experiences with prisoners, convinces me completely that too many men have to endure strict prison routines where they otherwise could be performing good and valuable service.

Sincerely,

Robert Rosenbluth

LIFE IN THE PHILIPPINES

Two recent events, (November, 1961) stir up other "recollections"—I refer to the loss of Governor Nelson Rockefeller's son off the coast of an East Indian Island, and to an item in the New York Times about "A man eats 52 bananas." I personally was "lost at sea" several times and always marvel at the fact that I did not drown.

The first time was when I started my explorations in the Philippines. I had gone about eight days down the coast with side trips to the interior. Not keeping up with my schedule, about noon of the ninth day, I instructed my assistant to go ahead with the baggage and carriers about 10 miles further and pitch camp, while I made a side trip alone to a mountain top, which I estimated to be two miles in the interior.

This trip took longer than I thought and when I returned to the coast, I came to a river which seemed too deep to cross. In my ignorance, I final-

ly decided, "if others can cross it, it must be fordable," and I ventured forward. Actually, the river in low tide was no obstacle, but when I got there, the high tide was just beginning to run out as it did with great force, and swept me out to sea. I struggled and swam until I finally decided it was useless, and turned over on my back to float. I can remember saying to myself, "this is a hell-of-a-way to die", and just then I tried again and my toes touched bottom. With a sigh of relief, I made it to shore and shortly afterwards met those from my party who were coming back to look for me. It was over ten months later that I again got back to "civilization." So there is always a chance that young Rockefeller will still turn up.

The small native boats called "Paraos" were dug out of single logs from big trees. Generally, they had "out-riggers" which consisted of two long bamboo poles parallel to the boat on both sides—this acted to steady the boat. Generally, a sail was hoisted from the center mast. At best, they were unstable and at worst, were frequently overturned.

In one period of about, a month during the typhoon season, when we were going along the coast, after completing an interior exploration and moving to another location, on at least a half dozen times, our boats would overturn and dump us in the water. Fortunately, the typhoon season ended, and this overcame an ever-rising and real fear of the sea.

Some months later, at a little settlement several hundred miles further away, I came to a beach at the Northwest corner of the Island, and wanting to explore another island about five miles offshore, after difficulty dealing with the natives, I hired a small boat with four men to take me. They were reluctant to go, even though I had offered a high price. When we got to the small island, I told them to wait while I went in the interior, and then to take me back after I returned.

When I got back, there was no boat and later I discovered why they were so hesitant to take me and they deserted me. A noise attracted my attention and I discovered a lone inhabitant on this island, which gave rise to the legend that it was "haunted." That lone inhabitant I discovered was a leper, and I had my choice of persuading him to take me to the main island—at a high price in rice and other commodities to be delivered to him—or stay indefinitely.

When we got to sea in a very small boat with its out-riggers and sail, a violent storm blew up, so most of the time we were in the air between wave-crests, but nevertheless, we did make our landing.

Later I discovered, by comparing dates, big vessels had run to port, so violent was the storm.

I set out again, from the isolated settlement on the main island, and this time it took another three months—ten months in all—from the time I started to explore, until I once more came out of the wilderness. This was the most difficult part of the trip, and for the last three days, we had nothing at all, before again coming to the coast on the west side of Mindoro.

This was on Christmas morning, and we were both very disconsolate. We started a fire and dug for roots and searched for fruits. The fire fortunately attracted a small boat which came to shore to see who could be there in that un-inhabited place. They took us aboard and we learned they were going to a small island about thirty miles away, bringing bananas and other supplies to a station which the transpacific cable maintained as a relay station,

When we started out we had a wonderful wind at our back and made 25 miles in about two hours. In that time, my assistant and myself, who had been so starved, paid for and ate 75 bananas—between us—not equal to the New York Times report of the man who ate 52, but nevertheless, a goodly amount.

When we got to the island holding the cable station, we found that it was manned by four Englishmen who in traditional full-dress were sitting down to a full Christmas dinner. Starved and in rage though I was, they insisted that I sit with them, and I did full justice to a hearty meal, despite the 75 bananas we two had eaten, and despite starvation. (Even after this dinner, my loss from starvation and illness was so great that I weighed only 95 pounds, as against a "normal" of 150 pounds.

THAT WAS TRULY "A MERRY CHRISTMAS"!

* * *

FURTHER RECOLLECTIONS OF THE PHILIPPINES

Other incidents in my Philippine experience come to my mind—these included climbing two active volcanoes, and descending into the crater floors. One of them was almost quiet, but the other was boiling actively and hurling stones several hundred feet into the air which was very sulphuric. This one actively erupted some years later.

The active one was Mount Mayon which rose from the sea in a perfect cone about nine thousand feet high. The top 1500 feet consisted of some rock projections, but mostly of very loose volcanic

ashes, making it a formidable obstacle, not only on the way up, but more dangerous on the way down.

The descent inside the volcano to the crater floor was quite hazardous. On the way back, one of the natives who accompanied us became careless and started an avalanche down which he was carried almost a thousand feet. He was miraculously stopped only by clutching on to one of the rock promontories from which we rescued him but after very hazardous and exciting difficulties.

Crossing the Pacific in 1907 took 30 days each way. This afforded time for several unusual experiences. I left from San Francisco in the late fall of 1907 on the largest trans-Pacific boat at that time, (about 30 thousand tons).

A pattern of life quickly developed. I would start walking around the deck about 5:00 a.m. and found a companion in a raw-boned Kansan who had never been away from home before, and who belonged to a deeply religious sect where smoking, drinking and other pleasures were completely prohibited—everything on the ship seemed to shock him. He had taught in a country school house in a sparsely settled Kansas area, and he was going to teach in the Philippines. His transformation there was complete and he went completely to pieces and on one of my rare visits to Manila I was told about his downfall. I set out to find him, which I did in a house of prostitution, where he was dead drunk. I "rescued" him and sobered him up in my own room and had doctors treat him, giving him sedatives for a few days. I thought he had recovered enough to take him with me on a beautiful Sunday afternoon to a ball game.

I thought he was merely interested in the exciting game, because he was leaning forward and muttering to himself. Instead, when the catcher went to the pitcher for a conference on the mound he suddenly leaped from his seat and ran out on the field yelling, "you s.o.b's, you can't talk that way about me!" I went running behind him to grab him, but it was too late. He was taken by the police and eventually went home. It was too late for me also, because people identified me with the incident.

On the outward journey from San Francisco, I also attended the daily afternoon prayer meetings, which were held by the large number of missionaries who were going to various stations in the Far East. I learned much, particularly from the medical and teaching missionaries, whom I found to know more about the countries and the people they were going to, than any other foreigners who generally refused to "mix with the natives."

In contrast to the other missionaries, a very young missionary was going out for the first time, but she was a very zealous religious missionary and she tried desperately to convert me. At that time I was reading Haecker's "Riddle of the Universe," which was wonderful when it was scientific, but very emotional and unfactual when it came to an attack on what the author called the "Christian Myth." This young missionary girl came up to me one day just as I was reading that part and insisted again that I be converted. I gave her Haecckel's book, and she read just one paragraph and literally threw the book in my face. I never was bothered with her again.

I also observed ship gamblers at work, and also with a very lovely young Japanese woman companion, won the masquerade party. When the ship stopped at Honolulu, which then was the most completely unspoiled beautiful spot in the world, I had a great thrill. When the ship stopped in Japan, I climbed Mount Fujiyama.

On the crossing of the Pacific, we ran into a terrific typhoon which delayed the 30 thousand ton ship for a two-day period, and it was a most exciting experience. Visits and stops were made at Shanghai and Hongkong before we got to Manila. I had a very unusual experience at all these places, but it would require too much space to detail them.

On the return trip I also had most unusual experiences. I had just come from a trip in the interior of China, venturing into areas in South China almost unknown to the Chinese and to the outside world until the Burma Road "of World War II fame." When crossing from Hongkong to Manila on a small cattle boat, we ran into a terrific typhoon, which made even the captain of the boat sea-sick.

When we landed at Manila, I immediately dictated a report on my Chinese trip, and when I completed it, I asked about the boat home and was told that a boat had left that afternoon for the United States and that there would be no other for a month. I got permission to go out with the pilot boat, a small boat to take the pilot off the ship at the Corregidor entrance to Manila Bay. When the pilot boat reached the transpacific liner, I had to go up a ladder, down which the pilot had come. When I shakily mounted the ladder and got on deck, suddenly a huge hunk of a man in a broad Irish brogue almost knocked me to the deck and said, "I am looking for a man who can pen the most pungent letter that ever man penned—and you are the man." I admitted the indictment, and that I was ready to serve, so I was allowed to get up.

When I reported to the purser of the boat and asked for a state room he said, "they are all filled up—except one bunk, and that is with the drunk who met you up on the deck." I said, "that is alright with me," not knowing what I was in for.

It seems that this man was a relative of one of the early great Irish patriots, (I think Parnell). He was a very well educated man; and after the "hangings for the wearing of the green," my roommate was shipped to Australia to sober up and to start a new life. After years there, he had become involved in something which he thought would make him rich, but his partners double-crossed him and started him on a prolonged period of drunkenness. They also paid the stewards on the ship to keep him drunk. (This I found out later). When I entered the cabin, my roommate was declaiming at great length in an almost continuous stream of classic orations, and I was much amused. However, there was a sudden change and again he smashed me to the floor and started screaming, "Pray lad! pray for the souls of both of us! See the Virgin Mary over in that corner! and see the devil himself over there! Pray! Pray!" he screamed, "Pray to the Virgin Mary! and you had better make it efficacious, or it will be the end of both of us." I prayed, and it must have been efficacious, for he fell asleep and I was safe.

As soon as I could escape, I got to the Captain of the ship who was himself a good Irishman, and knew of the fame of my room-mate—or rather of his relatives. We watched over him for several days and thought he was on the road to recovery, when one of the stewards who had been bribed, gave him a bottle of whiskey. That started the whole cycle of delirium tremens over again, and while the offending steward was put in the ship's "Brig", my roommate was taken out and put under medical care—leaving me in sole possession of the cabin.

By that time, I had enough unusual incidents for this Pacific crossing.

* * *

Republic of the Philippines
Department of Agriculture and Natural Resources
BUREAU OF FORESTRY
Office of the District Forester
City of Iloilo

Z-Forestry Educational Campaign
(1963 Arbor Week Celebration)

October 1, 1963

Director of Forestry
Manila

Sir:

In connection with the 1963 Arbor Week, I have the honor to submit hereunder the report on activities and accomplishments by this Office on the affair:

1. The affair was undertaken thru the IDAN-REA with the cooperation of other government agencies as well as private and semi-government entities, like the PACD, PNRC, Girl and Boy Scouts, private schools and colleges, etc.

2. Before the Arbor Week, separate conferences were held among (a) forestry personnel of this forest district with myself as the presiding officer, and (b) chiefs of local offices of the DANR and the PACD, with myself also as presiding officer and IDANREA Chairman. Decided in these conferences was that, in view of the absence of specific instructions from that Office, a program similar to that of the previous fiscal year shall be adopted with minor modifications, giving the district forester blanket authority to frame the program. Six streamers, 3' x 4', with appropriate slogans were hung at the back of RP vehicles before and during the celebration, materials being donated only by the local forestry personnel and forest users. The affair was plugged everyday over local radio stations at least a week before the affair.

When the desired parties were duly contacted, like radio stations, schools, speakers, etc., to take part in the radio program, a 7-day program of activities was drawn or mimeographed and same were distributed to the participants and the public. Please refer to enclosure, marked "A".

3. As per enclosure "A", chiefs and/or assistant chiefs of provincial and regional offices under the DANR and PACD gave 5-10 minute talks during the "OWA MANGUNGUMA" or "OWA, the FARMER" hour at the DYRI between 5-6 AM every day. The speakers were myself, Mr. Ben Gregorius of the PACD, Mr. Silvestre Sabio of the BAE, Forester Rafael Navallasca of the RA, Dr. Tomas Forteza of the BAI, Mr. Pascual Matulac of the BS and Mr. Jose Panique of the DANR Statistics Division.

4. The IDANREA sponsored 30-minute radio programs at the DYOO on July 21 (Sunday) and July 27 (Saturday) at 5-5:30 PM, per enclosures "B" and "C".

5. Mountain tree planting in the bare public forest at Mt. Minayakiya, Dingle, 47 Kms. from Iloilo City was undertaken on July 21th. by representatives of local offices under the DANR,

PACD, PNRC, Girl Scouts, public and private schools, etc., under the guidance of Forester Navallasca and myself. The Reforestation Administration furnished the planting materials which were available at the time of planting in the mountains. Photos marked "I", "II", "III" and "IV" are enclosed for information. After the tree planting in Mt. Minayakiya, the group proceeded for lunch at the Bo. Agtatakay Elem. School, Dingle, thence had a brief literary-musical program, followed by a tree planting activity at the school campus. Chiefs of offices and heads of the group in attendance gave brief talks in connection with the occasion, with myself as the toastmaster. Photo marked "V" herewith enclosed shows 2 lady teachers of Bo. Agtatakay Elem. School the affair are myself; Asst. Dist. Forester Juan giving a duet.

6. Forest officers who delivered talks during S. Ballesteros, Forest Station Helano J. Cuadra, Forest Guards Teodorico Galeno, Benjamin Magbanua, Jesus Escoliada, Ernesto Lasola and Felix Camiña. Please refer to enclosure marked "D". Forest Guard Jose Transporto assisted me in the preparation of the radio program and contacting the radio participants and speakers. Forest Guard Juan S. Catolico assisted in taking pictures during the Arbor Week.

Tree planting was also undertaken in the school campus of Bo. Jaguimitan Bo. School, Passi on July 25th. with Asst. District Forester Ballesteros, and Forest Guards Teodorico Galeno and Benjamin Magbanua leading the group, composed of teachers, school children and barrio folks, as per enclosed photos marked "VI", "VII" and "VIII". Not less than 3,000 tree seedlings of molave, teak, narra, banaba, etc. were distributed to the rural folks from the cooperative forest tree nurseries in Bo. Jaquimitan and Bo. San Antonio, municipalities of Passi and San Enrique, respectively.

7. Distribution of seedlings (ornamental and shade tree):

This office secured from the local forest nurseries of the Reforestation Administration 1,810 seedlings of Narra, Mt. Agoho and Beach Agoho, Molave, Palosanto, Teak, Fire Tree, Mahogany, etc. and distributed them to schools, boy and girl scouts, municipal officials, private persons, etc. From our cooperative forest nurseries which were established through the efforts of protection forest guards Galeno, Magbanua and Parian at barrio schools, at least 3,500 tree seedlings were likewise distributed to rural folks by the head teachers of schools where these tree nurseries were maintained.

The local office of the Reforestation Administration has distributed not less than 1,000 seedlings of assorted species to various individuals and groups.

8. REMARKS AND RECOMMENDATIONS:

1. It is a pride to report that the local chiefs of offices under the DANR, PACD, Girl and Boy Scouts, etc. have been very cooperative in any way to make the affair a success.

2. Posters, printed materials, etc. were badly wanted for distribution and/or display during the occasion. This office received only one (1) poster from the Central Office.

3. For a more effective celebration of Arbor Week, a yearly allotment of at least ₱50 should be granted this district for purchase of supplies, like paints, cloth, etc. for streamers and posters, etc.

Very truly yours,

FERNANDO ATMOSFERA
District Forester

encls.:

Copy for:

Editor, Forestry Leaves, College, Laguna
IDANREA File



OUR IDEAS AFFECT US

The ideas to which we give our love have a greater creative effect upon us than we realize. If, for example, we love goodness and usefulness, then goodness and usefulness will be demonstrated by us and their rewards will come to us.—THOMAS DREIER

Sunshine Corner

NEXT LESSON . . . PARKING

Tim: "How long did it take your wife to learn to drive?"

Tom: "It'll be ten years in March."

PAY THE BILL TOO, DOC

Patient: "Well, doctor, how am I?"

Doctor: "You're in good condition except for your legs swollen, but that doesn't disturb me."

Patient: "Well, Doc, if your legs were swollen it wouldn't disturb me either."

JUST INHALE SLIGHTLY

The young man's girl had just said "yes," and as he walked into the jewelry store, he was the happiest man in the world. A kindly clerk showed him a tray full of engagement rings, and he picked one up and asked the price.

"That one," said the jeweler gently, "is \$500."

The young man hastily replaced it and then whistled. He pointed to another ring.

"That, sir," said the jeweler still more gently, "is two whistles!"

PERFECT RETIREMENT

First man (to second who has been sitting on the porch all day): "What do you do for a living?"

Second man: "I'm a go-getter. My wife works—all I do is go get her."

SATURDAY NIGHT INDEMNITY

A local insurance agent likes to tell about the time he signed the man on the dotted line.

"Now that amounts to a premium of \$6.90 a month on a straight life. That's what you wanted, wasn't it?" he asked.

"Well," came the wistful reply, "Could I fool around a little on Saturday nights?"

HOUSE TRAINED

Sam: "Did you marry that girl, or do you still wash your own laundry and do your own cooking?"

Dan: "Yes."

Sam: "Yes, what?"

Dan: "I married the girl and I still wash my own laundry and do my own cooking!"

TORNADO OR TYPHOON!

A young woman telephoned the weather bureau. "I am going to be married tomorrow," she burred happily, "and then we're going up to the mountains for our honeymoon. Can you please tell me what is going to happen there during the weekend?"

REPORT NOT AN APPEAL

The pastor of an impoverished rural parish wrote often to his bishop for aid until the bishop demanded an end to such appeals. For a time there was no correspondence, and then one day the bishop received a letter saying, "This is a report, not an appeal. I have no pants."

MISTAKEN IDENTIFY

A monsignor had a string of letters after his name, LL. B., B. A., indicating his degrees as Bachelor of Laws and Bachelor of Arts. On one occasion while wearing his robes, which look somewhat like a bishops he was asked what the letters signified. His reply: "LL. B. — looks like bishop; B. A. — but ain't."

IT'S AN ILL WIND . . .

A new waitress in a Washington restaurant couldn't understand a customer's order because his voice was so hoarse. "I said," croaked the customer with some effort, "that I have laryngitis. Maybe some hot soup will help me." The girl got the message and brought the soup. But, since she was new and a bit excited, her hand was unsteady and she spilled the soup into the customer's lap.

When the waitress got back to the kitchen after apologizing, she heaved a deep sigh of relief. "Well anyhow," she mused, "he sure got his voice back fast."

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FORESTRY LEAVES

*Organ of the Student Body and Alumni of the College of Forestry, U.P.
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Cornstalk and Apple Crates

Each year that Arbor Week is celebrated, the trees get so overwhelming lip service that, perhaps, somehow overshadows the fact that we are depleting our forests "faster than any other country in the world". But the praises on tree and the exhortations on conservation are hardly a shot in the arm of our ailing forest posture. Even men directly engaged in million-peso work of replenishing our tree supply admit that they cannot cope with the task of reforesting areas fast being depleted.

The sad fact remains that unless all forest technologists, wood scientists and industrialists wholeheartedly work hand in hand, in an honest-to-goodness attitude, towards conservation, our trees are bound to extinction.

The rapidly growing demand for wood by the bustling population will in due time be hopelessly unanswered. Meanwhile, other branches of our science that serve the hope of finding a fair substitute for wood as a construction material have not come out with anything of the sort. Whither is our forest resource going? Countries that have clearly foreseen how rare and valuable trees of the world will be a score of decades hence are niggardly and wise in the disposition of their forests. They import as many logs as they can while keeping their forests intact and reserved for the future age when wood shall most likely be as precious as foodstuff.

The unparalleled rate we are cutting down our trees lead us to a definite future: wood building material so scarce in this country that we have to import even at prohibitive price from nations that have so prudently saved their trees. But they cannot supply our wood needs forever. Their own ever-multiplying populations will need the wood themselves. When our forests get exhausted and no neighbor is willing to sell us anymore wood, it will not be long before future house builders will be using stalks of corn as rafters and junked apple boxes as walling.

O. A. G.

The Forest Researcher is Paramount

By virtue of Republic Act 3523, passed during the Fifth Congress, the 4,000-hectare Makiling National Park becomes the State University's solely-owned research and experimental forest. More than anyone else concerned, the College of Forestry officials are happy because their long frozen full-scale development plan for the entire Mt. Makiling can now be started. As conceived by our planners it will be made into a model forest wherein modern management, silvicultural, and engineering practices are applied. Eventually, it will be a show-window of advanced technological trends and the hub of studies and researches in Philippine forestry science which the different forest entities, the sawmillers and concessionaires, and the general public can avail themselves of.

But we cannot stay so contented with this initial, though vital, success; then just leap toward experimentations, by-passing some basic consideration which are often "accidentally" taken for granted. For we believe that before any such development can briskly stride forth, attention should be focussed on the men who'll do the major jobs—on the technical staff or forest researchers—without whom no plan can be successfully executed. It is but in fairness to them that they should, for instance, be given adequate clerical assistance, transportation privileges, and encouragement in the form of security thru reasonably adequate remuneration. It is indeed disheartening to observe that while the forest researcher immerses himself in experimentations, he is continually distracted by having to type his findings, or, by having to go thru so much fuss in getting a vehicle for his trips up the reserve, or, by having to attend to family problems that basically arise from inadequate pay. These things may seem minor but they greatly hamper the efficiency of the researcher.

In effect, the faculty-researcher performs a two-fold function: one, is to continually search for knowledge in the realm of science, and the other, is to impart what he has found to his students. Both jobs are taxing, and more demanding than most other jobs. They require high intellect, perseverance and physical stamina before remarkable accomplishments are made. The intellect and the high technical competence, of the College's faculty-researcher are beyond doubt. But the enduring interest and energy are stuff that, like gasoline to an engine, must be constantly replenished in the person to keep him working. And the only way to do this is to give him the needed and adequate help. Once this immediate task is achieved, only then we can say that the foundation of all our researches is firmly set; that the College is heading in the right direction in its program of expansive scientific activities. For, by then, there will be no thought that a study has to be neglected or abandoned because the researcher has to attend to family financial problem (of which he would have been relieved if his salary had been sufficient). Nor will there be any vacillation and discouragement if he is given full assistance in the minor tasks akin to his studies. There will only be zest and sincerity in prying deep into the vast unknown field of forestry science, and in imparting any new knowledge gained to the students and to the world.

The Truly Great Are Humble

BY FRED DODGE

Conceit is God's gift to little men.—BRUCE BARTON

A SMALL town politician was appointed to a minor job in Washington. His head became much larger than his job.

Then he returned to his home state for a political rally. In a crowded room he rudely jostled a local citizen who expressed his annoyance. The appointee drew himself up haughtily and demanded:

“Do you know who I am? I am the Senator’s appointee in Washington!”

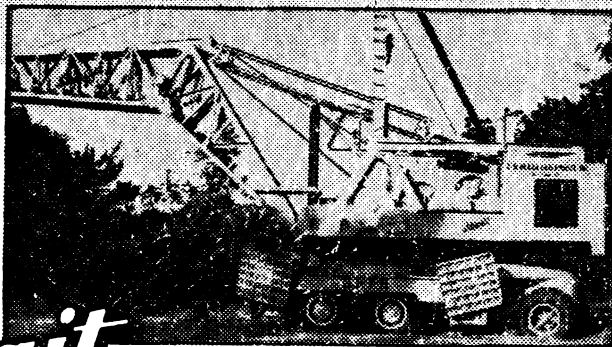
The local citizen looked at him for a moment and replied:

“That fact is, perhaps, an apology. Most certainly is a complete explanation.”

Rudeness is a badge of conceit. When we encounter rudeness, the feeling of self-importance always shows through.

And when we are rude, a moment of self-examination will show us that we have been feeling our own importance.

Truly great people are humble people. And a humble person is never rude. “Conceit is God’s gift to little men” and rudeness is conceit’s advertisement.



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