

Tropical Landscape Architecture

By P. J. WESTER, Horticulturist

The tropics more than any other part of the world is the paradise of the naturalist and plant lover. Nowhere else do we see such exuberant growth and such lavishness of foliage and flowers except in the conservatories in the temperate zone, and there the marvelous effects attained under good management are created by the aid of Flora's tropical children transported from their far-away native homes. Some traveler

and naturalist has remarked upon the poverty of floral displays in the tropics in contrast to the wealth of flowers that adorn the meadows of England. If he referred to the herbaceous flora of the two zones, the temperate and the torrid, we may concede the truth of this statement. However, this is a one-sided comparison. The flora in its entirety should be considered;

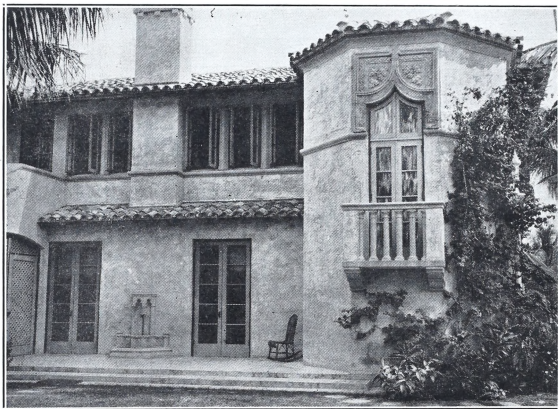
and who will then deny the blue ribbon to the tropics? Where in the temperate zone does one see such magnificent floral displays as a group of flamboyants, *Coboldea*, Banalia, the Barbados "flower fence," the clove-tree? Many of the water lilies are of tropical origin, including the most famous of all, the *Victoria regia*. A field— or shall we say a lake— of water-hyacinths in bloom is not likely to be soon forgotten; what temperate aquatic can compete with the royal lotus? And again, are not the tropics the home of the most gorgeous of those blue-bloods of the vegetable kingdom, the cattleya, the heliconia, the dendrobium, the vanda, the platanopsis? As if she were not satisfied with having scattered with the utmost lavishness brilliant flowers in the tropics over the two kingdoms of the earth—land and sea—nature has further endowed the leaves of many of her children among the cryptogams with iridescent colors, not to speak of the opulent wealth of color in some of the herbaceous shrubs, such as the codiaeums, certain pandanus and the heliconias. Lofty palms, unsurpassed in stateliness, the willow bamboo, and the majestic forest trees, to the shrubs and herbaceae, with an opulence of foliage to satisfy the most exacting, and to the humble ferns yet unsurpassed in grace and loveliness—not to forget the tree ferns, many of which are the *ne plus ultra* of all that is at once stately and graceful, nor the innumerable climbers that are perpetual sources of delight to the plant lover because of their habit, flowers and foliage—there are a few of nature's prodigalities in the tropics.

With all this vegetative wealth at home, in usually rich soil, with abundant rainfall and ample natural heat, what remains is merely the tasteful arrangement thereof by the horticulturist and landscape architect, and subsequent care in order to obtain and maintain the best effects.

In the ornamentation of parks, squares, streets, and avenues of a city, or in the laying out of an estate or a small city lot, utility and appropriateness of every object created should always be obvious; there should always be a reason for a walk here, an open vista there, or a group of shrubbery yonder. It should be remembered that an object that serves no purpose is out of place and that the saying that that woman is best dressed of whose apparel one can recollect no detail, applies in no inconsiderable measure to an ornamental ground. If all is harmoniously

and tastefully arranged, no single feature should glare us conspicuously in the face, and the whole should give an impression of completeness that would be disarranged by the removal of any one part.

The first requisite of an attractive park or garden, be it large or small, is a good lawn. The lawn is for the park what the background is for a beautiful picture. A good, ornamental garden



An effective use of a wistaria vine

without a good lawn is as inconceivable as a picture without a background.

Next comes the laying out of the road and paths. In this the width of the road should be considered in connection with its purpose, the

greater the traffic the wider the road. A winding road is more attractive and pleasing as a rule than the straight line; but care should be exercised in its design, or it may border on the ridiculous.

In the planting of trees the discrimination should be made in order to attain a certain object. Shade should ever be the watchword when trees are selected for the street and avenue in the tropics, while there are also other points to be taken into consideration. There are many exceedingly attractive trees that must be discarded as shade trees and relegated to the park alone because they are deciduous during the dry season, when shade is most needed. In the park the selection and grouping together of trees should depend upon their ability to supplement and enhance the beauty of each other whether in habit, flower, or foliage.

Do not crowd too many plants together in a small area. In an effort to have a "little of everything," sight is frequently lost of the appearance of the whole, with the result that the garden becomes a "curiosity shop" as it were, instead of a garden. Not only is it necessary for a tree or plant to have a certain space if it is to attain its proper and natural development, but additional space is required to "set off" the object, or in other words, a background. Frequently the best effect is obtained by a solitary specimen tree on the lawn, but if the grounds are ample, a group of trees may be planted to advantage. The ultimate size of a tree or plant should always be considered at the time of planting, remembering that too close planting is not conducive to the attainment of the best effects.

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Palms! This single word instantly conjures up visions of the tropics. As a matter of fact, this distinct family of plants seems to be more used for decorative purposes in the temperate zone than in its native home. Many millions of palms are annually propagated in greenhouses in the temperate zone and used to adorn houses the year around, and the garden and park during the summer. There are perhaps more in demand for this purpose than any other group of plants.

According to their habit and behavior, palms may be used in a variety of ways for decorative purposes. Because of their slow growth and comparatively small spread of crown which gives but little shade, they are not as frequently

planted for street trees as they deserve from a purely ornamental point of view. This is a matter for much regret because no shade tree can approach a well-developed palm of certain species in clean-cut knightly beauty. A tree may be the most majestic or the most graceful, but the palm is, nevertheless, distinctly in a class by itself. "The princes of the vegetable kingdom," so were the palms termed by the great Linnaeus, and there seems to be no reason for a revision of that expression. And yet Linnaeus received his impressions of the palms from descriptions by others, from herbaria specimens, and from what must have been but poor specimens found in the crudely-constructed greenhouses of his day. We can but conjecture his expressions if he had seen palms in their native habitat. One cannot but regret that the great plant lover and botanist never saw the real tropics. If palms are unsuited to line the wider streets and thoroughfares of a city or the country, they should be planted along paths and walks in parks and plazas whenever this can be done so as to conform to the general design. For avenue purposes only, species having a

straight trunk and a fairly well-developed crown should be chosen, such as the Canary Island date, the royal palm, *Oreodoxa*, the California fan palm, *Coccothrinax*, but and *Corypha elata*. The date, *Phoenix dactylifera*, makes a very satisfactory avenue tree, though it has a rather "stiff" and ungraceful appearance. For narrow walks and the "paths" the *Bojaga de China*, *Noronhaiya merrillii*, is excellent. As an all-around avenue tree perhaps no species surpasses the Canary Island date. The royal palm is indeed excellent when from 5 to 10 meters tall, but it unfortunately grows so rapidly as to lose its greatest charm while it is still comparatively young. For the best effect palms should never be planted so

much of the charm will be lost.

The bambos are of unique beauty. Greatly appreciated in far-away countries where they are introduced with difficulty, they are made so common that few stop to appreciate how beautiful they really are.

Shrubs are probably the most abused of any one class of ornamental plants. Who has not seen solitary shrubs standing in lines along roads and paths like so many sentinels, prim and stiff, not to say grotesque, and trimmed up like feather dusters from which most of the feathers had been clipped? Sometimes the attempt is made to train a shrub into a tree or some other fantastic shape—with the inevitable result. A man may confess that he is ignorant of other forms of gardening but he is sure that he knows how to make a hedge and he labors under the delusion that the hedge is the *stee quo non* in landscape architecture.

As a matter of fact, a hedge is a very serviceable and attractive subject in its place, and it is sometimes far from unattractive in itself out of place if it is properly tended. However, the would-be gardener usually cultivates it so assiduously with knife and shears that whatever potential beauty it might have is utterly destroyed and made into hard, ungraceful lines and corners.

The hedge is essentially a windbreak and may be used as a fence or to hide unsightly places, but used on both sides of a road or path it is an abomination, and as unattractive and out of place as a well-arranged border of flowers is attractive and appropriate.

In order to obtain compactness and impenetrability it is necessary to prune back the hedge; this should always be done with the thought in mind of preserving the natural habits of the plant constituting the hedge as much as possible and yet make it serve its purpose. Among plants commonly well adapted to hedges that also will serve as windbreaks are the oleander and hibiscus; for a low hedge, the *riodeta* is very good.

In most cases shrubs produce the best effects when they are massed; very few shrubs for solitaires are those of a drooping habit or semicandent and well covered with foliage from the ground up. *Dama-de-noche*, *Cestrum nocturnum*, *Russelia javana*, *Acalypha variegata*, *Pandanus baptisia*, and *P. verticillata* are good examples of shrubs adapted to solitaires; the two last-mentioned species are indeed not shrubs, though for ornamental purposes they are used as such, and they may, of course, also be used in massing, either in clumps of one species or intermixed with others.

The best effects in massing shrubs, are usually obtained by grouping foliage plants and flowering shrubs in separate clumps instead of mixing them promiscuously. Always place the tallest and most robust-growing species in the background and the smaller ones in front. Especially in a group of shrubs with ornamental foliage avoid planting them in tiers, or the planting assumes an artificial aspect, something that is always to be guarded against.

In making a flower bed, avoid intricate and curious designs. A long rectangular bed bordering a walk or a simple circle or an oval in a lawn and triangular beds at the intersection of roads and paths are the most appropriate designs. Whatever the center of the bed may contain, a border of some dwarf plant with white flowers—

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Banking the borders of a driveway.

close to the avenue that the leaves interlace. For massing, as solitary specimens on the lawn or in the shrubbery, all palms may be utilized more or less. For a grove, particularly near water, nothing is more appropriate than the coconut palm. In planting a grove for ornamental purposes, be sure not to plant an orchard, else

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It was a fitting end to the Conference, which I am sure has done much to liquidate the legacies of the War, to liberate the countries of Europe, and to enable them to pursue more actively their economic reconstruction. Above all, I believe it will be seen that it has brought a new spirit into international policy which will help to bring that peace so abundantly desired by the people.

Tropical Landscape Architecture

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for instance, sweet Alyssum—is singularly effective. *Pilea* may be used for this purpose, and *Alerananta* is also frequently employed in a similar way.

Climbing plants may be divided into three classes: the woody semibush form (requiring a wooden frame upon which it is trained), of which the *bougainvillea* and *allemanda* are good examples; the herbaceous, twining, or tendril-bearing climbers, such as the many species of *Ipomea*, *Convolvulus*, and *granadilla*; and the climbers that attach themselves to the object upon which they climb, such as *Bignonia*, *Crusin*, *Pothos aurea*, and several species of *piper*.

The first-named class can be used to the best advantage in screening unsightly objects. A frame should be built upon which this class of plants may climb. The more vigorous species of the second class may be used in a similar way and those of medium vigor are particularly well adapted as porch climbers; the third class is

particularly useful in covering walls or the trunks of old trees; they succeed best in shade.

A very attractive form of gardening is the rockery, which may be built over a heap of refuse and rubbish in a shady situation with enough good soil on the crevices between the stones on the surface to support and nourish the plants. Ferns and Selaginellas, begonias, tradescantias, various aroids, and similar plants, as well as terrestrial orchids, are particularly appropriate in a rockery. If water is available for small pond, the rockery can be used with telling effect, the pond being planted to water lilies and lotus, with here and there a clump of *Cyperus* on the shore. Bamboos, coconuts, rearing palms, plants of weeping habit, and tall grasses may be planted in the proximity of a pond.

Hanging baskets always add distinction to a house, be it large or small; and every house should have a few, either of the bird-nest fern, orchids, or combination baskets of orchids and various ferns. Fern baskets made of strong galvanized wire are most satisfactory and lasting. Coconut husks make very picturesque receptacles for ferns and orchids, and securely wired with copper or galvanized-iron wire last a long time. For small plants, split bamboo joints are attractive and serviceable, but they decay rapidly.

Neglect to utilize native plants in connection with ornamental gardening is not confined by any means to the Philippines or the tropics, but

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The Ikgan or The Men With Tails

BY IVON GRUNER COOK

Since, in this modern civilized age surgeons have occasionally found the spinal bones of men lengthened into a tail-like appendage; and Darwinian theories as well as the many links have been made, it is not surprising to find among the Manobo tribes of the upper Agusan near the mountain fastness of Mount Apo a race of men with tails.

The old warrior, Amay, hunched closer to the fire as the chill night air swept down the valley from the mountainside. Flames threw into relief the wrinkled face with its prominent cheek bones, its high forehead, small black eyes that glittered like insect eyes of coal, and lips reddened from the juice of the betel nut chewed by fated teeth which had been darkened to an inky-blackness.

The sun had only a little while ago dropped behind Mt. Apo and children were still playing and laughing together. Several of the boys resting from a strenuous game kept glancing toward Amay, and whispering among themselves. Amay, though now an old, old man, was a *Bagani lipus*; that is, one who had killed innumerable men (more than one hundred) including other Baganis, with his own hands. He commanded great respect not only for his deeds, but also because he was a fierce man in spite of his age. He alone of the whole tribe was entitled to wear the costume of black, embroidered in red, and the magenta kerchief turban with the yellow spots.

Finally one lay-bolder than the others crept near to his side and questioned him: "Tell us, Oh, great Amay, why the earth and trees swayed and shook yesterday, until I felt a great fear in my heart and a strange sickness in my head and stomach."

The others drew closer. The warrior sat stern and silent and no one moved. Suddenly Amay shot a gory spur of betel juice into the fire, which flickered and sputtered from the deluge. Then he began to speak.

"The earth is as square and as flat as the floor of yonder house, beneath it are four great columns which hold it in the air. Some of the great snake-god, lives between those supports. When he shakes and twists against the posts, the earth trembles."

"But why does he shake and twist?" the boy questioned.

"When the blood of men is spilled upon the earth, Sawa smells it, but he cannot reach it on account of his position beneath the earth, he

becomes infuriated and lashes his great tail with violence. At times he enters our houses full, trees crash, and even the earth cracks open."

"In his anger, he orders *Makabuntayag*, who lives beside him and governs the fates of the earth, to create a famine so that people may suffer as he suffers. To punish him the goddess casts a spell upon the earth so that neither pili nor camotes will grow, and the people of the world must live on such roots as they can dig from the ground."

"Busao, the God of War, lives at the side of Sawa also. Greatly to be feared is Busao for he can take the form of any animal, fish or tree and thus learn which men are cowards, which stir up mischief, and which are brave. Watch, too, the birds that fly by night, because though you may not dream of such a thing, one of them may be Busao."

A solemn hush fell over the group as the old brave's voice fell silent. Gradually they began to whisper to each other in wondering tones. Finally one youth, who had remained on the outer edge of the groups, sidled nearer to the veteran.

"Sumagayan says that there were once men with tails." His voice trembled at his own daring.

"Sumagayan! Huh!" grunted the old man, with a disparaging shrug. Sumagayan was only a *Bagani* *ayugan*, one who had killed not more than eight persons, and who was entitled to wear only the red kerchief turban. Why, he did not amount to as much as a *Bagani* *nanagan*, or a *Bagani* *tanagan* who had killed fifteen and twenty-five men respectively. What right had he to tell ancient folklore to these boys? That was the duty of the prophetic dancer. This must be corrected at once.

"For the present, no more! Tonight when the moon rises high in the sky you may sit in the rear of the warriors' circle and listen to the dancer's tale. Go now to your homes."

He dismissed the boys and with a jubilation about their rose to their feet, and rushed to tell their parents the glorious news.

The hour was late when the moon finally reached the highest point in the heavens and flung its many rays over the dark forest of motionless trees. Houses built among the branches cast weird, incongruous shadows; the figures of men and women were like sable silhouettes until they moved into the campfire's

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state, Bill, wrapped in the sarong of some pious Mohammedan.

"Not me," I replied, "too buggy—my rain coat will have to do."

No, Bob in the sarong and I in my rain coat, we stretched out for a long, cold night. We finally went to sleep to the monotonous beat of the agongs across the way, and the drumming of the rain on the nipa roof.

We had been here in Manila for two or three months, maybe longer, enjoying the shows, catching up on a bit of back eating and the like, when I was called to Camarines Norte to examine a property. The day before I left I had suggested a farewell game of golf to Bob, but he had begged off on the ground of a peculiar numbness in his right hand. "Must have acquired a touch of rheumatism in Cotabato," he said, "notice how it's drawn my little finger?" He had held up his hand for me to see, and it was all twisted and contracted out of shape. "We'll have the game when you come back, Bill."

But we never did.

The job took a little longer than I had expected. When I did get back to Manila, Bob was gone and his letter, three months' old, was waiting for me. He had written—

"Dear Bill:

"I went to see the Doc about my hand shortly after you left, and Bill—the Moro woman was right. It was a *scabies maled* we stayed in that night. If we could have understood her, we would have pushed on, regardless of the rain. I've got it, Bill * * *

and I'm off to Cullion.

"It was that damned sarong that did it. Thank God you didn't take my suggestion and roll in with me! And now, Bill, I'm depending on you to carry out a little last favor for me. Mildred must never know about this.

"I've thought it all out carefully and decided that it is best that I should be dead. Much better for her to think me dead than to be a living horror to her. I am dead anyway, Bill, for all practical purposes, so she will only be a white lie that you tell her, quite justifiable. With me reincarnated over here alive, I would be a bar to her future happiness, and even if I got well there would always be that doubt that neither of us could dispel.

"You can handle it, Bill, I'm banking on you. And now all hail and farewell. *Are Casar, moriturus le saltemus.*" The boatman is waiting to ferry me over the Styx, and I can't keep him waiting. It's sunset, Bill, and I'll soon be alone in the dark. So long!

—Bob."

In due time, because it was best, I told Mildred how Bob had died in central Mindanao, in eight minutes, from the bite of a *doyley-poo*, a cobra—with her picture in his hand and her name on pale lips.

It was almost six years ago. Mildred is married now. I have been around the world and back again, every place except the islands. Never there. Sometimes Bob's little nurse must come to him, as he sits watching the sun go down. "The doctor says that you are better, much better, and maybe, some day * * *." But Bob only smiles—the gray smile of a man who has seen his world tumble about his ears, the smile of a man for whom there is no tomorrow, the smile of a man dead among the living dead—watching the sunset.

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is universal.

It is true that many of the best effects are obtained by grouping together plants from many countries and climes, but it is also true that many plants which would be an ornament to any garden are passed by unnoticed because they are wild and common. Such ornamental native plants are particularly desirable because they are already adapted to the climate and are usually easy of culture, not to mention that they usually improve in attractiveness under cultivation.

Improving Buntal Fiber and Buntal Articles

By SALVADOR DEL MUNDO*

The Bureau of Science receives many requests for information in regard to a comparatively inexpensive process for improving the appearance of buntal fiber, not only from various local hat dealers and commercial houses exporting native hats and fiber, but also from private parties. Information that may be valuable to the various people who are interested in the subject is given in this paper.

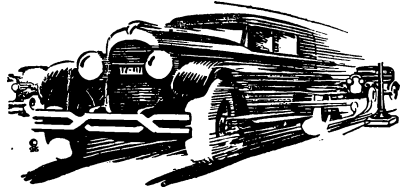
Buntal is the name given to the flexible material obtained from the fibrous bundles of the petiole of the matured leaf of bunt palm, *Corypha glabra*. When recently and properly pulled from the petiole, these fibers are white and glossy, but when exposed to air and light they become discolored and acquire an ugly brownish tint. The fiber is extensively woven into baskets, handbags, and similar household articles of

commercial value, but by far its most important industrial application is in the making of hats which are sold under the name of buntal. Baliang or Luchau, accordingly as the hats have been made in Baliang, Bulacan, or in Luchau, Tayabas. Buntal hats have met with favorable reception in foreign countries and the demand has created a profitable home industry. By request of local firms engaged in exporting native hats, experiments were performed in this laboratory with a view of evolving a comparatively cheap process of improving the appearance of buntal fiber or hats.

In evolving the process outlined below, it was not the primary object to produce a perfect bleach such as may be accomplished with the use of more powerful bleaching agents, sodium

*Philippine Journal of Science.

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